ORIGINAL

REVISED TECHNICAL PROPOSAL - VOLUME I

ROUTE 7 CORRIDOR IMPROVEMENTS

FROM: RESTON AVENUE
TO: JARRET VALLEY DRIVE

FAIRFAX COUNTY, VIRGINIA

STATE PROJECT NOS.: 0007-029-942 AND 0007-029-225
FEDERAL PROJECT NOS.: STP-5A01(745) AND STP-5A01(790)
CONTRACT ID NUMBER: C00099478DB98

JUNE 19, 2018

PREPARED FOR:

VDOT

SUBMITTED BY:

LANE WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE-Wagman, A Joint Venture

4.1 LETTER OF SUBMITTAL

LANE-Wagman, A Joint Venture

14500 Avion Parkway, Suite 200
Chantilly, VA 20151

June 19, 2018

Mr. Joseph A. Clarke, P.E., DBIA
Alternative Project Delivery Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

RE: Route 7 Corridor Improvements
State Project No.: 0007-029-942 and 0007-029-225
Federal Project No.: STP-5A01(745) and STP-5A01(790)
Contract ID Number: C00099478DB98

Dear Mr. Clarke:

LANE-Wagman, A Joint Venture (LANE-Wagman) is comprised of **The Lane Construction Corporation (LANE)** and **Wagman Heavy Civil, Inc. (Wagman)** (the joint venture partners) and presents our Revised Technical Proposal for the above referenced Design-Build (D-B) project to the Virginia Department of Transportation (VDOT). Our response contains all information requested in the Request for Revised Proposals dated June 1, 2018.

LANE-Wagman is the Offeror and will be the overall authority for the Project. **LANE** will serve as the Lead JV Partner. We have teamed with **Rummel, Klepper & Kahl, LLP (RK&K)** as the Lead Designer, supported by **Rinker Design Associates, PC (RDA)**, to provide VDOT with a Team that has a solid reputation for completing complex projects innovatively, on-time, within budget, and often ahead of schedule. Our Team's experience will enable us to safely deliver the high quality and technically sound project both VDOT and the public expects. Our Team has taken every opportunity to include enhancements, provide value-added features, diligently manage and mitigate risk, and reduce both construction and long-term maintenance costs.

4.1.1 Offeror's Full Legal Name:
LANE-Wagman, A Joint Venture
c/o The Lane Construction Corporation
90 Fieldstone Court
Cheshire, CT 06410

4.1.2 Declaration of Intent: It is LANE-Wagman's intent, if selected, to enter into a contract with VDOT for the Project in accordance with the terms of this RFP.

4.1.3 120-Day Declaration: Pursuant to Part 1, Section 8.2, we declare that the offer represented by this revised Technical Proposal and revised Price Proposal for the Base Scope will remain in full force and effect for one hundred twenty (120) days after the date the revised Technical Proposal is actually submitted to VDOT. We declare the revised Technical Proposal for Option 1 will remain in full force and effect for one hundred eighty (180) days after Notice to Proceed for the Base Scope.

4.1.4 Offeror's Point of Contact: Mr. Richard McDonough is the authorized representative and point of contact for the LANE-Wagman Team for all matters associated with this submittal.

Richard McDonough, Senior District Manager
14500 Avion Parkway, Suite 200, Chantilly, VA 20151; Tel: (703) 222-5670 Fax: (703) 222-5960
Email: RAMcDonough@laneconstruct.com

4.1.5 Offeror's Principal Officer Information: Mr. David J. Rankin, PE is a Principal Officer of LANE-Wagman.

David J. Rankin, PE, Senior Vice President
6125 Tyvola Centre Drive
Charlotte, NC 28217
Tel: (704) 553-6500 Fax: (704) 553-6598
Email: DJRankin@laneconstruct.com

4.1.6 Final Completion Dates: In accordance with RFP Section 2.3.1, LANE-Wagman proposes an Early Final Completion Date of May 30, 2024.

4.1.7 Unique Milestone Dates: LANE-Wagman proposes a Unique Milestone Date of September 2, 2022 for Area 2 , November 23, 2023 for Area 5A, and May 30, 2024 for Early Final Completion Date.

4.1.8 Proposal Payment Agreement: An executed Proposal Payment Agreement (Attachment 9.3.1) can be found in the Appendix of Volume 1.

4.1.9 Certification Regarding Debarment Forms: Certifications for Debarment for Primary and Lower Tier Transactions have been completed and executed for the Offeror and all subconsultants, subcontractors, and other entities as identified as members of the LANE-Wagman Team. These copies can be found in the Appendix of Volume 1.

4.1.10 DBE Statement: LANE-Wagman supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 12% goal for the design and construction of this Project utilizing Virginia certified DBE companies.

The LANE-Wagman Team appreciates the opportunity to provide our revised Proposal for this extremely important project. We look forward to working closely with VDOT and stakeholders in our development and delivery to make the Route 7 Corridor Improvements Project a landmark success for the citizens of Virginia.

Respectfully submitted,

Richard McDonough
Authorized Representative
LANE-Wagman, A Joint Venture

Route 7 Corridor Improvements
Summary of Changes

Change	Summary
Route 7 Station 175+00 to 176+30	Added Retaining Wall and Eliminated Impacts to 12” Water Main
Route 7 Station 219+00 to 224+85	Realigned Noise Wall and Permanent Easement to Eliminate Impacts to 12” Water Line
Route 7 Station 228+50 to 231+00	Realigned Noise Wall and Permanent Easement to Eliminate Impacts to 30” Water Main
Route 7 Station 242+50 to 245+50	Realigned Noise Wall and Permanent Easement to Eliminate Impacts to 30” Water Main
Route 7 Station 251+00 to 252+00	Realigned Noise Wall and Permanent Easement to Eliminate Impacts to 12” Water Line
Route 7 Station 255+00 to 285+00	Optimized Horizontal and Vertical Alignment Through the Intersection with Baron Cameron Avenue to Eliminate Impacts to 30” and 54” Water Mains and to Facilitate Maintenance of Traffic Configuration Changed from Interchange to an Intersection with WB Route 7 Triple Left Turn Movements
Route 7 Station 294+50 to 299+80	Added Retaining Wall to Eliminate Impacts to 54” Water Main
Route 7 Station 296+00 to 314+00	Adjusted Horizontal Alignment of Route 7; Reduced Median Width; Relocated Noise Wall - Eliminates Impacts to 54” Water Main
Route 7 Station 330+95 to 333+25	Added Retaining Wall to Eliminate Impacts to 54” Water Main
Route 7 Station 356+50 to 364+75 (Colvin Run)	Adjusted Alignment of Proposed Stream Relocation and Equestrian Trail; Reduced Retaining Wall Limits - Eliminates Impacts to 54” Water Main and Reduces Cost
Route 7 Station 368+74 to 411+15	Adjusted Horizontal Alignment of Route 7; Reduced Buffer Width Adjacent to EB Lanes; Added Retaining Wall; Relocated Noise Wall - Eliminates Impacts to 54” Water Main, 700’ of Retaining Wall, and MB-7D Noise Barrier Protection
Route 7 Station 415+00 to 449+00	Adjusted Horizontal Alignment of Route 7; Reduced Buffer Width Adjacent to EB Lanes; Relocated Noise Wall - Eliminates Impacts to 54” Water Main and MB-7D Noise Barrier Protection
Route 7 Station 455+75 to 469+00	Adjusted Horizontal Alignment of Route 7; Reduced Buffer Width Adjacent to EB Lanes; Relocated Noise Wall - Eliminates Impacts to 54” Water Main and MB-7D Noise Barrier Protection
Route 7 Station 469+00 to 490+50	Adjusted Horizontal Alignment of EB Route 7; Reduced Buffer Width Adjacent to EB Lanes; Relocated Noise Wall - Eliminates Impacts to 36”and 54” Water Mains and MB-7D Noise Barrier Protection
Route 7 Station 167+00 to 527+00 (Entire Project with Exception of 150’ at 174+50 Left)	Realigned Noise Walls to Eliminate MB-7D Noise Barrier Protection
Fairfax County Water Authority 54” waterline	90% (approx.) reduction of impacts resulting from adjustments allowed for by the RFRP
Colvin Run Channel	Redesign of Colvin Run to minimize impacts to 54” waterline and FCPA property

Williams Pipeline	Adjusted design to avoid new or extended encasement of the Williams' lines - only the gas line rectifier will require relocation
Verizon facilities	Reduced impacts as a result of alignment shifts to avoid water mains
ROW	Reduction of Stage 3 "normal" parcels resulting from reduction in ROW impacts associated with Area 2 (Baron Cameron)
Sequence of Construction	Area 2 SOC changed due to elimination of interchange. Minor changes to Areas 5A, 1, 5, and 4.
Transportation Management Plan	Minor changes to Area 2 and schedule on TMP graphics
Unique Milestone Dates	Unique Milestone dates changed: Area 2 and Area 5A
Early Final Completion Milestone	Will complete the Project three (3) months ahead of schedule

4.2 OFFEROR'S QUALIFICATIONS

4.2| OFFEROR'S QUALIFICATIONS

4.2.1 Qualifications of Key Personnel

The LANE-Wagman Team confirms all information presented in the Statement of Qualifications (SOQ) dated September 21, 2017 remains true and accurate in accordance with Part 1, Section 11.4. As demonstrated in the organizational chart presented on the following page, the team proposed by LANE-Wagman, including but not limited to our organizational structure, lead contractor, lead designer, key personnel, and other individuals identified pursuant to Part 1, Section 4.2, will remain intact for the duration of the contract.

4.2.2 Organizational Chart

Under the leadership of our Design-Build Project Manager (DBPM), Erick Smith, the LANE-Wagman Team is structured to effectively manage and deliver the design and construction of this project. The LANE-Wagman Team is organized to provide VDOT with a single-source point of contact, responsible for all design and construction activities. Our Team organization has a straightforward chain of command, with individual tasks and functional responsibilities clearly identified. This organizational chart identifies key personnel and major functions to be performed for the successful management, design, and construction of the project. Though reporting relationships are rigid, the lines of communication within the Team will remain fluid and flexible to meet the requirements of each individual project task. In order to prevent unnecessary project delays, it may be prudent at times for other members within the LANE-Wagman Team to communicate directly with their counterparts at VDOT. This will be directed and authorized in advance by Mr. Smith and the VDOT Project Manager.

VDOT

Third Parties/Stakeholders

MWAA, WMATA, FHWA, NVTA, Northern Virginia Transportation Commission, Fairfax County Department of Transportation, Fairfax County Transportation Advisory Commission. Fairfax County Water Authority, Fairfax County Park Authority (FCPA). Fairfax County History Commission, AAA Mid-Atlantic. Great Falls Citizens Association, Reston Association, Bishopgate Area, Northern Vienna / NoVi Trails, Friends of the W&OD Trail, Fairfax Alliance for Better Biking, Washington Area Bicycling Association, Hunter Mill Transportation Advisory Commission, Loudoun County Office of Transportation Services, Tysons Partnership, Tytran, Emergency Responders, Schools. Places of Worship, Local Businesses, Community Representatives, Local Residents, Wolf Trap Media, District Representatives, Route 7 Corridor Improvements Project Working Group, Home Owner Associations

Utilities

VDOT, Dominion Virginia Power, Washington Gas, Colonial Pipeline Company, Williams Gas Pipeline, Verizon, Zayo, CenturyLink, FiberLight, LLC, Level 3 Communications, Verizon Business Solutions, Qwest Government Serivces, Comcast, Cox, AT&T, Fairfax Water & Sewer

JV Executive Committee
Rich McDonough (L)
David Lyle (W)

Design-Build Project Manager
Erick Smith (L)

Quality Assurance Manager
Kaushik Vyas, PE (Q)

QA Lead Inspector (Bridge)
DJ Stover (Q)

QA Lead Inspector (Roadway)
Dinesh Mehta (Q)

Other QA Inspectors (as needed)

AMRL Certified QA Lab
Specialized Engineering

Public Relations Manager
John Undeland (U)

Safety Manager
Brandie Hensley (L)

Project Controls Manager
Larry Hora (L)

Design QA
Ryan Masters, PE, DBIA (RKK)

Design QC
Independent Reviewers (RKK)
Independent Reviewers (RDA)

Design Manager
Owen Peery, PE (RKK)

Design Team - Segment 1
Roadway Engineer
James Durbin, PE, LEED AP (RKK)
Drainage Design
Mike Hogan, PE (RKK)
MOT Manager
Howard Humphreys, PE (RKK)
Structures Lead
Sagar Adivarekar, PE (RKK)

Design Team - Segment 2
Roadway Engineer
John Giometti, PE (RDA)
Drainage Design
Nikhil Deshpande, PE, LEED AP (RDA)
MOT Manager
Adam Welschenbach, PE (RDA)
Structures Lead
Song Kim, PE (RDA)

Construction Manager
David Leber, DBIA (W)

Roadway Superintendent
Skip Vest (L)

Project Engineer
David Holmes (L)

MOT Superintendent
Vincent Yuskoski (W)

Structures Superintendent
Dustin Burkette (W)

Environmental Compliance
Chris Monahan (L)

ITS Integration
Shane Smith (L)

Utilities
Jason Hershey, DBIA (W)

QC Manager
Tim Freeland (RDA)

QC Inspectors

AMRL Certified QC Lab
Selected after shortlist

Subcontractors
Subcontractors and DBE/SWaM Firms

SWM/River Mechanics
Brian Finerfrock, PE (RKK)

Geotechnical
Paul Zhang, PE (D)

Traffic Analysis
Jeffrey Kuttesch, PE, PTOE (RKK)

Noise Analysis
Joe Rauseo (RKK)

Survey
Ryan Dreelin, LS (RDA)

Right of Way
James Street (RDA)

Review Appraisers
VDOT Prequalified Individuals

Fee Appraiser
VDOT Prequalified Individuals

TMP
Stuart Samberg, PE, PTOE (RKK)

Structures
Chris Vaught, PE, DBIA (RKK)

Environmental
Richard Woody, PWS (RKK)

ITS / Lighting
Barry Brandt, PE, PTOE (RKK)

Utility Design
Jeff Kapinos (RKK)

Lead Utility Coordination Manager
John Myers (RDA)

Landscape
Deana Rhodeside (RH)

Legend

Reporting Lines — Communication/ Coordination Lines

Key Personnel — JV Personnel/ Subcontractors

Design Personnel/ Subconsultants — Independent QAM Personnel

The Lane Construction Corporation (L)
Wagman Heavy Civil (W)
Rummel, Klepper & Kahl (RKK)
Rinker Design Associates (RDA)
Quinn Consulting Services (Q)
DMY Engineering (D)
Undeland Associates (U)
Rhodside & Harwell (RH)

4.3 DESIGN CONCEPT

4.3| DESIGN CONCEPT

The LANE-Wagman Team's Design Concept for the Route 7 Corridor Improvements complies with the Technical Requirements, exceeds VDOT's requirements, offers a more efficient and safe corridor, improves the effectiveness of traffic operations, minimizes impacts to the surrounding neighborhoods, businesses, churches, parks, and reduces the need for future inspection and maintenance. The following table illustrates the benefits, enhancements, and added value of our Design Concept.

The LANE-Wagman Team Offers	Benefit to End Users
Delivery of Area 2 (Station 258+00 to Station 294+00) and Area 5A (Station 474+50 to Station 526+50) Prior to Final Completion	• The Project has been segmented into project areas to expedite construction and deliver congestion relief at Baron Cameron and Lewinsville **ahead of Final Completion** • Functional use of Baron Cameron Intersection (Area 2) provides significant **congestion relief** while other segments are still ongoing • Functional use of the Lewinsville Displaced Left Turn Lanes (Area 5A) **improves traffic congestion and flow patterns**
Proven Environmental Management Program	• Ensures environmental compliance throughout all phases of construction • Positive protection of environmentally sensitive areas • Provides **training, monitoring and compliance assistance to construction team**
Right of Way (ROW) Prioritization	• **ROW will be acquired by prioritization groups** – higher priority groupings include long-lead negotiation / acquisition parcels including HOAs, churches, cemeteries, FCPA, FCBOS, and embassy-owned • Authorization of challenging parcels, such as those needing ROW or easements for noise barriers, will be in the last prioritization group allowing time for noise studies to be completed as construction progresses elsewhere • The priority groupings are overlaid with our Project Areas to gain greater efficiencies with respect to resource allocation and schedule
Utility Coordination from NTP to As-Built Record Drawings	• Dedicated management and inspectors to ensure accurate location and document changes in as-built plans • An **integrated team of coordination (John Myers) and construction (Jason Hershey) personnel/experts to plan and document where relocated utilities are placed through the as-built process**
Proactive Public Outreach Plan	• Proactive, multi-faceted outreach program to build Project consensus and good will through the transmission of open, honest and accurate information • Project hotline manned by the LANE-Wagman Team • Hot Topics Meetings keep VDOT Project Manager and District Management knowledgeable of pending issues with stakeholders • **Coordination with the VDOT Northern Virginia Public Affairs Office will be seamless as we rely on our Route 7 bridge replacement over the DTR and DAAH DB project experience (Wagman/RDA) and the lessons learned on the Route 29 Solutions project (LANE/RK&K/RDA)**
Maintenance of Traffic is Simplified	• **Improves safety for the traveling public and construction personnel** • **Reduces the number of construction phases** • **Minimizes shifts and changes in traffic patterns** • **Commit to continually monitor signal timings throughout construction to ensure operational efficiency**
Bridge over Difficult Run is Constructed with only Two Traffic Phases	• **Reduces traffic impact** and i**mproves safety** • **Reduces construction schedule** • Eliminates construction joints in wheel line for better drivability, user functionality, and **reduces long-term maintenance**
Optimized Stormwater Management Design	• **Reduced ROW needs** • Reduced large diameter and linear footage of storm sewer pipe • Reduced the number of wet ponds to **reduce future maintenance operations and life cycle costs** • Greater overall pollutant removal achieved

4.3.1 Conceptual Roadway Plans

The Team's Conceptual Roadway Plans are included in Volume II and meet or exceed all RFP requirements and Attachments 2.2(a), 2.2(b) and 2.2(c). The design stays within the proposed ROW and easements as required by the RFP and as shown on the RFP Conceptual Plans and does not require any Design Exceptions or Design Waivers beyond those listed in the RFP documents.

Through the proprietary meeting process and preliminary engineering efforts, the LANE-Wagman Team has identified a number of areas where the design shown on the RFP Conceptual Plans can be enhanced or modified to provide benefit to VDOT and the end user. Those elements are shown in the table below and on the plans provided in Volume II of this Technical Proposal:

Table 4.3.1-1. *Design Enhancements*

Location	Enhancement	Result	Benefit to End Users
Route 7 Station 232-235	Realigned Noise Wall	• Eliminated impacts to parcels 261 and 252	• Direct savings to VDOT • Enhances public acceptance • Reduces schedule risk
Route 7 Station 239-242	Realigned Noise Wall	• Eliminated permanent easement for noise wall on Parcel 033	• Enhances pubic acceptance • Reduces schedule risk
No Longer Applicable due to Revised Design		•	•
Route 7 Station 344+50-346	Shifted Pedestrian Tunnel and Added Retaining Wall	• Reduces fill • Eliminates reconstruction of 136 feet of 54" water line • Shortens the tunnel by 23'	• Reduces Project impacts to environmental areas • Fill in wetlands reduced 7,300 SF • Impacts to park reduced by 11,800 SF • Significant reduction in Project cost
No Longer Applicable due to Revised Design			
Route 7 Station 247+75-247+50	Extended Retaining Wall	• Brings Project into compliance with the RFP	• Enhances public acceptance • Reduces schedule risk
Route 7 Station 316+75-318+30			
Route 7 Station 375-37+25			
Route 7 12 Locations Noted on the Conceptual Roadway Plans	Provide 8' Buffer Adjacent to Turn Lane	• Eliminates the need for design waiver at these locations	• Improves safety for pedestrians and bicyclists
Station 399+00	Revised Vertical Profile to Comfort Curve Criteria	• Reduces impacts to adjacent properties and improves construction efficiencies	• Incorporates lighting through the curve limits and provides a safer work zone for the traveling public
Forestville Drive	Incorporated C&G to contain proposed design within Existing ROW limits	• Avoids acquisition of additional ROW or permanent easement	• Reduces schedule risk • Direct savings to VDOT
Route 7 Station 409-410+50	Revised Drainage Design	• Eliminates reconstruction of 54" water line	• Direct savings to VDOT

Route 7 Station 426+50 / Service Road #2 Station 35+00	Adjusted SWM Facility Grading	• Reduced ROW acquisition	• Direct savings to VDOT • Improves Project schedule
Route 7 Station 409+50 to 410+75	Reduced Limits of Retaining Wall	• Eliminates 125' of retaining wall construction	• Direct savings to VDOT • Reduces required maintenance
Incorporated Into Larger Design Revision			
Forestville Drive Station 10+59 to 14+12	Added Curb and Gutter	• Design is compliant with RFP • Reduces cut slope and limits of temporary construction easement	• Enhances public acceptance
Route 7 Station 460+50	Realigned Noise Wall	• Eliminates reconstruction of 54" water line	• Direct savings to VDOT
Route 7 Station 461+00	Adjusted grading	• Reduced permanent easement for drainage	• Improves Project schedule • Direct savings to VDOT
Route 7 Station 516+00 to 519+00	Adjusted Alignment of Shared Use Path	• Reduces impact/ reconstruction of existing shared use path and lighting	• Direct savings to VDOT
Route 7 Station 219+00 to 224+85	Realigned Noise Wall and Permanent Easement	• Eliminates reconstruction of 12” water line	• Direct savings to VDOT
Route 7 Station 228+50 to 231+00	Realigned Noise Wall and Permanent Easement	• Eliminates reconstruction of 30” water line	• Direct savings to VDOT
Route 7 Station 242+50 to 245+50	Realigned Noise Wall and Permanent Easement	• Eliminates reconstruction of 30” water line	• Direct savings to VDOT
Route 7 Station 251+00 to 252+00	Realigned Noise Wall and Permanent Easement	• Eliminates reconstruction of 12” water line	• Direct savings to VDOT
Route 7 Station 175+00 to 176+30	Added Retaining Wall	• Eliminates reconstruction of 12” water line	• Direct savings to VDOT
Route 7 Station 255+00 to 285+00	Optimized Horizontal Alignment through the intersection with Baron Cameron Avenue	• Eliminates reconstruction of 54” water line • Eliminates reconstruction of 30” water line • Facilitates Maintenance of Traffic during construction	• Direct savings to VDOT • Improves safety for the traveling public during construction
Route 7 Station 294+50 to 299+80	Added Retaining Wall	• Eliminates reconstruction of 54” water line	• Direct savings to VDOT
Route 7 Station 296+00 to 314+00	Adjusted Horizontal Alignment of Route 7; Reduced Median Width; Relocated Noise Wall	• Eliminates reconstruction of 54” water line	• Direct savings to VDOT

Route 7 Station 330+95 to 333+25	Added Retaining Wall	• Eliminates reconstruction of 54" water line	• Direct savings to VDOT
Route 7 Station 356+50 to 364+75 (Colvin Run)	Adjusted Alignment of Proposed Stream Relocation and Equestrian Trail; Reduced Retaining Wall Limits	• Eliminates reconstruction of 54" water line	• Direct savings to VDOT • Wall replaced with landscaped slope as enhancement for park • An equestrian bridge over Colvin Run as enhancement for park
Route 7 Station 368+74 to 411+15	Adjusted Horizontal Alignment of Route 7; Reduced Buffer Width Adjacent to EB Lanes; Added Retaining Wall; Relocated Noise Wall	• Eliminates reconstruction of 54" water line • Eliminates 700' of retaining wall • Noise wall minimum 18' offset to face of curb eliminates MB-7D	• Direct savings to VDOT
Route 7 Station 415+00 to 449+00	Adjusted Horizontal Alignment of Route 7; Reduced Buffer Width Adjacent to EB Lanes; Relocated Noise Wall	• Eliminates reconstruction of 54" water line • Noise wall minimum 18' offset to face of curb eliminates MB-7D	• Direct savings to VDOT
Route 7 Station 455+75 to 469+00	Adjusted Horizontal Alignment of Route 7; Reduced Buffer Width Adjacent to EB Lanes; Relocated Noise Wall	• Eliminates reconstruction of 54" water line • Noise wall minimum 18' offset to face of curb eliminates MB-7D	• Direct savings to VDOT
Route 7 Station 469+00 to 490+50	Adjusted Horizontal Alignment of EB Route 7; Reduced Buffer Width Adjacent to EB Lanes; Relocated Noise Wall	• Eliminates reconstruction of 54" water line • Eliminates reconstruction of 36" water line • Noise wall minimum 18' offset to face of curb eliminates MB-7D	• Direct savings to VDOT
Route 7 Station 167+00 to 527+00 (Entire Project with Exception of 150' at 174+50 Left)	Realigned Noise Walls	• Noise wall minimum 18' offset to face of curb eliminates MB-7D	• Direct savings to VDOT

Additional enhancements and benefits of our design are described in the various sections of this Technical Proposal and most notably: Hydraulic and Stormwater Management Design, Section 4.3.1(c.); Bridge Structures, Sections 4.3.2 and 4.3.3; Environmental, Section 4.4.1; Utilities, Section 4.4.2; Stakeholder Communication, Section 4.4.4; and Right of Way Management, Section 4.4.5.

(a) General Geometry (including Horizontal Curve Data and Associated Design Speeds, the Number and Widths of Lanes, Shoulders and Shared Use paths)

As shown in Volume II, our design will widen Route 7 to provide a 6-lane facility with three travel lanes in each direction, curb and gutter with closed drainage, a raised median and a 10' shared use path on each side of the roadway. An Equestrian Connection is provided in the vicinity of the Difficult Run Bridge and is designed in accordance with the U.S. Forestry Equestrian Design Guidebook. The Route 7 roadway design will meet the GS-5, Other Principal Arterial criteria as well as all of the major design criteria detailed in the RFP Attachment 2.2(a). Horizontal curve data, lane widths and design speeds are shown on the Conceptual Roadway Plans in

Volume II. Most notably, the design speed, and therefore corresponding horizontal and vertical design criteria, changes as follows:

- Station 166+75 to Station 478+00: 60 MPH design speed with 55 MPH posted speed
- Station 478+00 to Station 526+61: 45 MPH design speed with 45 MPH posted speed

Our design includes the following features depicted on the RFP Conceptual Plans and required in accordance with Attachment 2.2(b) of the RFP:

- ✓ Median left turn lanes and right turn lanes along with taper and storage lengths.
- ✓ Access to and from unsignalized intersections including right-in / right out and / or right-in / right-out / left-in.
- ✓ U-turns will be allowed and have been accommodated at locations shown. U-turns will accommodate S-Bus-40 criteria at all locations and will accommodate a WB-62 vehicle at:
  - Reston Parkway
  - Baron Cameron Avenue / Springvale Road
  - Beulah Road / Forestville Drive
  - Towlston Road, and
  - Lewinsville Road
- ✓ A single lane, one-way eastbound connection is maintained from Service Road #1 to the Meadows Farms Nursery Entrance.
- ✓ A single access/entrance from eastbound Route 7 to the frontage road will be maintained during construction and in the final design.
- ✓ Full access has been maintained at the Colvin Run Road and Delta Glen Court intersection including a shared left / through and right turn lane on Colvin Run Road.
- ✓ Service Road #2 provides two-lane access from Lucky Estates Drive to the Jill's House / McLean Bible Church combined access point to Route 7.
- ✓ Lewinsville Road is limited to a single inbound lane to the north, allowing only a single left turn lane from Route 7 and a single through lane from Lewinsville northbound crossing Route 7.
- ✓ A 5' wide sidewalk is provided along the east side of Relocated Lewinsville Road, connecting the Route 7 shared use path to the existing asphalt path which begins near Woodhurst Boulevard.
- ✓ An 8' tall privacy fence will be constructed along the east side of relocated Lewinsville Road adjacent to the 5' sidewalk.

Connecting roadways and frontage roads shown in Volume II have been designed in accordance with the RFP conceptual drawings and the design criteria established in Attachment 2.2(a) of the RFP. These roadways are primarily Urban Minor Arterial Roadways (GS-6), Urban Collector Streets (GS-7), Urban Local Streets (GS-8) and Service Roads (GS-8). Their horizontal and vertical alignments, numbers of lanes, lane configurations and lane widths closely follow the alignments provided in the RFP plans.

(b) Horizontal Alignments

The horizontal alignments depicted on the Conceptual Roadway Plans in Volume II follow the horizontal alignments depicted in the RFP plans for Route 7 and connecting streets and roadways with the exception of the following locations:

- Station 255+00 to Station 285+00 the horizontal alignment for the at-grade intersection with Baron Cameron Avenue was set to optimize constructability and functionality of the intersection and to reduce and eliminate impacts to major utilities including the 30" water line and the 54" water line.
- Station 296+00 to Station 314+00 the horizontal alignment was shifted to the north, the median was narrowed, noise walls were shifted to reduce fill, and impacts to the 54" water line were eliminated.

- Station 368+74 to Station 411+15 the horizontal alignment was shifted to the north. The shifted alignment, in combination with a reduction in the SUP buffer strip, eliminated impacts to the 54" water line and eliminated the need for 700' of retaining wall. Throughout this section, the noise wall will be placed a minimum of 18' from the face of curb, eliminating the need for MB-7D in front of the noise wall, and further reducing cost.
- Station 415+00 to Station 449+00 the horizontal alignment was shifted to the north. The shifted alignment, in combination with a reduction in the SUP buffer strip, reduced impacts to the 54" water line. Additionally, the noise wall was shifted south of the water line utilizing permanent easement to eliminate proximity impacts and to eliminate the need for MB-7D in front of the noise wall. The combination of these measures allowed our design to avoid the 54" water line.
- Station 455+75 to Station 469+00 the horizontal alignment was shifted to the north and the noise wall was adjusted to an offset of 18' to eliminate impacts to the 54" water line. Additional right of way is shown on the north side of the roadway to eliminate this major utility impact.
- Station 469+00 to Station 490+50 the horizontal alignment of the eastbound lanes only was shifted to the north, thereby reducing the median width by up to 12', while maintaining a minimum median width of 16' outside of turn lanes. This shifted alignment, in combination with adjusting the noise wall offset to 18', allowed our design to reduce the fill over the existing 54" water line, thereby eliminating major impacts. Furthermore, the shifted alignment eliminated impacts to the 36" water line as well.

Each of these alignments meet or exceed the criteria established in Attachment 2.2(a) of the RFP.

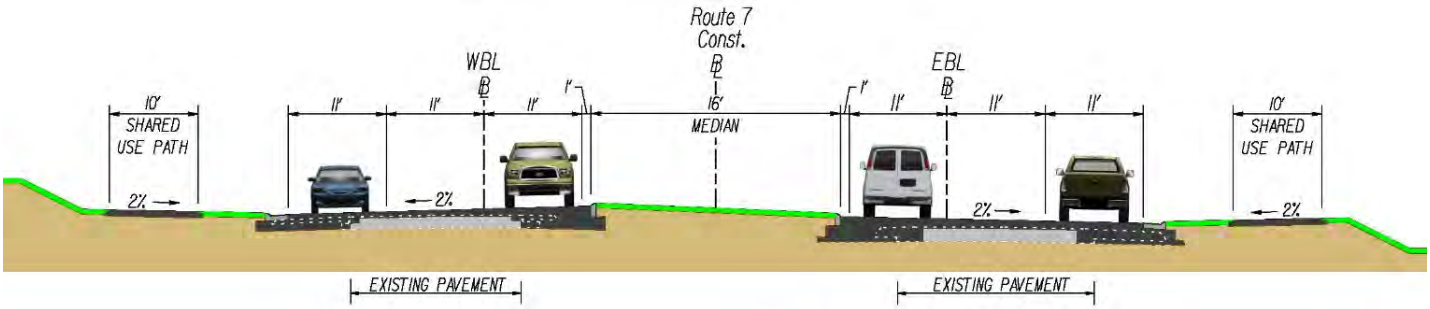
(c) Profile Grade Lines for all Segments and Connectors

The vertical alignments and profiles of Route 7 and all connecting roadways depicted on the Conceptual Roadway plans in Volume II follow the vertical alignments depicted in the RFP plans with the exception of the following:

- Vertical alignments have been adjusted in the areas where the horizontal alignment has been adjusted in an effort to reduce or eliminate impacts to utilities;
- VPIs with grade breaks greater than 0.3%. Our design replaced the grade breaks on the eastbound Route 7 profile at Station 305+83 and 310+52 with vertical curves meeting the minimum 60 MPH design speed. The vertical profiles of these roadways meet, at a minimum, the design criteria for each roadway as detailed in Attachment 2.2(a) of the RFP. Maximum grades on each of the connecting roadways and streets have not been exceeded while maintaining these connections.
- In the area of Baron Cameron Avenue, the grade of the roadway has been optimized to utilize existing pavement as much as practical and to minimize or eliminate impacts to utilities.
- The vertical curves for both eastbound and westbound Route 7, at approximate Station 399+00, were redesigned to meet/exceed comfort curve criteria for 60 MPH. As required, lighting was added to both sides of the roadway through the limits of the curve as mitigation. The benefits of this change are the elimination of several feet of fill, the reduction of construction limits, improved safety (reduced drop-off), and improved construction schedule and production.

(d) Typical Sections of the Roadway Segments (including Shared Use Paths, Retaining Walls and Bridge Structures, Pedestrian Underpass, Stream Relocation Diversion Channel)

The typical sections in Volume II graphically depict the design intent and comply with the RFP. The existing Route 7 is to be widened to provide three through lanes in each direction plus turn lanes.



A 10' shared use path is provided on each side of Route 7 separated by a buffer strip of 8', except where allowed to be reduced by the RFRP either adjacent to turn lanes or to avoid major utilities. The 8' buffer strip has been reduced in locations where impacts to major utilities will be avoided. After NTP, the design will be reevaluated to ensure that buffer reductions are limited to those areas of absolute need to ensure that pedestrian safety is maximized. Furthermore, at Station 346+00, a pedestrian connection is provided under Route 7. Our design:

- **Moves the location of this connection to eliminate impacts to the 54" water line in this location**
- Provides a precast concrete arch designed in accordance with AASHTO LRFD Bridge Design Specifications, VDOT Modifications (IIM-S&B-80) and the VDOT Road Design Manual
- Provides architectural treatments to all exposed and visible surfaces outside of the embankment
- Provides lighting
- Provides a width of 20' and a minimum height of 10' clear including any lights or other appurtenances

Retaining walls will be provided in locations depicted on the Conceptual Roadway Plans to **reduce and minimize impacts** to surrounding properties. In several locations described in the previous Table 4.3.1-1, our **design provides additional retaining walls** not depicted in the RFP plans to ensure that our design remains within the prescribed right of way and easement limits.

Most notably, our typical section design accommodates the requirements of the RFP Conceptual Plans and as required in accordance with Attachment 2.2(b) of the RFP:

- Avoids impacts to the existing fence from approximately Station 384+75 to Station 395+00.
- Reduces impacts to Eastern Ridge School property by use of a retaining wall.
- Avoids the statue and shrine on the Saint Athanasius Church property.
- Does not disturb the existing berm and vegetation between McLean Bible Church and Route 7.

Retaining walls and wing wall will receive architectural treatments in accordance with the Special Provision for Architectural Treatments. A special design retaining wall was shown on the RFP plans from approximately Station 356+42 to Station 364+87 to facilitate the relocation of an existing stream. In accordance with Part 2, Section 2.14 was revised to emphasize that adjustments to design elements shall be considered in an effort to avoid impacts to the 54" water main, our design has been adjusted to avoid impacts to the 54" water main, eliminate 708' of retaining wall and provide additional amenities for the park by adjusting the location of the relocated stream and equestrian path. With the adjusted design, a retaining wall is only necessary between Station 363+50 and Station 364+87, a distance of 137'. This eliminates a significant portion of the retaining wall in a location where it is susceptible to scour and reduces future maintenance costs. The proposed relocated Colvin Run channel was designed with a minimum slope to ensure at least four (4) feet of cover is maintained over the 54" water line at all locations. Additionally, from Station 359+50 to Station 365+00, the existing 54" water line is located under the equestrian trail. This design approach provides the same working conditions, if a repair were ever necessary, as the proposed location on the RFP plans, but with the benefit of not relocating the water line, creating a significant savings in cost and accelerating the time for construction in the park. These adjustments were made with **no increase in right of way or easements within the park and no additional impacts to wetlands or streams**.

Our design at relocated Colvin Run provides a graded slope adjacent to Route 7 with landscaping provided on the face of the slope adjacent to the equestrian path. This landscaped slope will be an enhancement over the design shown on the RFP plans by providing a more natural element in the park setting adjacent to the equestrian trail. A typical section showing the relationship of this stream and equestrian path to Route 7 is depicted on Sheet 2(5) in the Conceptual Roadway Plans in Volume II.

A bridge is located at approximately Station 366+50 over Difficult Run, along the Route 7 alignment. Additionally, a new bridge specifically designed for equestrian use is located right of Station 358+00, where the adjusted equestrian trail crosses relocated Colvin Run. Description of this bridge design is found in Section 4.3.2 of this Technical Proposal.

(e) Conceptual Hydraulic and Stormwater Management Design

Storm Drainage: Storm drainage will be designed to convey runoff through the Project improvements while **optimizing the system to facilitate construction**, **minimize impacts to existing utilities**, and result in overall **reduced maintenance efforts and costs**.

Stormwater Management Plan: SWM for the Project will be governed by the grandfathered criteria outlined in Part IIC of the State stormwater regulations The DEQ Performance Based Computations were used to determine the required removal rate for compliance with the State Regulations. The following unique challenges were considered for the Project:

SWM Design is an optimized approach over the RFP design by balancing opportunities to achieve higher pollutant removal efficiencies in five (5) proposed BMP facilities. This allowed for the elimination of one BMP facility shown in the RFP plans, ensuring all grading stays within prescribed right of way, providing overall lower future maintenance life-cycle costs through easier maintained BMPs and reduced storm drainage pipe networks.

- RFP proposed SWM basins locations were identified and shown to the public as potential stormwater facility locations. Due to the highly sensitive nature of the ROW impacts to private residents, no additional locations for SWM were considered.
- Major utility impacts are encountered throughout the design corridor, including the 54” Fairfax Water line, a 15-way duct bank (Verizon of Virginia), and a 42” Sewer (DC WASA) adjacent to Difficult Run. Our design has been revised to minimize impacts to these major utilities as much as possible utilizing the parameters provided in the RFRP.

Taking into account all of these challenges, our Team developed a revised SWM/storm drainage configuration that provides a focused and balance design. Specifically, our approach provides higher removal efficiencies (see Table 4.3.1-2) at SWM locations, that can accommodate such a design, for the benefit of eliminating or reducing other SWM locations. This balanced approach results in **less SWM facilities needing future maintenance, reduced ROW needs, reduced utility impacts, and significant reduction in linear footage of storm drain pipe, inlets, and large diameter pipes**. A great example of the benefit of the proposed design, is as follows:

- Removing Pond 3A provides a significant benefit for **reduced construction time**, **reduction of large pipe diameter, elimination of 700 LF of 54” waterline relocation, and less future maintenance**. Specifically, the new stormwater configuration (utilizing 15”, 18”, and 24” pipe sizes) replaces the following pipe size runs:
    - 880 LF of 54” storm drain pipe
    - 580 LF of 42” storm drain pipe
    - 2500 LF of 30” storm drain pipe
- Using smaller pipe diameters also allows additional flexibility for the storm drainage system to minimize utility conflicts.

Table 4.3.1-2. *Altered SWM Plan*

BMP ID	RFP Design	Design Alteration	Benefit to Project
2	Retention Basin I (Eff= 40%)	Multi-celled Bioretention (Eff= 50%)	• Higher pollutant removal efficiency • Greater quantity control for Outfall Analysis • Lower maintenance cost with use of herbaceous meadow seed mix
3A	Retention Basin I (Eff= 40%)	Removed	• Reduction in ROW • Lower future maintenance costs • Construction schedule accelerated with smaller storm drain pipe installation • Reduce 600 LF of 54" waterline relocation • Eliminated gas line relocation at STA 228+50
3B	Retention Basin I (Eff= 40%)	Multi-celled Bioretention (Eff= 50%)	• Higher pollutant removal efficiency (generates over 1.2 lbs/year greater removal than Retention Basin I) • Greater quantity control for Outfall Analysis • Lower future maintenance cost with use of herbaceous meadow seed mix
4	Dry Pond (Quantity Control Only)	Multi-celled Bioretention (Eff= 50%)	• Higher pollutant removal efficiency water quality (generates over 7.7 lbs/ year greater than RFP design) • Greater quantity control for Outfall Analysis
8	Retention Basin I (Eff= 40%)	Extended Detention (Eff= 35%)	• Reduced 54" waterline relocation providing accelerated construction schedule • Lower future maintenance costs
9	Retention Basin I (Eff= 40%)	Extended Detention (Eff= 35%)	• Drainage area increased by capturing minor road impervious, negates the effect of lower efficiency • Accelerated construction schedule by avoiding gas line conflict at 444+50 • Lower future maintenance costs
10	Retention Basin I (Eff= 40%)	Retention Basin II (Eff= 50%)	• Higher removal efficiency without changing footprint. • Accelerated construction schedule by reduced utility conflicts • Prescriptive design element
11	Retention Basin I (Eff= 40%)	Retention Basin II (Eff= 50%)	• Higher pollutant removal efficiency • Pipe network simplified with utility and roadway crossings reduced (specifically near 493+00) • Accelerated construction schedule and • Reduced storm drain network maintenance compared to RFP design
13	Retention Basin I (Eff= 40%)	Extended Detention (Eff= 35%)	• Pipe network simplified with utility and roadway crossings reduced • Accelerated construction schedule • Reduced future storm drain and BMP maintenance costs

Other SWM/Storm Drain Design Features are as follows:

- Nutrient credits will be purchased to meet 25% of the total required removal rate for the Project.
- Throughout the project culvert headwalls adjacent to the 54" water line will be pulled closer to the roadway, utilizing a small retaining wall to hold the fill slope and further reduce relocation of the waterline. Thus, **saving significant construction time**.
- SWM 11, a prescriptive design element in accordance with Attachment 2.2(b), is proposed to be situated approximately half on the Wolf Trap Woods HOA property and half on the McLean Bible Church-Jill's House property.

Colvin Run Stream Relocation Design Enhancements

- Reduced the proposed Colvin Run Stream relocation slope to approximately 0.35% and utilize 4- 30" culvert pipes at the utility road crossing to **avoid impacting the 42" Sanitary Sewer**

Proposed Major Culvert Crossings:

- Station 355+50: Colvin Run @ Carpers Farm Way- 3- 12'x 12' box culvert
- Station 264+00: Piney Run- Extend existing 8'H x 10'W double box culvert and adding a jacked 60" concrete pipe to improve HW/D and 100-year backwater impacts with the culvert extension
- Station 202+00: Dog Run- Two 54" and a 60" concrete pipe countersunk to meet USACE permit requirements, all jacked pipe

Route 7 over Difficult Run:

The proposed Route 7 bridge over Difficult Run will be designed to ensure the proposed 100-year water surface will result in a no-rise criteria. The proposed bridge hydraulics are significantly influenced by the 100-year overtopping Route 7 at the sag. The proposed design will provide a no-rise condition for the 100-year flood condition.

(f) Proposed Right of Way Limits

The LANE-Wagman Team has provided an overlay of our Right of Way (ROW) needs in comparison to those of the RFP Conceptual Roadway Plans and have shown them highlighted on our Volume II Conceptual Roadway Plans. As permitted by the requirements of the RFP, we have made adjustments to the ROW and easement locations and documented accordingly. Except as allowed for noise barriers, these changes resulted in a reduction in the total amount of ROW take and number of parcels resulting from design efficiencies (i.e. storm drain design revisions, SWM facility sizes, etc.). Some specific examples are noted below:

- Station 262+00 RT – stormwater management design eliminated the need for the basin resulting in the elimination of a conflict with the 54" water main
- Station 482+00 RT – Revised drainage design to eliminate Permanent Drainage Easement
- Station 409+00 to 411+00 RT – revised longitudinal drainage to eliminate Proposed Permanent Easement for Drainage

Furthermore, there are several specific elements of our ROW approach that are discussed in Section 4.4.5 that are worthy of note. Our approach develops the ROW acquisitions into prioritization groups along with segmenting the project by "Areas" with logical use/benefit. By combining these strategies, we have established multiple acquisition teams to deliver the ROW needs to meet the schedule necessary for each stage of construction and overall project success.

(g) Proposed Utility Impacts

The LANE-Wagman Team met with each major utility owner in this corridor multiple times and developed a detailed understanding of the location of existing utilities and how our design may impact these facilities. A detailed description of the utilities in the corridor, along with potential impacts and mitigation measures our design has taken to reduce or eliminate these impacts, are generally described below and discussed in greater detail in Sections 4.4.2 and 4.4.3 of this Technical Proposal.

Utility Company	Impacts	Mitigation
Dominion Energy	1 Phase, 2 Phase, 3 Phase, 6 Phase, and 9 Phase – overhead and underground – throughout the corridor	Adjust drainage where feasible to avoid underground runs. Adjust roadway footprint where feasible and within the confines of the RFP to avoid impacts.
Washington Gas	Various sizes (2", 3", 4", 6", 8", 12", and 24") throughout the corridor	Modify drainage design to minimize impacts.
Verizon	Aerial on poles and a 15-way ductbank	Drainage will be adjusted to avoid impacts to the 15-way ductbank where feasible. Where impacts cannot be avoided, our Team will construct a 9-way ductbank to facilitate Verizon's relocation.

CenturyLink (formerly Level 3)	Fiber Optic throughout project due to drainage walls, and other roadway elements	Adjustments will be made to each of the features impacting their lines where feasible.
Fiberlight	Fiber Optic throughout Project due to drainage.	Adjustments will be made to our drainage design where feasible to avoid impacts.
XO	144-288 pair FO on poles and underground 1, 2, 3, 6, and 9 Phase overhead and underground	Where feasible, grading and drainage will be adjusted to minimize potential impacts.
MCI	288 pair underground FO due primarily to drainage	Drainage will be adjusted to avoid impacts where feasible.
Zayo	864 pair underground FO due to drainage and grading	Only two impact areas. Minimal avoidance will be implemented.
Fairfax DPW (Sewer)	8" Sewer, 33" Sewer, and 36" force main crossing impacted by drainage and grading	Design avoids major relocations to the 8" and 33" sewers – only manhole adjustments were required.
Fairfax Water Authority	Various size water lines ranging in size from 2" to 54"	Drainage systems will be adjusted to avoid impacts where practical.
DC WASA (Sewer)	Manhole under the Difficult Run Bridge	Avoidance was not feasible. Manhole will be closed and two new manholes constructed up and downstream of the impacted manhole (outside of the bridge footprint).

(h) Noise Barrier Locations

Noise barriers will be designed in accordance with VDOT and AASHTO LRFD specifications and requirements. Noise barriers will be provided in the locations described in the RFP. Horizontal locations of the barriers have been adjusted in accordance with the Request for Revised Proposals to reduce cost and avoid major utilities. These locations are noted on the Conceptual Roadway Plans in Volume II.

In several locations on the project, the design will provide special design retaining walls in conjunction with noise barriers, reducing or eliminating impacts to right of way and / or utilities at the following locations:

- Station 219+75 to Station 223+00, Left
- Station 247+50 to Station 249+00, Left
- Station 294+45 to Station 299+80, Right
- Station 314+50 to Station 318+30, Left
- Station 329+50 to Station 334+50, Left
- Station 330+95 to Station 333+25, Right
- Station 338+85 to Station 344+00, Right
- Station 368+60 to Station 374+00, Right
- Station 375+25 to Station 384+25, Right
- Station 379+00 to Station 381+21, Left
- Station 384+60 to Station 388+00, Right
- Station 391+85 to Station 393+70, Right
- Station 449+50 to Station 452+25, Left

(i) Any Other Key Project Features

In addition to the above, the LANE-Wagman Team provides the following features depicted on the RFP Conceptual Plans and required in accordance with Attachment 2.2(b) of the RFP:

- ✓ The signalized entrance to Jill's House / McLean Bible Church will provide all movements including to and from Service Road #2.
- ✓ Provides signalization for the two-lane Service Road #2 from Lucky Estates Drive to the Jill's House / McLean Bible Church.
- ✓ Signalizes the eastern and western entrances for McLean Bible Church.
- ✓ Maintains all internal circulation patterns for McLean Bible Church.

Our Team will coordinate with the U.S. Postal Service to determine preferred locations and necessary pull-off areas, if required, to provide access to existing mail boxes. Additionally, we will provide boarding platforms at

12 existing Fairfax Connector bus stops within the Project limits as listed in the RFP. These mailbox and bus stop locations are shown in the Conceptual Roadway Plans provided in Volume II.

In addition to the above, our design will provide an esthetic package of landscaping and wall finishes that will give this corridor a unified feel which will be pleasant for all end users. Lighting will be provided where roadway lighting exists today and new lighting will be provided where the comfort criteria has been used for sag vertical curves. These improvements, along with fully integrated signalization and ITS components will provide a safer and more operationally efficient roadway corridor than exists today.

4.3.2 Conceptual Structural Plans – Route 7 Bridge over Difficult Run

The LANE-Wagman Team will completely replace the existing Route 7 bridges over Difficult Run. During the RFP/ Technical Proposal phase, both steel and concrete superstructure alternatives were evaluated, and the concrete superstructure was chosen due to **schedule and construction efficiencies and lower future maintenance costs**. We have enhanced the RFP design in the following locations:

Enhancement	Benefit to the End User
Modified abutment to be full integral abutment	• **Minimizes future maintenance** costs due to fewer elements and materials • One row of piles **reduces construction time** and **improves safety** • Eliminates bearings which **reduces further maintenance**
Use drilled shafts at piers	• Decreases the amount of excavation, which **minimizes environmental impacts** • Eliminates the need for cofferdam as a barrier to Difficult Run **minimizing stream impacts** • **Improves construction time** and **minimizes impacts to traffic**
Two phased construction	• **Minimizes construction time** • **Increased safety** due to reduced impact to traffic • No longitudinal construction joints in the deck **reducing future maintenance costs**
Multi-column pier	• Provide better natural lighting and visibility to trail users **improving public acceptance** • **Added safety** for trail and equestrian connection

The bridge will be constructed in two phases – the entire east bound (EB) bridge first; then the entire west bound (WB) bridge. This eliminates a longitudinal construction joint along the deck that could affect traffic and wheel lines, while allowing two lanes of traffic to remain open in each direction during all phases of construction. Additionally, fewer construction phases **reduces the amount of traffic impact**, and therefore **increases safety** to the Project.

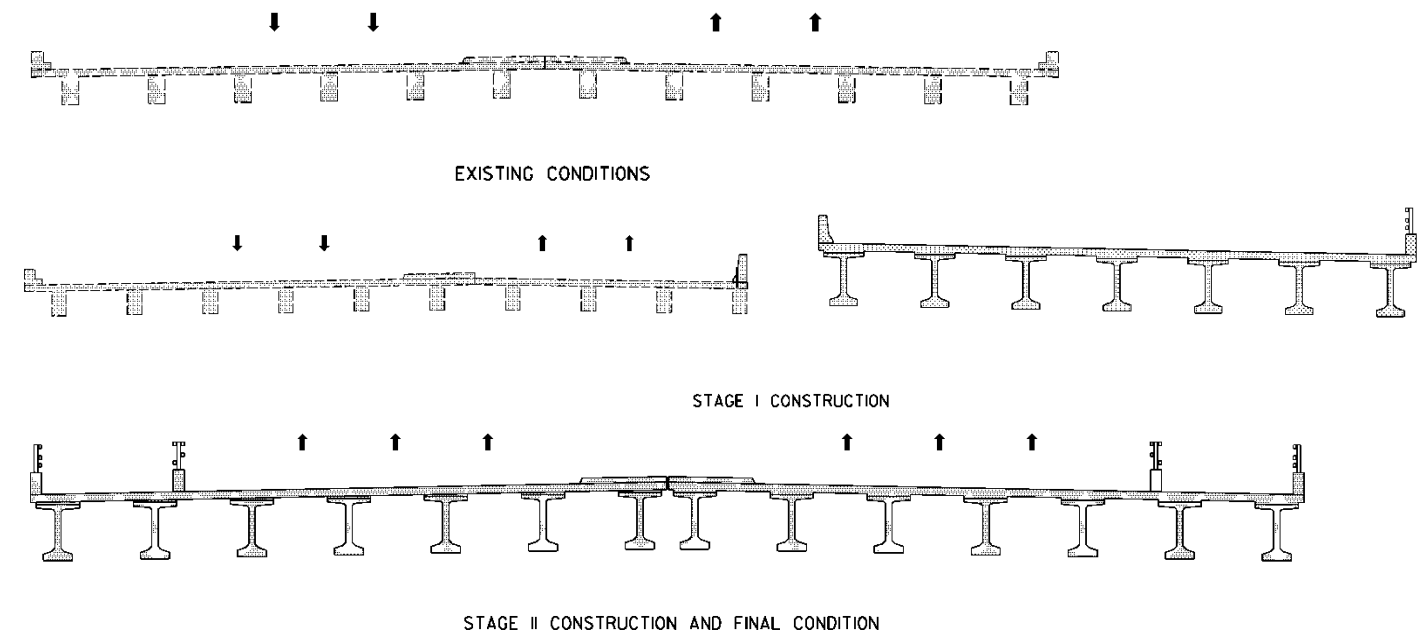


Figure 4.3.2-1. *Route 7 over Difficult Run Construction Phasing*

The bridge design meets the requirements of the RFP as well as the AASHTO LRFD Bridge Design Specifications and VDOT Modifications, VDOT standards, and IIMs. Additionally, the LANE-Wagman Team has requested and received the CII/SSI information that has been carefully studied and incorporated, where appropriate, into the proposed design.

The bridge superstructure will be jointless, in accordance with VDOT's desire to **minimize future maintenance concerns** that most often occur at joint locations. The beams will be 61" VDOT prestressed concrete bulb-T (PCBT) sections. The use of concrete beams allows the use of full integral abutments following the VDOT Manual of the Structure and Bridge Part 2, Chapter 17. Following the RFP requirements, architectural treatment will be used on the BR27C barriers with a black vinyl coated pedestrian fence for pedestrian safety. An at-grade approach slab will be used with a sleeper slab as required in the VDOT standards.

The substructure will be composed of full integral abutments supported on one row of H-piles that are protected from potential scour by Class I dry rip rap. The piers will be multicolumn piers supported by drilled shafts. Using piles minimizes interference at Pier 2 where Abutment B of the existing bridge is located. Additionally, drilled shaft foundations **minimize environmental impacts** that would result from deep excavations required for spread footings, which could also impact Difficult Run and need shoring measures such as cofferdams.

While wall piers were considered, multicolumn piers were chosen due to construction efficiencies. Additionally, multicolumn piers allow higher visibility of Difficult Run by users of the pedestrian and equestrian path, **increasing public acceptance**.

The use of full integral abutments eliminates bearings at the abutments, and an additional element that will require inspection and could potentially become a maintenance concern.

Additionally, a single-span bridge carrying the equestrian trail will be built over the Colvin Run stream relocation to take the trail from Colvin Run Road to Difficult Run. The bridge will be designed in accordance with the AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges and follow recommendations made in the Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds published by USDA Forest Service.

The bridge deck will be designed for pedestrian and equestrian loads and accommodate the punching shear load produced by horse hooves. The deck surface will be developed in coordination with VDOT and the trail owner for an easy transition between the path and the bridge. This transition is important because many animals will hesitate or stop completely if the transition is too abrupt. An effort will be made to use a consistent surface between both the trail and the bridge. A 54" railing will be designed. Additionally, a rub rail is anticipated to prevent horses and trail users from getting gear caught on the bridge railing.

The substructure is anticipated to be comprised of concrete abutments that follow the requirements of the AASHTO LRFD bridge manual and the VDOT Manual of the Structure and Bridge. The design will account for scour effects from the nearby Colvin Run.

4.3.3 Conceptual Intersection Plan – Route 7 & Baron Cameron Avenue/Springvale Road At-Grade Intersection

The Route 7 and Baron Cameron Avenue Intersection Improvement has been developed with the following design features:

- **The horizontal alignment through the intersection area has been positioned to minimize impacts to major utilities and facilitate maintenance of traffic during construction.**
- **The vertical profile has been optimized to allow for the re-use and overlay of existing pavement as much as practical in accordance with the RFP plans.**
- The profile from Baron Cameron Avenue to Springvale Road has been improved to remove the sharp grade difference through the intersection that exists today.

- Existing lane configurations on Springvale Road and Baron Cameron Avenue have been maintained or modified only to meet the design criteria established by the RFRP.
- A single left turn lane is provided in the eastbound direction with 505' of storage and a 200' taper. Triple left turns are provided in the westbound direction with 2000' of length including the tapers. The triple left turn lanes accommodate a passenger vehicle, a Single Unit Truck and a WB-62 turning simultaneously.
- **The eastbound single left turn lane and the westbound triple left turn lanes will be allowed to operate concurrently.** This will benefit the PM peak operations when the westbound triple left turn will obtain a majority of the timing and allow for the eastbound left turn to be part of this time usage.
- Pedestrians will be timed to allow for the safe crossing of all legs of the intersection using standard NRO practices.
- Baron Cameron Avenue and Springvale Road will be timed to run concurrently to minimize impacts on the overall traffic flow along Route 7.
- Green time will be maximized with the appropriate use of right-turn overlaps to enhance efficiency while not losing sight of pedestrian access and safety.
- Right turn lanes are provided in all directions.
- From eastbound Route 7 to southbound Baron Cameron Avenue, the island and the free flow right turn have been eliminated to facilitate the triple left turns from westbound Route 7.
- From northbound Baron Cameron Avenue to eastbound Route 7, the right turn lane extends eastward to Delta Glen Court.
- The existing frontage road in the southwest corner of the intersection is maintained with our design and one access point from the Route 7 right turn lane is provided.

4.4 PROJECT APPROACH

4.4| PROJECT APPROACH

The LANE-Wagman Team's Project Approach meets and exceeds the RFRP requirements while maximizing the benefits to VDOT and stakeholders. Our integrated approach to managing the Project from design through construction and ultimately final acceptance, was developed from on our Team's extensive experience designing and constructing similar projects for VDOT.

Our Project Approach is also enhanced through the inclusion of the following value-added personnel/positions who will help ensure key Project elements receive the proper attention and oversight.

Value-Added Position	Project Benefit
Environmental Compliance Team (Construction)	• Chris Monahan will have full-time staff on-site to ensure compliance with environmental commitments • Evaluate E&S controls daily
Utility Manager (Construction)	• Jason Hershey will support our Lead Utility Coordination Manager by overseeing utility relocations in the field with dedicated inspection staff
Quality Control Manager	• Tim Freeland, PE will be on-site fulltime to oversee construction quality control • Mr. Freeland is currently the QCM on the adjacent Route 7 project working with many of the same VDOT, QA, and contractor staff that will be assigned to this Project
MOT Superintendent	• Vincent Yuskoski is currently on the adjacent Route 7 project in this same role and understands the challenges of traffic in the corridor and the commitment to ensuring operational efficiency

4.4.1 Environmental Management

The LANE-Wagman Team believes in managing environmental risk and improving environmental performance by employing the same successful environmental management strategies that we have used for other environmentally complex projects such as on Route 29 Solutions and Route 7 over Dulles Toll Road.

Our Environmental Management Program (EMP) promotes compliance with the Project's environmental commitments by defining key actions and best management practices to comply with the commitments. We tailor our Team's actions to the needs of the project by identifying environmental risk management strategies, provide in-plan environmental constraints mapping, have active discussions about environmental resources, identify coordination touch points, define informational requirements for the acquisition required environmental clearances, provide environmental compliance assistance and evaluate our progress weighed against the Project schedule during our design and construction meetings.

Our Environmental Management Program Includes:

- Risk management strategies
- **Constraints mapping**
- **Compliance table**
- Agency coordination
- **Confirmation environmental commitments incorporated into the Project plans.**
- Quality Control/Assurance reviews
- Constructability reviews
- **Training to construction team including subcontractors**
- Monitoring and compliance assistance
- **Dedicated E&S Inspection staff and construction E&S team**
- **Environmental Team and E&S Inspection staff jointly perform monthly regulatory compliance Monitoring**
- Restoration of temporary impact areas
- Final Project closeout review
- Preparation of the permit close-out documentation

Our EMP incorporates the specific requirements and commitments contained in the NEPA document, and all Project permits and other environmental clearances such as Section 4(f), Hazardous Materials, Cultural Resources, Noise, and Erosion and Sediment Control, etc. Our Team has created in-plan constraints mapping for example at the road trace (Figure 4.4.1-3) to make environmental requirements readily available to design and construction staff to ensure the Project design and construction is protecting sensitive environmental resources. Another example of positive reinforcement to construction staff is the installation of exclusion fencing to avoid impacting specific environmental resource

areas throughout the Project. During the Project transition from design to construction, our environmental team will provide Project-specific training to all construction personnel and subcontractors on the areas of environmental resources and their compliance requirements and present the state and federal agency's expectations.

Unique Environmental Features our Team's EMP addresses:

- Cultural Resource and Section 4(f) Commitments:
  - Colvin Run Mill Park and Historic District
  - Great Falls Nike Park
  - Difficult Run Stream Valley Park
  - Reconstruction Rails to River Trail and Gerry Connelly Cross Country Trail
  - Avoidance of Northern and Southern Road Trace
  - Andrew Chapel and Brown's cemeteries
- Stream relocation requirements for Colvin Run
- Providing equestrian trail and Pedestrian Tunnel
- Wood Turtle Best Management Practices
- Noise Wall Aesthetic Treatments and Minimization of tree Clearing at FCPA property
- Managing Petroleum Contaminated Soil Parcel 076

Our EMP is effective at reducing risk to VDOT because it:

- Promotes efficiency and effectiveness across our team by encouraging partnerships with regulatory agencies, provides a substantial investment of resources to coordinate and communicate the environmental commitments across the Project team, and is committed to deliver VDOT an environmentally compliant project.
- Affords flexibility because it is a living document that readily adjusts to changes in the Project design and construction to document decisions made to comply with all regulatory agencies authorizations and VDOT's RFP documents.
- Establishes an environmental commitment tracking system to organize, retain, and document compliance. It includes quality assurance and controls reviews of the Project plans, requires environmental team sign off points throughout the design, requires periodic regulatory monitoring of the project during construction, provides incident management reporting procedures, staff training, defines records keeping, materials sampling protocols and analytical chemistry results, materials disposal and beneficial reuse, and regulatory agency communications.
- Provides practical guidance to our team to reduce the risk to VDOT for implementation of the commitments during the Project design and construction.
- Safeguards compliance as we commit to using the consistent and appropriately experienced environmental staff throughout the procurement, design and construction phases.

We analyzed the Project-specific environmental commitments and communicated them to the team to ensure they are aware of them and incorporated them into our Project plans, schedule, and cost proposal.

Our analysis considered the current environmental commitments as well as the anticipated regulatory clearances required to effect and impact the natural, cultural, biological, and recreational, conservation and geological resources within Project's limits of disturbance and those in the proximity of the Project corridor.

We developed Environmental Risk Management Strategies (ERMS) (Table 4.4.1-1) for each environmental risk category. These strategies are crafted to improve environmental performance to ensure we deliver an environmentally compliant project with minimal risk to VDOT.

Table 4.4.1-1. *Environmental Risk Management Reduction Strategies*

Risk Category	Impact	Risk Management Reduction Strategies
NEPA	Project Authorizations	▪ Streamline the NEPA re-Evaluation by avoiding expansion of the ROW from the RFP Conceptual Plans. ▪ **Communicate the Environmental Commitments to the Design team at the design status meetings** ▪ **Create Constraints mapping for Environmental Resources within Project area** ▪ Perform Quality Control/Assurance review of plans, reports and outside agency coordination requirements to ensure Environmental Commitments have been incorporated or addressed in the project plans ▪ **Track NEPA Commitments within a project specific Environmental Compliance Table with target milestone for each (Table 4.4.1-4).** ▪ Prepare Right of Way (EQ-201) and PS&E (EQ-200) Environmental Certification/ Environmental Checklist (EQ-103)
Cultural Resources/ Section 4(f) Properties	Encroachment on Resources	▪ **Coordinate with VDOT about the anticipated project activities located near and within the Section 4 (f) design constraint acreages of Great Falls Nike Missile Park, Colvin Run Mill Park & Difficult Run Stream Valley Park and within the viewshed of these historic properties.** ▪ Design and construct to minimize the removal of existing trees for noise barriers in areas adjacent to historic properties ▪ **Establish "No Encroachment Area" within the Project plans for the Road Trace (VDHR No. 029- 6068) on Colvin Mill Park (Figure 4.4.1)** ▪ **Establish "No Encroachment Area" within the project plans for Andrew Chapel and Brown's cemeteries.** ▪ Provide context sensitive architectural/aesthetic treatment for the noise walls and pedestrian tunnel portal. ▪ **Provide "top-down" construction for the pedestrian tunnel portal on Colvin Mill Park to minimize temporary construction impacts to the park** ▪ Put time in the Project schedule to allow for the final noise wall plans coordination with VDOT and the VA SHPO/ consulting parties. ▪ **Put time in the Project Schedule for the coordination time with Fairfax County Park Authority for the aesthetic treatments and elements of the project within the view shed** ▪ Historic properties are design constraints and affecting them beyond what is shown on the RFP Conceptual Plans will be avoided
Wetlands/ Streams	Fill and Channelization	▪ **Confirm field locations from Corps Jurisdictional Determination and prepare USM for stream compensation ratio** ▪ Incorporate avoidance and minimization measures into plans and determine compensatory mitigation ▪ Anticipate the standard wetlands compensation ratios 2:1 forested, 1.5:1 scrub-shrub and 1:1 for emergent for permanent wetlands impacts. ▪ **Install "exclusion fencing" around the non-impacted wetlands** ▪ **Seek to have the stream relocation to be considered self-compensating for the impacts or receive a reduced compensation ratio.** ▪ The best method to expedite permit acquisition is to purchase credits from an approved mitigation bank, of which there are several within the watershed ▪ We have already consulted with the approved banks in the appropriate HUC codes to verify that credits for all the types of wetland and stream impacts are available.

Table 4.4.1-1. *Environmental Risk Management Reduction Strategies*

Risk Category	Impact	Risk Management Reduction Strategies
Water Quality Permitting	Impacts to Wetlands and Streams	▪ **Coordinate with USACE and VDEQ to present a concept for single and complete project permitting following NTP.** ▪ Implement and track the key elements in the USACE recommendation in the preliminary least environmentally damaging practical alternative (LEDPA) decision with estimated impacts to 2.14 acres of wetlands and 3,185 linear feet of stream. ▪ **Provide detail survey for the channel relocation prior to starting construction and provide regular environmental compliance assistance reviews during the construction of relocated Colvin Run.** ▪ **Avoidance and minimization efforts reduced the estimated project impacts to wetlands by approximately 5% to 1.72 acres of wetlands impacted and to stream by approximately 10% to 2,872 linear feet of stream impacts.** ▪ **Once design has progressed to a detailed level to approximately 60%, we will prepare the permit application and supporting documents and submit to the permitting agencies**. ▪ We are prepared to secure the following permits: o United States Army Corps of Engineers (USACE) – Individual Permit o Virginia DEQ Virginia Water Protection Permit (VWPP) – Individual Permit o Virginia Marine Resources Commission (VMRC) State-owned Subaqueous Bed Permit o Virginia DEQ Virginia Stormwater Management Program (VSMP) o Virginia DEQ Coastal Zone Management Area (CZMA) Consistency Determination ▪ The Team will coordinate throughout design, including formal pre-application meetings with the permitting agencies. ▪ **Upfront coordination provides a streamlined permitting process by addressing agency concerns in the design and avoiding late stage redesign or lengthy or multiple information requests which expedites permit acquisition** ▪ Provide VDOT and the regulatory permitting agencies notification prior to beginning work in the jurisdictional areas ▪ At the completion of the Project, notify the VDOT, regulatory permitting agencies in writing of the completion of the work, and transfer VMRC to VDOT
Threatened and Endangered species	Potential Species and associated habit disturbance	▪ At NTP, we will evaluate potential effects to state and federal rare, threatened and endangered species (RT&E) species ▪ Verify project RTE status as regulatory agencies continually add new species information ▪ **Consult with USFWS for a Section 7 ESA Affect determination as the design of the project progresses. We will rely upon the findings of the Programmatic Biological Opinion for Final 4(d) Rule on the Northern Long-Eared Bat to clear this Project** ▪ Prior to any demolition or construction activity associated with bridges, the Design-Builder shall conduct a bat inventory in accordance with the VDOT Bat Inventory Guidelines for Bridges ▪ Visually inspect the Colvin Run /Difficult Run areas for any turtles prior to beginning work each day. If turtles are located notify the VDOT Project Manager, prepare and submit the VDGIF Wood Turtle Observation Form, and relocate turtles
Hazardous Materials	Hazardous Material Impacts	▪ At NTP, our Team will confirm the area of Petroleum Contaminated Soil on Parcel 076 ▪ **Develop a plan to safely manage the soil, coordinate our implementation plan and document monitoring and performance to comply with RFP Special Provisions for Management of this soil; this includes screening, sampling, chemical characterization, reuse and/or disposal** ▪ **Perform asbestos inspection following the NTP and perform required abatement action to appropriately manage, notify and document the action for the structure demolitions** ▪ **During our geotechnical investigation, our Team will determine if naturally occurring asbestos will be encountered, if necessary we will prepare an appropriate asbestos management plan for the excavation in those areas** ▪ Prepare and implement Spill Prevention, Control, and Countermeasure Plan ▪ Develop an incident emergency management plan if unknown materials are encountered

Table 4.4.1-1. *Environmental Risk Management Reduction Strategies*

Risk Category	Impact	Risk Management Reduction Strategies
Air	Air Quality degradation	▪ Adhered to during the construction: Open Burning restrictions; Cutback Asphalt restrictions; Fugitive Dust precautions and Special Provision for Volatile Organic Compound Emissions Control Areas ▪ Construction emissions performed in accordance with VDOT's Road and Bridge Specifications
Noise	Noise Effects on adjacent properties	▪ **Begin at the NTP, the Ambient Noise Monitoring, and TNM Modeling, Analysis and Design to support the early preparation of the Noise Analysis Design Report (NADR) This will facilitate the coordination and public involvement and Chief Engineer Approval** ▪ Complete final NADR ▪ Provide technical information and public involvement for the benefitted receptors ▪ Design Noise barriers outside the National Register-eligible limits of historic properties ▪ Provide the Noise abatement wall design to VDHR and Fairfax County Park Authority for review and comments ▪ Coordinate with first responders to ensure access for fire hydrants and other emergency based on Noise barrier design ▪ Coordinate with VDOT during design for appropriate locations for access to the backside of the proposed noise barriers ▪ Install proper barrier protection if the ultimate noise barrier location is within 32' of the travel lane
Erosion and Sediment Controls and Stormwater	Water Quality	▪ Our Team understands the environmental sensitivity for water quality on this project ▪ All work will be in accordance with all VDOT requirements, as well as the Virginia Erosion and Sediment Control (ESC) Handbook and Regulations ▪ **Our focus will be on the constructability of the project and the conformance of the phased stormwater controls plan** ▪ **We have found regular QA plan review minimizes in field changes and maximizes environmental protection measures to the receiving waters** ▪ ESC/SWM designs will be reviewed by a DEQ certified plan reviewer ▪ Secure the Virginia Stormwater Management Permit (VSMP) from VDEQ ▪ **Focus on the temporary measures to minimize impacts during construction and take remedial action as necessary for each** ▪ Implement strict adherence to erosion and sediment control ▪ Provide stormwater management basins and secure nutrient credits to provide compensation for the anticipated water quality impacts ▪ **Full-time E&S Manager (will hold RLD, ESCCC and DEQ ESC Inspector Certifications) with dedicated resources for repairs and maintenance** ▪ **Develop and implement a Site Specific Environmental Work Plan addressing environmental compliance and commitment. Train all employees and subcontractors prior to individuals beginning work on the project.** ▪ **Document Project Specific Environmental training with signatures and hard hat stickers for verification.** ▪ Daily documented inspections of E&S controls. Including documenting C107 interim actions notes and providing stabilization within 7 days on all disturbed areas. ▪ Maintain positive and proactive relationships, as we already established by the LANE-Wagman team project personnel on recent projects with NOVA District Environmental Personnel.

As an example of our Team avoidance and minimization of wetland impacts efforts, we incorporated a retaining wall at the pedestrian tunnel to avoid 0.16 acres of wetlands, .41 LF of stream impacts and further reduces the impacts to the park property (See Figure 4.4.1-2).

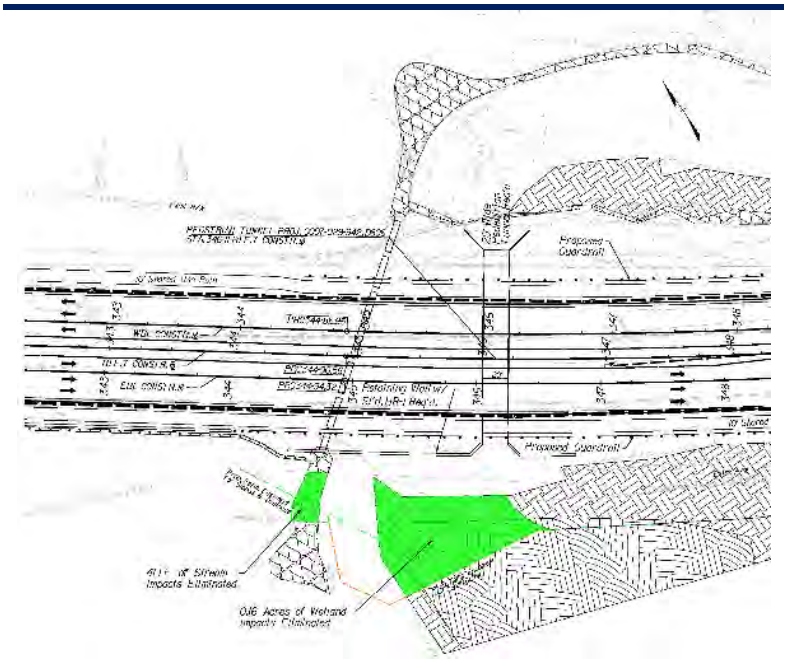


Figure 4.4.1-2. *Wetland Avoidance at Pedestrian Tunnel*

Our Team identified design modifications to minimize or eliminate impacts to the 54" water line in the area of Colvin Run. Our approach provides an environmentally friendly design as requested by the FCPA while complying with the FHWA Section 4(f) De Minimis decision and provides a design that satisfies the regulatory guidance from the USACE and VDEQ and is consistent with the Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) decision from the USACE. We understand that our Team is responsible for schedule, cost and any coordination and permitting for this revised design.

Our Team will coordinate our design refinements with FCPA to receive their concurrence with our environmentally friendly design of Colvin Run. We will provide this concurrence to VDOT for the completion and reevaluation of the 4(f) evaluation document.

Our environmentally friendly design provides the relocated Colvin Run channel design that incorporates step pools in the articulated blocks to reduce the lateral footprint, provides a grassed and landscaped 2:1 slope in place of the RFP designed retaining wall, shiftes the equestrian trail to between Route 7 and the relocated channel of Colvin Run, and provides an equestrian bridge crossing of relocated Colvin Run. This environmentally friendly design avoids the relocation of the 54" water line (Figure 4.4.1-2.1).

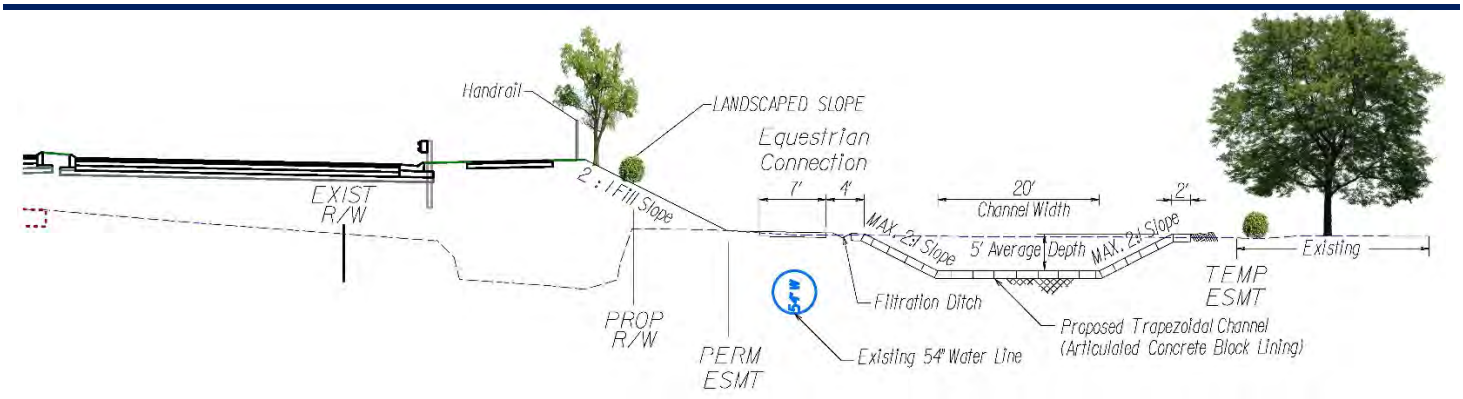


Figure 4.4.1-2.1. *Colvin Run Typical Section*

Our design does not require any additional Fee take of Permanent or Temporary Easements from Difficult Run Stream Valley Park and remains consistent with the current FHWA Section 4(f) De Minimis decision (Table 4.4.1-2).

Table 4.4.1-2. *Right of Way Takes from Fairfax County Park Authority Parkland*

Parcel #	FCPA Park ID	Fee Taking	Easements	
		Acres	Acres	Temporary
118 122 129 121 126	Difficult Run Stream Valley Park	1.05	0.86	3.78

Our Design, using avoidance and minimization efforts, reduced the estimated total project impacts to wetlands by approximately 5% of acres of wetlands impacted and to stream by over 10% of linear feet of stream impacts (Table 4.4.1-3).

Table 4.4.1-3. *LOD Impact Comparison*

Design Element	Design Iterations			LANE-Wagman DB Team LOD
	EA LOD (PH Design)	EA LOD (Corrected)	Revised EA LOD	
Total Project Stream (lf)	2894	3425	3185	2,832
Total Project Wetland (ac)	5.41	6.46	2.14	1.72

Our Team will provide the USACE with a compensatory mitigation plan and information in our permit application demonstrating that our proposed design of Colvin Run improves upon the information used to secure the USACE Preliminary LEDPA.

A key component to our ECM is environmental constraints mapping and we have incorporated this into the design plans. This approach has proven invaluable in **reducing both design and construction risk** because it shows the location of the environmentally sensitive natural, cultural, biological, recreational, conservation and geological resources within the project corridor. Below is an example of constraints mapping (Figure 4.4.1-3):

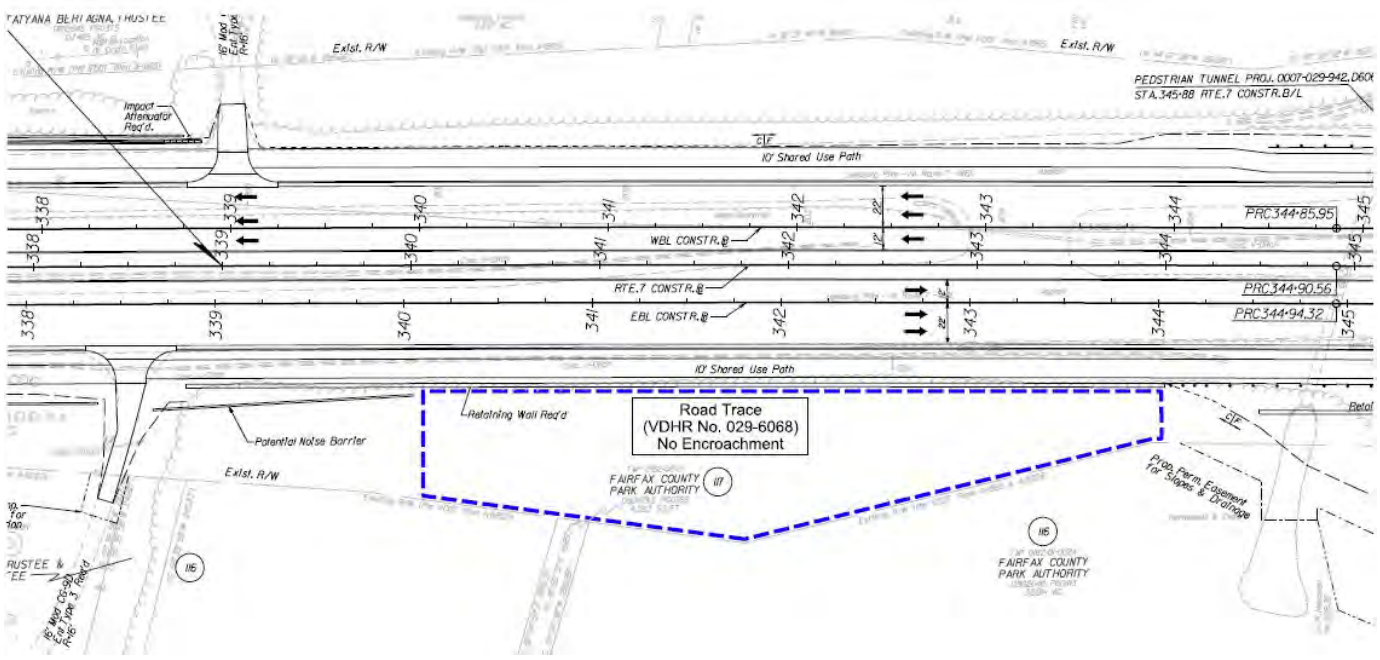


Figure 4.4.1-3. *Environmental Constraints Mapping for Road Trace*

Environmental Compliance

Our Team understands how environmental commitments are incorporated into design plans and are experienced at evaluating performance during construction. We have negotiated with USACE, VDEQ and VMRC to resolve environmental issues that arise during permit acquisition and construction. Our ERMS (Table 4.4.1-1) identifies actions to ensure the efficient delivery of the environmental clearances which **minimizes Project delays** and keeps the Project on schedule and in compliance with environmental commitments.

We will develop an Environmental Compliance Table (ECT), and an example is shown in Figure 4.4.1-4, that identifies the schedule for environmental clearances required for this Project. These timeframes are included in

the Project Schedule as hold points. We will use this table to track and document environmental coordination requirements, permit/clearance acquisition, and each environmental coordination touch point included in the RFP during Project development. Once the specific project environmental clearances or coordination touch points are obtained, our team will record them in ECT and it will be provided to VDOT to assist in completing the EQ103, EQ200, and EQ201.

Figure 4.4.1-4. *Sample Environmental Compliance Table (ECT)*

VDOT DB Route 7 **Environmental Clearance Table (ECT)** Start Environmental Work at Notice to Proceed - May 20, 2018	Environmental Clearance End Date	Environmental Clearance Status
Environmental Document		
• EQ103 Environmental Certification/Commitments Checklist		
• EQ200 – DOCUMENT REEVALUATION FOR PSE AUTHORIZATION		
• EQ201 – Right of Way Re-Evaluation		
Cultural Resources		
• Phase I Archaeology		
• Aesthetic treatments coordination Colvin Mill/Difficult Run/ pedestrian tunnel portal		
• Coordination of activities in viewshed of these historic properties		
Section 4(f) Resources		
• Confirm In plan ***de minimis*** Use Acres / consistent determination		
○ Great Falls Nike Missile Park de minimis Use 0.76 acre		
○ Colvin Run Mill Park de minimis Use 2.30 acres		
○ Difficult Run Stream Valley Park de minimis Use 5.69 acres		
Water Quality Permits and Compensatory Mitigation		
• Field Locate Jurisdictional Determination		
• Water Quality Permit Acquisition		
• Secure Wetland and Stream Compensation		

Our environmental lead will provide training for the construction team on the environmental resources, which resources must be avoided, and discuss the environmental permits/clearances requirements. The goal is to make sure our leaders are aware of all environmental conditions, environmental resources, and commitments to further reduce risk to VDOT. In addition, this training emphasizes the environmental team as a resource that is available to them to answer questions or resolve identified environmental issues. This helps keep the Project on-schedule and compliant with commitments. The Team will have refresher of trainings sessions throughout the Project.

Once plans are approved and released for construction, the same environmental staff who secured the environmental clearances will transition to the environmental monitoring and compliance assistance phase. As a first step in permit compliance, the environmental team will oversee the installation of exclusion fencing to non-impacted areas within the Project limits.

Figure 4.4.1-5 – *Install Exclusion Fencing to Protect Non-Impacted Wetland Area*

As the Project develops, the environmental team will provide compliance assistance during the construction of the stream relocation of Colvin Run. The team will continue to avoid and minimize impacts to environmental resources during construction by evaluating the locations of soil borrow/disposal areas, staging locations, and use of temporary/permanent easements areas and oversee the restoration of temporary impact areas. Additionally, at the completion of construction, environmental staff will perform a final site visit to document the final site conditions and prepare the permit closure-out documentation for the regulatory agencies including the transfer of any VMRC permits to VDOT.

Schedule Integration - Environmental activities, coordination requirements and clearances are identified in the ECT. The majority of the environmental work will start at the notice to proceed. Using this date, we established projected end dates for each environmental clearance required.

To establish our schedule, we considered the plan development process to ensure the design plans contain enough detail for grading, drainage, and temporary construction items to ensure the informational requirements to secure environmental clearances are secured to support the Project's design, right of way and construction schedules.

The Team will relocate the existing FCWA waterline in Area 5A in April 2019, which is the prior to June 30, 2019 permit expiration date. This allows the Project to remain "grandfathered" under the VDPES permit

Our Team plans for the installation of temporary cofferdams in Colvin and Difficult Run and their removal outside of the 1-October through 31-March Time-of-Year Restriction (TOYR). In addition, our Team planned land-clearing and grubbing within 300 feet landward of Colvin and Difficult Run outside of the April 1- September 30 TOYR both TOYR are protective of

State Threatened (ST) wood turtles. Our environmental team will conduct wood turtle site reviews prior to the installation of the perimeter silt fence. Once the silt fence is installed, each day until construction is complete; our environmental team will visually inspect the area for any turtles prior to beginning work. For positive reinforcement, each Team member that finds a turtle and completes the required VDOT notification will receive a sticker for their hardhats.

Our Team does not anticipate a TOYR for the Northern Long Ear Bat because we will rely upon the findings of the Programmatic Biological Opinion for Final 4(d) Rule on the Northern Long-Eared Bat (NELB) to clear this Project. To facilitate the project schedule, we have incorporated the bridge visual inspection to occur within our timeframe for clearing the T&E species.

To promote compliance, our environmental lead will participate in the Project meetings and perform constructability reviews to confirm that environmental commitments are reflected in the Project plans and being implemented during construction. These meetings and site reviews will occur concurrently with the dedicated E&S Inspector so any identified deficiencies can be discussed and appropriately corrected.

To keep the Project schedule, we will partner with the regulatory agencies, Fairfax County Park Authority and VDOT to present environmental engineering design solutions and to identify efficiencies that **minimize Project delays** while encouraging workable solutions to keep the Project on schedule and in compliance with environmental commitments.

4.4.2 Utilities

LANE-Wagman Team members coordinated with the same utility companies on the adjacent Project to the east.

Our utility coordination team has over 50 years of experience in utility design, coordination and conflict resolution in the NOVA District. Leading those efforts is John Myers, Utility Coordinator. Mr. Myers is a former VDOT NOVA Regional Utility Coordinator with strong relationships with each of the utility companies and their engineers that have facilities along this corridor. In fact, these are the same utilities that Mr. Myers and RDA, as the lead designer for Wagman, successfully coordinated with on the Route 7 bridge replacement over the DTR and DAAH DB project located at the eastern end of this Project. Furthermore, many of these same utilities were coordinated with during LANE's high successful 29 Solutions project – Mr. Myers was the Lead Utility Coordinator on that project as well.

Mr. Myers and members of our design and construction team have met with each major utility owner to obtain insights on critical elements of their facilities, strategize avoidance and minimization measures that will satisfy each of the utility owners, and discuss relocation preferences where avoidance cannot be achieved. Collectively, the utility owners have no desire to relocate their facilities and have expressed a genuine desire to work with our team to minimize disruptions. A database of each utility conflict has been developed to document the conflict with a snapshot of the design, noting the nature of the conflict and identifying mitigation/avoidance strategies. This database was then shared with the designers to implement design changes where feasible. The database was then updated to document whether the utility could be avoided or identified as a conflict that is being carried forward for relocation. This approach will be through final design to further evaluate updated utility designations, test hole data obtained by our Team, and design changes after NTP.

To lessen the strain on the utility companies, improve our chance of success and help better "attack" the project with multiple crews, our team is breaking the project up into six smaller segments, identified as Areas 1-5 and 5A. These projects are in themselves about the size of a regular relocation project so they can be approached by the utility as six separate jobs. This approach allows additional engineering resources to be assigned to Area thereby lessening design time. Furthermore, multiple jobs mean multiple crews to facilitate a faster relocation process. Finally, within each Area, we have identified which utilities are impacted by each stage of construction which establishes a prioritization list for relocation.

Upon award of the contract, the LANE-Wagman Team will continue to coordinate with each of the utility companies **(**Figure 4.4.2-1**)** to ensure that information is accurate, conflicts are minimized, and relocations proceed smoothly. Our Team will perform Quality Level B utility surveys to verify and supplement the existing SUE files provided with the RFP. Where conflicts are a concern, test holes (Quality Level A services) will be performed to obtain precise horizontal and vertical data. Working with accurate and detailed information reduces surprises in the field. The more our Team can do to avoid impacts, the better we (the Team, VDOT, utility companies, etc.) collectively can deliver the Project on-time and on-budget. In fact, some areas of the Project can be delivered to provide functional benefit well ahead of schedule. These opportunities are discussed in Section 4.5 Construction of the Project.

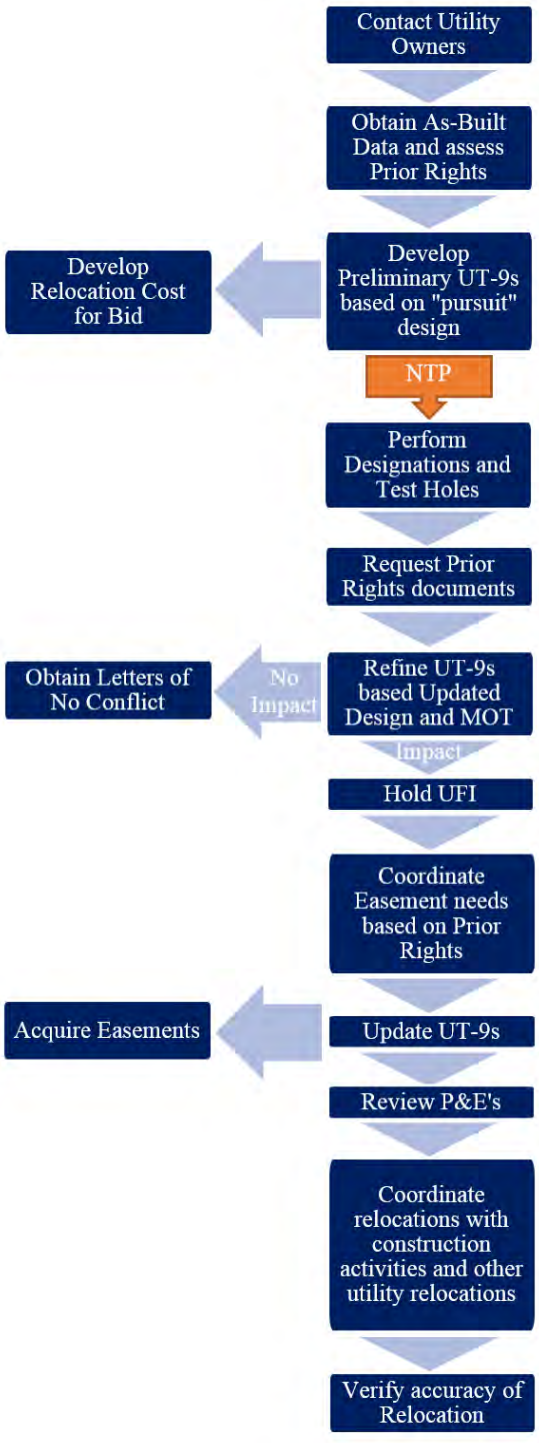


Figure 4.4.2-1. *Utility Coordination Matrix*

As the design progresses, so will our continued efforts to avoid conflicts and how best to protect each utility in the field. In advance of the UFI, we will send preliminary UT-9s for each utility that is anticipated to be in conflict. This allows the utility companies to come prepared to discuss details regarding relocation needs and schedule. At the UFI, the utility companies will be reminded of the Buy America requirements. Following the UFI, the LANE-Wagman Team will update the UT-9s, coordinate with the VDOT Utility Manager, update the ROW plans with required utility easements, and prepare master agreements for relocations.

With ROW Plan approval, our ROW Team will begin acquisition concurrent with the utility companies preparing their Plans & Estimates (P&E's), which will be based on updated UT-9s. Upon submission, all P&Es will be reviewed against our plans and each other to ensure that they conform to our design and do not create additional conflicts prior to submitting to VDOT for approval. RUMS will be updated at each key milestone to ensure complete documentation.

The first step of any utility work is mitigation. Because of the time implications that utility work has, regardless of whose cost it is, avoidance is always the best solution. Our approach creates a priority list of utilities where avoidance is most beneficial. Petroleum lines are first on the list due to long durations and huge cost implications as a result of relocation. **On this Project, we are able to avoid two of the three petroleum lines, with Williams Pipeline being only one in conflict.** However, based on new information provided in the RFRP, we have been able to avoid new or extended encasement of the Williams' lines. The only relocation required will be the gas line rectifier.

Next on the list is the 54" waterline due to the time it takes to install the relocation, as well as the time needed to produce the material. Furthermore, the extensive testing of large waterlines tie-in limitations associated with shut downs, and all associated risks make the relocation of this facility a high priority. Based on the revised language in the RFRP, our Team has been able to significantly reduce the impacts to Fairfax County Water Authority facilities, especially the 54" waterline. Anticipated impacts were originally calculated to be as high as 12,000 LF of 54" waterline impact. Based on design revisions specifically to eliminate these conflicts, we have reduced the impacts to approximately 1,200 LF – a 90% reduction.

Next, an in-depth review of the existing Verizon ductbank was performed in hopes of avoiding large portions of their existing 15-way ductbank and leaving it within the roadway footprint. This analysis was performed to see just how much of the ductbank could be saved, and how that impacted the Project Schedule with the additional splicing time that would be needed for multiple section cuts versus wholesale relocation.

Unfortunately, not everything can be missed and there remains many conflicts that will require relocation. With the large number of utilities on this Project and the depth of the coordination needed with each utility company, we summarized our approach on a company by company basis below.

To maintain consistent and constant coordination, our Utility Team, comprised of design and construction personnel, will remain involved until completion of each relocation. Furthermore, prior to commencement of relocations, our Team will meet with each utility contractor at our field office to discuss safety protocols. This **value-added approach of an integrated (design and construction) team from NTP to final relocation** has worked well on other D-B projects, including the aforementioned Route 7 project. As the Project transitions from coordination/design (described above) into construction, our utility inspection personnel for each major utility, working under Jason Hershey (Utility Manager-Construction), will be in the field with the utility relocation crews making sure the facilities are placed out of conflict, completing accurate daily reports on UT7 forms and documenting, via redlines, the location of the relocated utilities. This information will be provided to the Lead Utility Coordination Manager (John Myers) to develop digital as-builts with the Project DGN files. The graphic below (Figure 4.4.2-2) provides visual guidance on how we anticipate our Utility Team to operate. Information gathered during relocation operations will be utilized throughout the remainder of the construction to ensure plan revisions account for relocated utilities and to determine which lines are active versus decommissioned as the Project progresses.

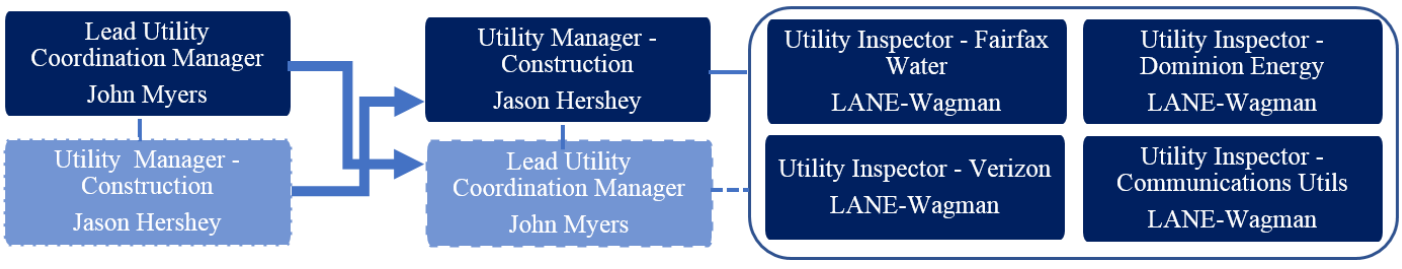


Figure 4.4.2-2. *Utility Coordination Matrix*

Fairfax County Department of Public Works owns multiple sanitary sewer lines through the project corridor. Overall, these lines cross the project and do not run for extended lengths parallel to the work area. Most of these lines will only need the frame and covers analyzed and switched out to ADA compliant lids based on where they fall in the typical section (i.e. within the SUP). However, there is one sizable relocation in the area of Carpers Farm Way where the existing Sanitary line meanders across multiple lanes of the proposed Route 7 travel way. Not only is this in violation of VDOT utility policies, but it has been deemed unacceptable by Fairfax DPW standards as well. A new manhole will be cut into the system, and an extension put on the existing crossing to reach the outside of the road way where it will turn and run parallel to the stream relocation before tying back into the existing system. Conversely, a potential, costly relocation at Colvin Forrest Drive is being mitigated through design adjustment to avoid a manhole that conflicted with the proposed gutter. Based on discussions with Fairfax County, an additional sewer line has been installed at Bishop Meade Road to feed a new school built by the County that is not reflected in the utility designation provided as part of the RFP Information Package. Upon NTP, our Team will ensure that our designation in this area is refreshed so that we can properly analyze the sewer line against the proposed roadway design. Unfortunately, no information is available at this time to determine if an impact is eminent. Furthermore, the County informed us that they are in the process of recommissioning the 36" SFM just west of the bridge over the equestrian trail that has been decommissioned and out of service for years. A rehabilitation project on the line is underway that we will continue to coordinate with to ensure the line is out of conflict with the project before beginning to utilize the pipe to cut down on any needed pumping and impact to their customers.

Fairfax County Water Authority (FCWA) is at the top of the list of risks and impacts to the Project. They own several lines through the project corridor but by far the most worrisome is a 54" line constructed in the late 1960's/early 1970's that will be costly and very time consuming to relocate. Our utility and drainage teams have been working hand and hand to mitigate as many conflicts with this line as possible. To add further complication, FCWA Engineering has stated that due to the size and potential customer impact, shut downs of the line for tie-ins will be limited. However, due to significant flexibility provided in the RFRP, we were able to reduce our impacts to the 54" to two locations totally approximately 700 feet and 500 feet. In many cases, the design changes provided to avoid the 54" waterline also avoided other waterline impacts. Although we have significantly reduced impacts to the 54" line, it remains a high priority for avoidance and is second only to the petroleum pipelines. Testholes will be performed immediately following NTP to further explore design mitigation strategies. FCWA has expressed a desire to not move the 54" line more than absolutely necessary, making them a collaborative partner sharing in the goals of our team.

Our Team met with FCWA several times to ensure that our design protected their 54" line to the greatest extent possible and where relocation was required, we fully understood the constraints and requirements.

As noted above, impacts to the 54" waterline and its associated relocation are the single largest risk to the Project. With the massive cost and time needed to relocate facilities of this size, it causes a huge swing in schedule and budget. With John Myers working out of the Manassas office, he is just minutes away from the offices of Michael Baker (FCWA's designer for all waterline relocations on the project), and envisions in-depth joint conflict evaluations (i.e. reviewing testhole results together to determine if mitigation options are available other than relocation, and where unavoidable the most cost-effective relocation is designed). This in-depth "unified" effort will reduce the time needed for engineering, lessen the impacts, and shorten the durations of the relocations needed in the field.

DC Water (aka DC WASA) owns a 42" Sanitary Main known as "The DC Collector" that crosses the Project at the proposed bridge over Difficult Run. Our analysis of this pipe shows it to be clear. However, the manhole in the final configuration will be under the new bridge, and approximately 3 feet below the bridge beams. This will make the manhole inaccessible as a safety harness and tripod will not be able to be set up above the manhole for entry. We subsequently contacted DC Water and their recommendation is to close access to the manhole in question and to construct an additional manhole on each side of the bridge to allow them fully video inspection from either side.

Dominion Energy has aerial power distribution lines running down both sides of Route 7 throughout the Project corridor. As a result, over 100 poles will be impacted by the design and construction. To facilitate coordination with Dominion, a layout of a proposed pole line will be provided by our Utility Team thus reducing the time and effort they have to spend on engineering. An added benefit of our Team providing this enabling work is that we can avoid, minimize and mitigate impacts to adjacent properties and utilities, to include the petroleum and large water lines, based on our in-depth knowledge and on-going coordination. Areas of problematic realignment (i.e. cemeteries) will be preserved as is. Over all, Dominion's relocations will be broken into smaller packages to align with the construction phases and sequencing for the project. This will allow multiple crews to be assigned to the overall project and get the work done faster, allowing the other utilities attached to Dominion's poles earlier access for relocation. As part of the RDA Utility team, Mr. Robert Terry (retired from Dominion Energy) brings almost 40 years of electric design, many decades of those in the highway relocation section, and many of those as the manager of their relocation engineers. The engineers that will be assigned to this project from Dominion will have learned how to do their job from Mr. Terry. He will be key to minimizing the work needed to relocate the facilities while maximizing the ability to approach the project in a manner that will get Dominion complete faster. For decades, Mr. Terry has been the "Go To" guy for Dominion in Northern Virginia and has been the person VDOT Utilities and Utility Construction calls in when there are issues. This experience in problem solving and his ability to work through problems will be key to conquering unforeseen challenges.

Colonial Pipeline has two petroleum lines crossing in the vicinity of Station 171+00. RDA has recent experience with those same lines having worked with Colonial Pipeline on a Prince William County project. In fact, based on our discussions with Colonial, the same project manager has assigned to this project which allows our Team to build upon the good relationship already established. Pipeline relocations are historically expensive even for small protective measures. This is especially true for Colonial and therefore is at the top of our priority list to avoid, minimize and mitigate. At this time, our design is thought to be clear of conflicts with the Colonial lines. To document and gain concurrence, we have prepared and transmitted an exhibit has been transmitted to them for their confirmation.

Columbia Transmission has three large lines crossing the project that pose an expensive and time-consuming relocation if needed. Unlike Colonial and Williams, Columbia Transmission has very little experience with the VDOT process and paperwork. As such, we will be there to help guide them through the process. Our Lead Utility Coordination Manager, John Myers, had almost 15 years of experience at VDOT prior to moving to RDA and is well versed in guiding utility companies through the process and ensuring they get all the documents they need to satisfy the VDOT Utility Manual requirements. At this time, we believe our design is clear of conflict with their facilities and an exhibit has been provided for their concurrence. Once we are granted NTP for the project we will help them complete a letter of no conflict to have on file.

Williams Pipeline (TRANSCO) has four lines crossing just west of Baron Cameron. When our team approached Williams about the project at the end of September 2017 (during a visit to their Charlottesville office while discussing a different project), they had already looked at the project in-depth and determined a relocation of their facilities were probably needed. VDOT worked with them to get field investigation work completed on these lines to see the extent of what needs to be done. While the revised RFP language and information allows us to avoid encasement extensions that were originally required by TRANSCO, relocation of their equipment for the project will still be required. In an email, TRANSCO documented that a rectifier, part of their cathodic protection equipment for the project, will need to be relocated. Additionally, the design-builder will bear the cost of onsite TRANSCO inspectors whenever work is progressing over their lines. With these changes, the relocation cost of the project incurred for TRANSCO has drastically reduced.

Washington Gas Light Company (WGL) has a 16-inch transmission line that will be upgraded to a 24-inch. Our approach and integration with WGL as it relates to the upgrade is discussed below in Section 4.4.3 and includes the main down Baron Cameron and all service taps/feeds and regulators

needed for the transmission line or in conflict with the project. However, WGL also has some smaller distribution lines, feeds, and service lines at various locations throughout the project that we will coordinate independent of the transmission line upgrade.

Communications facilities through the eastern section of this project primarily run through two ductbanks – one owned by Verizon of Virginia and the other by Fiberlight. At Beulah Road, the Fiberlight ductbank ends and Level 3 (CenturyLink) and Verizon Business have independent facilities through most of the remainder of the project to the west. Due to limited space with the other existing and proposed utilities, as well as potential proposed drainage conflicts, we believe that a joint ductbank system to house all the conduit and cable for these providers to include their leases is the most cost-effective solution. Furthermore, if our crews build the ductbank, risk of it being constructed in the incorrect location and conflicting with other proposed work is mitigated. Finally, it gives our team more control over the schedule, allows us to get the conduit in the ground much faster, and eliminates multiple crews from different utility companies attempting to install conduit in the same location and at the same time. With the conduit installed for them, each utility company would only need to pull cable and splice – greatly reducing the time needed for the relocations. Lastly, installing the conduit will foster a cooperative relationship amongst each of the utility companies that will pay dividends if unforeseen issues arise.

Below are all of the communication companies that we have reached out to and met with during our coordination of the project. Some own the ducts they are in as described above, while the others lease from them.

Verizon of Virginia – Verizon's main is a 15-way ductbank running down Route 7, mostly in the median. This ductbank contains both copper and fiber facilities owned by Verizon as well as other communication companies. Additionally, Verizon (FIOS) has fiber optic lines contained in separate conduits. We met with Verizon and expressed that we are considering constructing a ductbank for them for their facilities. Although hesitant at first, ultimately, they agreed that a DB constructed ductbank was advantageous. As a result, they also expressed a desire to include the aerial cables in the ductbank if approved to move forward. This would drastically reduce the time and space needed for a second pole line. They were very definitive that if they were not currently on a Dominion pole, they would require their own pole if they were to remain aerial. Further discussions to limit the impact of the new ductbank to the corridor focused on using handholes in lieu of manholes, which would lessen the footprint of their facilities, as well as reduce time needed for relocation. Once again Verizon was amenable. Engineering relocations of this size will be challenging to the small consultant company Verizon of Virginia presently utilizes, but as part of the RDA Utility team, Bill Suter with almost 30 years of experience working with Verizon will be on hand working with them to develop the engineering plans. Mr. Suter reviewed this project while he was still at Verizon, early in the scoping process, and has a full understanding of the existing facilities and work that needs to be done by the Verizon Consultant. We will be there with them in the design phase to ensure the relocation has the least impact and risk to the schedule as possible.

As an unintended benefit, implementing design changes to avoid the 54" waterline has also reduced impacts to large portions of Verizon facilities. However, the biggest benefits were realized around the Baron Cameron intersection due to the removal of the interchange configuration.

Verizon Business primarily owns Fiber Optic cable inside the Verizon ductbank system. However, there are a few areas where they have their own conduit which will be accounted for in the joint trench ductbank.

Fiberlight has a multi-conduit ductbank running from the eastern end of the project to Beulah Road. Our team has recent experience working with them on the adjacent Route 7 project. As a result, we anticipate having to provide additional assistance to Fiberlight in order expedite their relocation in a timely manner. While they house their own cable in the ductbank, they also lease all spare conduits to other communication companies.

AT&T Long Distance has fiber facilities running through the Verizon ductbank. Additionally, they own an abandoned conduit and manhole system that we believe still houses splice cases for the active cables inside the Verizon ductbank. Currently, many of the AT&T splices utilize the abandoned manholes, however, when relocated, they will only require handholes to splice in which will be a faster, cheaper, smaller footprint option. If the Verizon ductbank remains in place, these manholes will need to remain as well to house the existing AT&T splice cases.

AT&T Local owns and operates fiber optic systems inside the Fiberlight ductbank. They will follow Fiberlight's lead on pulling and splicing operations.

Zayo Group owns fiber optic cable in both the Verizon and Fiberlight ductbanks. Our team met with Zayo to discuss their "overbuild" request on the project. Their schedule and our schedule of the award of this Project, do not align and our concerns were expressed accordingly. However, while we told them that we would look at it with them more closely after award, we strongly encouraged them to develop a temporary solution and even suggested some temporary options to carry their needs between the end of 2018 and when the plans would be to a point they could build a new line out of conflict or join a joint trench ductbank for their permanent solution.

CenturyLink (formerly Level 3 Communications) owns cable mainly in the Fiberlight system at the east end. However, once Fiberlight's system turns and leaves the Project, CenturyLink maintains their own conduit through the remainder of the project. This will be placed in the joint trench ductbank.

Not listed on the RFP documents but present is ***Qwest Business Communications (a CenturyLink company)***. They lease conduit from Fiberlight in this area.

XO Communications is another provider in the corridor not listed in the original RFP documents, but found on-site. They are mostly aerial through the Project and located on the Dominion Energy poles. However, consolidation of their facilities into the joint ductbank where they go underground will be provided as previously discussed.

Although **Cox Communications** holds the rights to provide cable television to this area, they do not hold the same rights and privileges as the other communication companies described above. Regardless, they reside mainly on the Dominion Energy poles and will transfer to the new poles wherever possible. During RDA and Wagman's recent project, Route 7 Widening and Bridge Rehabilitation over the Dulles Toll Road, we developed a very in-depth and productive working relationship with their local area personnel and will carry this relationship into this project to make the relocation as easy and painless as possible.

Unknown Utilities are always a possibility. In an area as this, the chance of finding several unknowns is almost assured. When an unknown utility is found, we will methodically trace the facility to determine if it is an issue, and who owns it if it is. Our Team's years of experience helps in these instances. Most the time, our team can make an educated theory on the facility just based on its location, what the material of the facility is, and the condition of the facility. As an example, an unknown facility was found on Route 29 Rio Road in Charlottesville. The field foreman of the work contacted the utility manager at 10PM at night with the information. Based on the size, location and material of the facility, the utility manager was able to make a very educated opinion it was likely an abandoned signal cable feeding an abandoned loop detector. While work resumed with care around the line, it was confirmed the next day by tracking the line out with a locator that it was in fact leading to an abandoned loop and could be cut without further concern. While a small window of reduced production was encountered to perform due diligence, a much larger window of lower production was avoided due to quick thinking and in-depth experience. A lesser experienced Team would have contacted various know fiber carriers in the corridor and waited on their responses to confirm it was not their line. However, when experience tells us that a facility is probably an active fiber line, we have no other choice but to lean on the cooperation of our friends at the utility companies. Our years of experience and mutual respect with the area utility companies

affords us improved response time and cooperation to track these facilities down. Our counterparts at the utility companies know us, and know that we are trying to protect their facilities and interest as much as our own.

4.4.3 Washington Gas Transmission Line

Our Team met in depth with both the WGL project manager, Jeff Hicks, and the manager of their transmission group, Tom Fryer, to discuss WGL's plans and approach to the Project and how we envisioned the partnership working during the construction phase. We were pleasantly surprised to find that many of our concerns were already in the forefront of their approach to the Project and that they genuinely had intentions to work quickly and efficiently to stay ahead of our construction, while at the same time working hand and hand with us to make sure they placed their facilities out of conflict.

The LANE-Wagman Team met with WGL to establish an in-depth understanding of their operations and intended approach and fully integrated their CPM schedule into ours.

To begin the partnership, WGL will co-locate their project designer, EN Engineering, in our design offices to work with our coordination team as well as the roadway, drainage and noise barrier design teams. This will ensure that their design does in fact provide for an installation of the new pipe out of conflict with the proposed features of the Project. As they prepare their designs, our Team will integrate their design into ours as a 3D model that we can project to the plans and cross sections throughout the corridor. We have already, as part of this pursuit, integrated their CPM schedule into ours, letting the natural progression of the schedule show us key areas they need to focus efforts in to allow the Project to proceed on a schedule that will meet the end dates required. With WGL committing 4-5 crews working on the 24" installation, this should allow us to best utilize those crews in the areas most needed to stay on schedule.

Given that their existing line must remain in service during extended periods of our construction to limit the number of shutdowns and cutovers, extensive testholes will be performed on the existing line at key points inside the areas we are constructing first and those with long duration items that have to be started early. The testholes will be analyzed against the design to see if the existing transmission line is in conflict with our Project. This provides the greatest amount of time and opportunity to avoid, minimize or mitigate these conflicts. Where feasible, our work can proceed while WGL continues to pursue their installation in sequence. Where this is not possible, WGL has committed to moving additional crews into these priority locations to install the proposed line and provide temporary tie ins when completed to allow for construction to proceed. The key in these areas will be to install as much as possible before using our 1 time a year cutover to gain access to as much of the Project as possible. While the extensive test-holing should avoid unexpected conflicts, if any other conflicts should arise we did not account for, these will be analyzed on a location by location basis and a joint meeting with WGL project management to see how best to account for the unexpected impact and how best to address it and keep moving forward on schedule. Our Team's approach to breaking the overall Project up into smaller segments will benefit both companies, allowing WGL to pursue their installation in areas of the Project that LANE-Wagman are not and being able to focus on pre-determined sections of the larger project to better direct their (and our) resources. This will help in the planning of the work, allow forecasting of possible issues months into the future, and pro-actively adjust labor assignments to ensure there is not a slow down due to the WGL's work.

Unforeseen problems are anticipated in a project this size. However, with the Lead Utility Coordination Manager's extensive experience working with utilities in the field and RK&K's gas design expertise, we have the experience to find creative solutions when faced with challenges.

At the same time the transmission project is being pursued, WGL has committed to allocating separate distribution crews to perform the relocations of the distribution pipelines in conflict with the proposed Project. This will allow the transmission project to operate independently with the distribution impacts.

Based on follow-up discussions with WGL resulting from the RFRP, WGL delayed their initial work to better align with the BAFO selection and NTP of the successful bidder. We do not anticipate any appreciable changes associated with their work.

4.4.4 Stakeholder Communication

In addition to maintaining the strong relationships VDOT has created through its outreach to date, the LANE-Wagman Team will undertake a comprehensive proactive communications plan that will provide all key stakeholders – Route 7 users, direct-impact neighborhoods, large entities (major employers and businesses, schools, places of worship, etc.) and county, state and federal elected representatives – the information they need to anticipate and accommodate the construction process that will unfold over the ensuing six-year project. Success in public outreach will be a key determinant in the Project's overall success.

On LANE's 495 Express Lanes project, over 1,000 public outreach meetings were conducted and, in coordination with VDOT, the Team kept the public involved through various media methods: project websites, routine newsletters, and brochure mailings to residents and businesses.

Many constituents appreciate the long-term benefits of road-improvement projects like the Route 7 Improvements, and will reasonably tolerate associated short-term inconveniences, when provided accurate information about what changes to expect in their environment, the nature of activity that will occur, the anticipated duration and opportunities to stay abreast of schedule and plan alterations.

Northern Virginia residents are sophisticated information consumers and providing multiple sources of easily accessible information about the Project will help ensure the Project proceeds as smoothly as possible. At the same time, however, it should be recognized that the rise of social networks in recent years has created an unprecedentedly fast and efficient means of organizing opposition, which has the potential to put the Project in the hot seat and on the defensive. Our outreach efforts are aimed at setting expectations in advance and proactively managing the dialogue surrounding the Project.

The LANE-Wagman Team will prepare and execute a communications plan that will inform the public of the Project status as the Project advances. Participating in the project management meetings will enable the communications team to produce an ongoing calendar of upcoming activities and their potential effects on the community. That calendar will be shared and discussed during management meetings, and the activities identified on the calendar will drive the content of communication to the community. Our plan is designed to be flexible so as to accommodate unforeseen challenges as well as opportunities and to seamless transition from design to construction phases.

In support of VDOT, Public Outreach will be led by John Undeland (Undeland Associates) with the assistance of Christopher Reed (Rinker Design Associates). Undeland has teamed with RK&K on a myriad of sensitive local projects including the Woodrow Wilson Bridge (also with Reed) and Intercounty Connector and has worked separately on the Transform 66 Outside the Beltway and Transform 66 Inside the Beltway projects. Reed was on the LANE team that recently completed the Route 29 Solutions Project for VDOT in Charlottesville and brings front-line "lessons learned" from that project.

Our Team has handled public outreach for some of the region's most sensitive, high-profile projects including:

- **Route 29 Solutions**
- **Transform 66**
- **Wilson Bridge**
- **Intercounty Connector**

Design Advisory Group/Construction Information Group

VDOT's established Working Group has effectively involved the public and other stakeholders and fostered overall trust among external audiences. We propose altering the function of the working group into a design stakeholder advisory group, in which members meet with Project design leads quarterly or as needed during the design process and as needed during construction. On VDOT's behalf, the LANE-Wagman Team will manage the advisory group, establish meeting schedules, agendas, prepare materials and facilitate the meetings. All information will be coordinated with the VDOT Project Manager before being provided to the group or other members of the public.

Engaging stakeholders intensively early on in a properly defined and disciplined process can:

- Empower stakeholders to have a genuine impact on matters such as the appearance of noise barriers, landscaping and potentially more significant design elements.
- Identify improvements to the Project that are desired by the community and can be achieved with minimal to no cost and schedule impact.
- Generate public good will and establish a "favorability bank" that can be drawn against during particularly impactful construction
- Involved stakeholders can become third-party advocates

Early and ongoing contact with key stakeholders is crucial to building and maintaining successful relationships that can pay dividends over the life of the Project. Engaging in one-on-one discussions, at which stakeholders get to know whom they may contact with questions or issues, is essential. Stakeholder contact will be initiated at Notice to Proceed and will occur on an as-needed basis as well as at key milestones such as: design start, utility relocation, right-of-way acquisition and construction starts. All such contact will be performed and coordinated with VDOT.

In short, a well-executed stakeholder process gives supporters additional reasons to back the Project, it can win over fence-sitters and reasonable opponents and it can leave those remaining in opposition are fewer in number and isolated.

Successful design stakeholder processes require transparency, the setting of realistic expectations and a clear definition of the process. The following elements are key to a successful stakeholder involvement process:

- Defining scope – Clearly explaining what is on and off the table is critical to ensuring the process stays on point and does not produce recommendations that are out of scope and budget.
- Defining membership – The transition of the Project is a natural time to evaluate the membership of the stakeholder advisory group to ensure the right constituencies are represented.
- Defining calendar – It's essential to communicate that the period in which the stakeholder panel can have input is necessarily brief and finite so that the design can solidify to keep the Project on schedule.
- Defining how input will be considered – In exchange for volunteering their time and effort, stakeholders want and deserve to know how their input will be considered, so explicitly explaining how the Team and VDOT will evaluate recommendations is essential.

Once the design matures to the point at which major changes are not possible, we advise continuing the working group but having it operate on more an informational rather than participatory basis and for it to meet less frequently. The group would serve as a primary conduit to the community on progress milestones and provide advance notice about upcoming construction work and other Project updates. Meeting on a proposed quarterly and as-needed basis, a series of more informal meetings, perhaps entitled "Coffee with (DBPM/Construction Manager/etc.)," can provide an outlet for interested residents and others to stay abreast of the Project.

Additional Communication Channels

In addition to the above-noted efforts, the following package of additional communication initiatives are proposed to reach stakeholders affected by the Project:

- **Public Meetings** - At the outset of design and construction phases as well as at periodic intervals during construction, we will schedule "pardon our dust" public meetings at convenient locations to enable residents to learn about the Project and have their questions answered.

  The "open house" meetings will feature Team members exhibiting and explaining display boards that overview the overall Project scope, upcoming construction activity, the anticipated schedule, how traffic impacts will be minimized, environmental issues, photos of progress and other issues of public interest.

  In lieu of formal in-person presentations, we propose pre-recorded presentations shown on a loop, in which a narrator overviews slides discussing the Project's scope, anticipated impacts and key milestones. The approach helps ensure all attendees receive an orientation, no matter when they arrive, and helps

avoid instances when critics attempt to commandeer the floor and focus attention on their individual concerns. Following the recorded introductory presentations, technical staff will answer questions raised at each of the information display stations, helping to maintain order and a desired tone, while providing meaningful opportunities for residents to have their specific issues addressed. The events will serve as an important feedback loop from the public to the Team, creating opportunities for team members to hear directly about concerns that may exist among impacted residents. Finally, these forums also can preempt requests from community organizations for visits to individual meetings by Team representatives.

- **HOAs and Community Groups** - VDOT has noted there are 56 homeowner associations (HOAs) and four churches in the immediate vicinity of the improvement corridor, each with members that will be impacted by the Project. Most of these organizations have newsletters and social-media channels of their own, which we can use to reach their members with regular Project updates and frequent reminders about how to subscribe to the Project's dedicated social-media and online channels (see below). HOAs and other community groups along the corridor will be offered in-person briefings during the life of the Project. Issues and concerns voiced at these meetings will be tracked and responded to in a timely manner.

  We will also work with the Fairfax County government and local elected officials to identify additional HOAs in the area to provide Project updates. The more residents who can access direct sources of information, the more likely that timely information will flow out into the community.

- **Local, State and Federal Elected Representatives** - Ensuring elected officials and their staffs are regularly apprised of activity in the improvement corridor is a strategic focus. With infrastructure projects, no one likes surprises, least of all elected leaders to whom residents often turn for answers. By keeping these offices regularly informed about the status of the Project, temporary traffic-flow changes and other conditions that are likely to prompt calls from residents, VDOT can assist them as they provide service to constituents and help them help the Project by being good sources of information to the community.

- **Business Organizations and Transportation Groups** - The adjacent and fast-growing Tysons Corner area, already the 12th largest business district in the U.S., hosts 26 million square feet of commercial office space and 6 million square feet of retail space. Leading businesses in finance, media, government contracting, accounting, technology and hospitality dot the area, bringing an influx of more than 100,000 workers daily, a sizable segment traveling via Route 7. Many of these businesses belong to Northern Virginia chambers of commerce and other business and professional associations, which can be conduits of information to those commuters. Large retail landlords and property owners, in the area's two super-regional malls and smaller specialty stores, can also be a means of sharing information with workers who may be impacted by the Project. As part of our outreach, the LANE-Wagman Team will identify organizations that reach these audiences and encourage them to publicize the Project's information sources among their members. Targets include the Tysons Corner/Galleria, Northern Virginia and Fairfax County Chambers of Commerce; Fairfax County Economic Development Corporation, Northern Virginia Technology Council; Northern Virginia Transportation Alliance; AAA; Greater Washington Board of Trade; Hispanic Chamber of Commerce of Northern Virginia; Northern Virginia Building Industry Association; Virginia Asian Women in Business; Virginia Asian Chamber of Commerce; and others. Undeland Associates has strong relationships with the leadership of several of these organizations.

- **Places of Worship, Fairfax County Park Authority, Fairfax County Schools, Fairfax Connector, Fairfax County Police/Fire/Rescue, Foreign Embassy, Utilities, Cemeteries and Others** - The diverse corridor is studded with a variety of specialized uses and constituencies that the Project must keep involved with and apprised of the Project. For example, the reconstruction of the intersection at the Project's eastern terminus will have bearing on the comings and goings of McLean Bible Church's 10,000 parishioners. Temporary traffic changes may affect the schedules of Fairfax Connector Route

574, which runs along the entire Project corridor, as well as a variety of school bus routes. Updates must be shared with first-responders to enable them to reach emergencies efficiently. For such entities that are not members of the above-mentioned Design/Construction working group, the Project outreach team will offer individual briefings and meetings for these stakeholders in advance of key Project milestones. They will also be added to the **project eNews** distribution list, which will be periodically prepared and sent to all stakeholders.

- **Traffic and Transportation Reporters** - The impact of traffic changes in the Route 7 improvement corridor has the potential to impact traffic flow on several major highways throughout the western half of the Washington metropolitan area. Access to and from the Beltway, Dulles Connector Road, the Fairfax County Parkway and the George Washington Memorial Parkway could be impacted, particularly if outreach is not executed effectively. The scope of that effect makes this Project regionally significant to drivers throughout the area – and therefore newsworthy to transportation and traffic reporters. Keeping those media fully informed about the Project and regularly apprised of progress and construction plans (in advance of impact) is advantageous. Starting with a pre-construction briefing to outline the scope and master timeline of the Project, then providing regular updates in the form of press releases and traffic advisories, the LANE-Wagman Team will help them keep area drivers abreast of the latest information about the Project. We also propose tours and one-on-one briefings for key reporters to foster strong relationships with media. Additionally, at the outset and potentially at key milestones, we recommend scheduling an in-studio briefing at IHeartRadio (which produces nearly every traffic report aired on local TV and radio) as a way of ensuring these trusted voices understand and are equipped to accurately report on the Project. Going the extra mile with media to build relationships can pay intangible dividends of credibility if and when Project critics attempt to gain coverage of their allegations.
- **Online** - The LANE-Wagman communications team will build on the existing attractive, informative Project website, enabling it to continue serving as a primary source of current information about the Project throughout the duration of the Project. Our Team will provide monthly updates of the to VDOT for inclusion in the interactive Project map that VDOT is maintaining on the Project web site. The GeoDataBase will contain all of the layers associated with the update and each layer will be named according to its feature type. This data will be provided in Esri's ArcGIS format.
- **Social** - The existing webpage includes links to VDOT's social media channels, including Facebook, Twitter, YouTube and Instagram. Given that VDOT's social media platforms cover the entire Northern Virginia region, we propose creating new, dedicated Project profiles specifically on Twitter and Facebook to allow constituents to subscribe to information that is exclusive to the Project, rather than having to filter out information about other projects that is not relevant to their interests and which is carried on the existing VDOT Northern Virginia-wide channels. It should be recognized, however, that social media platforms carry an expectation of rapid response, which can be resource consumptive and challenging from an approval standpoint. Assuming our tailored approach is approved, Route 7 Improvement information also would be fed back to the established VDOT channels to help ensure that constituents who may not be subscribed to our new channels will have the opportunity to receive Project updates.
- **Phone Line and Correspondence** - A dedicated toll-free number will be established to capture inquiries, with recorded messages being responded to within two business days. The hotline will be monitored during all work hours. Similar to what the LANE Team provided on Rt. 29 Solutions, hotline calls will be forwarded to the office and the cell phones of Mr. Undeland and Mr. Reed for return contact and issues resolutions. In addition, emails and letters will be logged and responded to within in five business days. Inquiries will be tracked by subject matter to identify issues of key concern and to develop consistent messaging.

These proactive and comprehensive outreach initiatives will provide look-ahead and current-status updates to area residents and drivers and prepare them for changes that will occur to both their commute and community,

helping to ensure continued public support (or at minimum benign acceptance) throughout the duration of the Project.

4.4.5 Right-of-Way Management

The timely and efficient ROW acquisition of all parcels will be critical to the overall success of the Project. To ensure an orderly and logical acquisition schedule, the ROW team has worked closely with our MOT team to develop a proposed sequence of construction that maximizes construction within ROW and integrates ROW acquisitions in a systematic manner. We believe this parcel specific, targeted prioritization, strategy will minimize the risk of property acquisition delays and allow the Project to move forward in an orderly fashion. The interrelationship of our priority grouping is discussed below and represented graphically for each area of the Project. The timeframes provided reflect the duration from NTP for ROW acquisition through the recordation of legal documents. Attempts to acquire right of entries, where appropriate, will begin once bona fide offers have been made and some efficiencies may be achieved if multiple properties with the same landowner are negotiated simultaneously.

The Route 7 Project contains a variety of properties that could prove to be challenging to acquire, such as homeowners' associations, churches, cemeteries, and government entities. These parcels often have boards or committees that authorize land transactions and will require appearing on their agendas to discuss the right of way needs of the Project. These governing boards or commissions may only meet monthly or quarterly which can extend the time required to negotiate an adequate settlement. The following is a discussion of the parcels that may require extra effort.

Fairfax County Park Authority (FCPA) – Discussions with the FCPA have already been initiated by Team members. Special consideration and time must be allowed for environmental, operational, public outreach and administrative issues. It is critical to engage the proper parties as soon as possible to establish a dialogue and a framework whereby all parties achieve the desired outcomes. While the discussions need to occur immediately and require a high degree of sensitivity, the Project team has the experience and expertise to achieve a mutually beneficial outcome for the Project and the community. We understand that VDOT has already done extensive outreach with FCPA and reached preliminary concurrence of minimal impact as required for federally funded projects. It is intended that proposed mitigation measures will include:

- Colvin Run Stream relocation per Corp of Engineers specifications
- Rehabilitation of any and all temporary impacts to natural resources
- Replacement of all vegetation will utilize native plants
- Invasive plant management
- Appropriate archaeological studies
- Realignment of impacted sections of Rails to River Trail
- Provision of interpretive signs
- Replacement of existing impacted park signage and fencing
- Replacement of trail head/maintenance entrance and three parking spaces along Carpers Farm Way

The Project team stands ready to continue dialogue with the FCPA throughout the duration of the Project to ensure they and their constituency is aware of the timing and impact of all construction activities.

Homeowner Associations (HOAs) – HOA negotiations need to be handled with flexible parameters but systematic documentation. The administration of these organizations can be very centralized with one or a small group of homeowners that have the time and inclination to be involved or a very democratic process where neighborhood meetings are held regularly. The RDA negotiator will attempt to determine the most efficient manner to get to "deal point" with each organization. In many instances, effective communication about timing of construction and potential access issues or road closings will go a long way in mitigating protracted negotiations. However, landscaping, entry features, sound and visual mitigation efforts are

Early kick-off meetings with the HOA's will establish a common understanding of the Project and facilitate open communication.

very often negotiation points and the ROW team will coordinate with the designers to be prepared for these concerns early in the process. To facilitate awareness and open the doors of communication, kick-off meetings with all impacted HOA's at the start of the Project will establish a common understanding of the Project and the process by which our Team will interact with their communities.

Community Associations – These organizations serve as an umbrella group for HOA's and are typically responsible for the maintenance of community assets (i.e. pool, recreation center, etc.). Often, these associations are managed by professional organizations with very objective views on property. Commitment to unencumbered access and restoration of disturbed areas of the facilities to their "before construction" condition will expedite negotiations and granting of rights of entry to the needed properties.

Churches – The organizational hierarchy of each church will determine the most effective negotiation strategy. Local churches often put their decision-making authority with the Pastor or a Leadership Council and can be dealt with in a straight forward manner. However, some churches are required to report to a diocese or other governing body who holds ownership interest. Yet another nuance to church properties is that the formal acquisition (or right of entry) of property rights for religious organizations with a Board of Trustees requires a Court Order, which can be a lengthy process. Based on our experience, rights of entry can often be secured. In these instances, the congregation understands the need for the Project but is hampered by the processes and procedures required to negotiate and close on the acquisition. However, we fully understand that there are inherent risks in this approach as rights of entry can be rescinded at any time for any reason.

Foreign Embassy Owned Parcel – The acquisition of property owned by a sovereign state presents a unique challenge. Although, we have full faith in our Team's ability to negotiate a settlement, it is our understanding that all communication with the Embassy of the Sultanate of Oman must go through the State Department. Given the relatively small size and low level of criticality of the property rights needed (or shown on the plan), our design team is evaluating alternatives that will eliminate the need for this particular property acquisition.

Avoidance of the Embassy of the Sultanate of Oman's property at the tie-in with Lewinsville Road will resolve a potentially lengthy acquisition.

Utilities – Close coordination with our Lead Utility Coordination Manager, John Myers, and impacted utility companies will ensure that the easement documents are properly included in offer packages as discussed in greater detail in Section 4.4.2. With regards to utility owned properties, we do not believe our required access and/or encroachment will cause any disruption to the critical path for the construction of this Project.

Cemeteries – Historical research is a prerequisite for entry into cemeteries/grave yards. The disturbance of a marked or unmarked grave must be avoided. The current plans indicate that the entry and gate surrounding the graveyard in Area 3 (Bowns Chapel Association Cemetery) are outside the limits of construction. This would apparently indicate no graves would be disturbed; however, upon NTP, careful research and field work will be conducted to confirm. However, the location of graves in the cemetery on Parcel 191 in Area 5 (Andrew Chapel Cemetery) could present a greater challenge. However, the revised alignment provided for in the RFRP has eliminated impacts to this cemetery.

Residential Properties – Residential acquisitions are generally straight forward for fee value. Residential property values in this area are well established and homeowners are very savvy regarding the value of their assets, especially in this region. The more challenging aspect of residential acquisitions is the calculation of damages to the remainder of the parcel. Whether it is proximity to the road, landscaping, appurtenances to the home and out-buildings, understanding the homeowners' concerns and effective communication and detailed documentation for negotiations will lead to a timely resolution.

Commercial Properties – Commercial property in this area is valued particularly high. However, the key to timely and efficient acquisition of commercial property is to endeavor to keep the business unencumbered during and after construction. A detailed MOT plan addresses this issue. **Going the extra mile to maintain access, visibility and signage will benefit the overall cost and schedule of the Project.**

While negotiations with these various property types and individuals can be protracted, our ROW team has a long history of dealing with all different types of properties, individuals and organizations. We are confident and experienced in securing the necessary property rights to maintain overall Project Schedule. We understand the hurdles that need to be overcome to achieve consensus and maintain Project momentum. While negotiations will require a great degree of effort to achieve the Project Schedule, all acquisitions will be in strict accordance with the approved plans. Furthermore, we will work with VDOT to execute Certificates of Take (COT) in a timely manner to maintain the necessary schedule for Project success. However, negotiations can continue after a COT is recorded at the direction of VDOT.

Long Lead Parcel types:

- **Residential Relocation (1)**
- **Homeowner's Associations/Community Associations (33)**
- **Churches (9)**
- **Cemeteries (2)**
- **Fairfax County Park Authority (8)**
- **Fairfax County Board of Supervisors (1)**
- **Embassy Owned (1)**

The LANE-Wagman approach to right of way acquisition has been carefully coordinated with our Sequence of Construction to minimize the risk for delays in construction.

Our Team has fully integrated our right of way services with design and construction to minimize potential delays. We have identified the parcels needed to begin construction in each Area and Stage. These parcels were further identified as either "normal" acquisitions i.e. residential and commercial strip takes and "long lead" acquisitions. These "long lead" acquisitions will generally take three (3) to six (6) months longer due to the negotiation challenges discussed in detail above.

Our ROW management strategy focuses on clearing those parcels that construction activities are dependent in order to start work. The Project has been divided in to six (6) areas and typically three (3) stages of construction. Since the magnitude of the ROW impacts varies across each area and stage, the ROW acquisition strategy has prioritized the acquisitions into the following groups:

Construction Stage	Priority Group #1	Priority Group #2	Priority Group #3	Priority Group #4
Stage 1	11 "long lead" parcels, 15 "normal" parcels	None	None	None
Stage 2	20 "long lead" parcels	46 "normal" parcels	None	None
Stage 3	None	15 "long lead" parcels	83 "normal" parcels	9 "long lead" parcels, 32 "normal" parcels

Our ROW prioritization strategy integrates the ROW acquisition with construction by coordinating the parcel acquisition required to begin work for each stage of construction. Each Priority Group emphasizes the allocation of resources needed to clear right of way for its corresponding stage of construction. The exceptions are the "long lead" parcels that will require additional time and those parcels in Priority Group #4 that are needed solely for noise barrier construction. The Priority Group strategy anticipates the potential for acquisition challenges by starting "long lead" acquisitions early further minimizing the risk in delays to construction. The graphics below show the integration of our ROW management strategy by construction Area and Stage:

Priority Group #1 Priority Group #2 Priority Group #3 Priority Group #4

Area 1 - 49 Parcels Total acquisition will be 23 months with 13 long lead parcels.

	D-18	J-19	F-19	M-19	A-19	M-19	J-19	J-19	A-19	S-19	O-19	N-19	D-19	J-20	F-20	M-20	A-20	M-20	J-20	J-20	A-20	S-20	O-20
Stage 1																							
	(1 - Long Lead Parcel, 1 - Normal Parcel)																						
Stage 2																							
	(10 - Long Lead Parcels, 14 - Normal Parcels)																						
Stage 3																							
	(2 - Long Lead Parcels, 21 - Normal Parcels)																						

Area 2 - 29 Parcels Total acquisition will be 23 months with 7 long lead parcels.

	D-18	J-19	F-19	M-19	A-19	M-19	J-19	J-19	A-19	S-19	O-19	N-19	D-19	J-20	F-20	M-20	A-20	M-20	J-20	J-20	A-20	S-20	O-20
Stage 1																							
	(4 - Long Lead Parcels, 5 - Normal Parcels)																						
Stage 2																							
	(0 - Long Lead Parcels, 1 - Normal Parcel)																						
Stage 3																							
	(3 - Long Lead Parcels, 16 - Normal Parcels)																						

Area 3 - 32 Parcels *Total acquisition will be 18 months with 3 long lead parcels.*

	D-18	J-19	F-19	M-19	A-19	M-19	J-19	J-19	A-19	S-19	O-19	N-19	D-19	J-20	F-20	M-20	A-20	M-20	J-20	J-20	A-20	S-20	O-20
Stage 1																							
	(0 - Long Lead Parcels, 1 - Normal Parcel)																						
Stage 2																							
	(3 - Long Lead Parcels, 27 - Normal Parcels)																						
Stage 3																							
	(0 - Long Lead Parcels, 1 - Normal Parcel)																						

Area 4 - 24 Parcels *Total acquisition will be 18 months with 6 long lead parcels.*

	D-18	J-19	F-19	M-19	A-19	M-19	J-19	J-19	A-19	S-19	O-19	N-19	D-19	J-20	F-20	M-20	A-20	M-20	J-20	J-20	A-20	S-20	O-20
Stage 1																							
	(4 - Long Lead Parcels, 4 - Normal Parcels)																						
Stage 2																							
	(2 - Long Lead Parcels, 0 - Normal Parcels)																						
Stage 3																							
	(0 - Long Lead Parcels, 14 - Normal Parcels)																						

Area 5 - 68 Parcels *Total acquisition will be 23 months with 14 long lead parcels.*

	D-18	J-19	F-19	M-19	A-19	M-19	J-19	J-19	A-19	S-19	O-19	N-19	D-19	J-20	F-20	M-20	A-20	M-20	J-20	J-20	A-20	S-20	O-20
Stage 1																							
	(1 - Long Lead Parcel, 4 - Normal Parcels)																						
Stage 2																							
	(0 - Long Lead Parcels, 0 - Normal Parcels)																						
Stage 3																							
	(13 - Long Lead Parcels, 50 - Normal Parcels)																						

Area 5A - 29 Parcels *Total acquisition will be 23 months with 12 long lead parcels.*

	D-18	J-19	F-19	M-19	A-19	M-19	J-19	J-19	A-19	S-19	O-19	N-19	D-19	J-20	F-20	M-20	A-20	M-20	J-20	J-20	A-20	S-20	O-20
Stage 1																							
	(1 - Long Lead Parcel, 0 - Normal Parcels)																						
Stage 2																							
	(5 - Long Lead Parcels, 4 - Normal Parcels)																						
Stage 3																							
	(6 - Long Lead Parcels, 13 - Normal Parcels)																						

4.5 CONSTRUCTION OF THE PROJECT

4.5| CONSTRUCTION OF THE PROJECT

The LANE-Wagman Team's construction approach involves assembling a team of highly-skilled personnel with unmatched technical knowledge and award-winning expertise utilizing state of the art equipment to develop the means and methods to deliver this Project. The Team's Sequence of Construction (SOC) and Transportation Management Plan (TMP) concept has been thoroughly evaluated and coordinated to anticipate conflicts and develop appropriate solutions. To facilitate efficient construction progress, the Project has been divided into six (1-5A) Areas. This subdivision of the Project provides our Team the flexibility to adjust activities and efficiently construct the Project thereby **minimizing impacts to the traveling public and stakeholders**.

Separating the Project into these distinct Areas enables our Team to provide the following benefits:

- Deliver overall project completion 3 months early.
- Deliver two critical and heavily traveled intersections; Baron Cameron and Lewinsville Road (21 and 6 months early, respectively).
- **Improves construction efficiency** and helps **minimize and/or eliminate schedule impacts** since each Area can act independent of other Areas.
- **Anticipates and mitigates any utility or design issues** within the Project by focusing on individual Areas instead of the entire Project.
- **Minimizes the construction phasing requirements**, **reduces Project construction time**, **and decreases disruption to the travelling public and local residents**.
- Aligns Washington Gas and Light (WGL) work with our SOC to **minimize schedule impacts and delays**

Additionally, our understanding of the corridor is an important element that will help ensure success. LANE-Wagman Team members have recent experience with the Route 7 Bridge Replacement over the DTR and DAAH DB project at the eastern end of this Project. This experience provides our Team significant insight into the expectations of the stakeholders and the commitment that we must have to be successful. As evidence of our continued commitment to the corridor and this Project, our Team has assigned Mr. Tim Freeland as the full-time QC Manager. Mr. Freeland is currently the QC Manager on the adjacent VDOT Route 7 project and is integral to the success of that project.

4.5.1 Sequence of Construction (SOC)

The LANE-Wagman Team's SOC allows for the substantial completion of Areas 2 and 5A ahead of schedule.

Construction operations are organized logically and systematically into six (6) Areas, each with coordinated and well-defined phasing. Each Area is specifically established to achieve and enhance the goals and requirements set forth in the RFP. Dividing the Project into Areas allows our Team to coordinate the elements of our design and the construction approach and to manage resources required to work through permitting, ROW, stakeholder coordination, safety and the complexities of the utility relocations expected to be encountered. Coordination with the schedules of concurrent projects in the area will be an integral influence on our SOC; MOT will be developed to function with each specific construction sequence Throughout the construction of the Project we will follow a logical SOC that allows the LANE-Wagman Team to construct the Project as efficiently as possible while allowing the traveling public to navigate through the work zone safely and without delay.

Immediately following award of the Project, the LANE-Wagman Team will start design development and utility coordination as well as the Scope Validation period. As mentioned above, the Team decided early on to divide the Project into six individual Areas. Below is an overview of the area breakdown:

The Areas were then evaluated by the anticipated durations of design development, ROW acquisition, utility relocation, WGL work, and permitting. The following represents the anticipated Project Area SOC:

This proposed SOC offers numerous distinct advantages:

- **Safety:** As opposed to one long continuous work zone, work will be performed in distinct Areas that allow for a smoother flow of traffic and less start and stop situations.
- **Less Impact to Traveling Public:** Rather than "being everywhere at once", we will construct the major work elements within each Area then connect the new improvements over the length of the Project. Additionally, our plan will allow for a logical and seamless overall Project completion.
- **Less Impact to Landowners/Stakeholders:** Our sequence will enable the Area teams to focus on individual segments and ensure no areas are "lost in the shuffle" of the overall Project.
- **Increased Efficiencies**: This sequencing accommodates the time required to relocate utilities, acquire needed permitting, and start early release work activities.
- **Minimizes Schedule Risk:** The six Area sequencing strategy anticipates the Areas that may prove to be problematic and gives the LANE-Wagman Team the time and flexibility needed to mitigate the issues encountered.

Additionally, our SOC takes into account and facilitates the work that needs to be completed for the Washington Gas Transmission line. The location of the Washington Gas relocation project can be summarized as follows:

				2018				2019				2020				2021			
Washington Gas Location	Area	Start	Finish	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Strip 2 (229+00 to 239+80)	1	7-May-18	28-Sep-18																
Anticipated Area 1 Field Construcition Start														X					
Strip 1, Dranesville Gate Station to Great Passage Blv	2	4-Jun-18	28-Sep-18																
Strip 1, Great Passage Blvd to Downey Dr	2	1-Oct-18	28-Sep-19																
Anticipated Area 2 Field Construction Start														X					
Strip 1, Downey Drive to Colvin Run Rd	3	1-Oct-19	28-Sep-20																
Anticipated Area 3 Field Construction Start										X									
Strip 1, Colvin Run Rd to Beulah Rd	4	1-Oct-20	30-Sep-21																
Anticipated Area 4 Field Construction Start																		X	
Strip 1, Beulah Rd to Royal Estates Dr (L)	5	28-Sep-20	7-Jun-21																
Strip 1, Beulah Rd to Royal Estates Dr (R)	5	8-Jan-21	28-Sep-21																
Anticipated Area 5 Field Construction Start																	X		
Strip 1, Royal Estates Dr to Jarrett Valley Dr (R)	5A	1-Oct-19	29-Oct-19																
Strip 1, Royal Estates Dr to Jarrett Valley Dr (L)	5A	30-Oct-19	28-Sep-20																
Anticipated Area 5A Field Construction Start												X							

Based on the Production Schedule provided in the RFP by Washington Gas, the LANE-Wagman Team determined that the Strip 1 Royal Estates Drive to Jarrett Valley Drive (Activity ID: W000-1070 & W000-1080) conflicts with Area 5A Stage 2 work. As a result, WGL will need to concurrently construct two sections of the gas line starting October 1, 2019, to avoid delaying the Project Final Completion (see Section 4.6 Proposal Schedule).

LANE-Wagman Team offers the following advantages for WGL coordination:

- **Provides detailed construction sequencing for WGL work**
- **Minimizes schedule conflicts with the utility work**
- **Maintain a 21-day minimum gap**

The following is a detailed breakdown of the work areas with side roads and work staging listed:

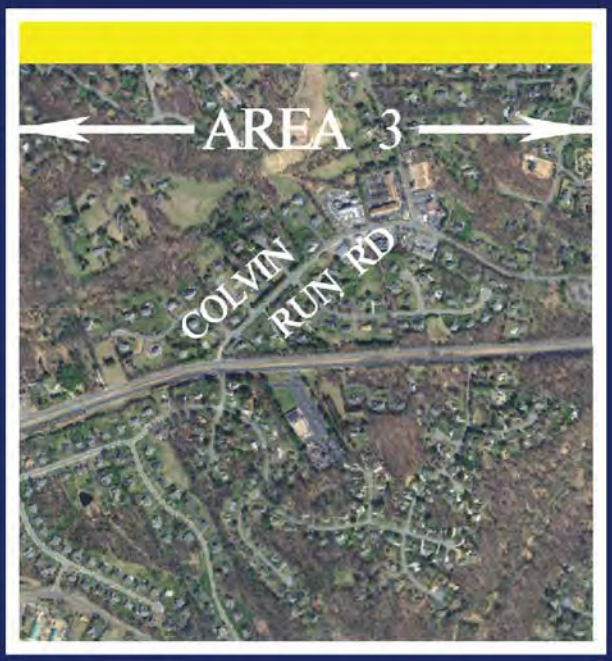
Station 294+00 to Station 346+00

Major Work Item(s): Fairfax County Water 54" Waterline Relocation, Washington Gas Relocation

Side Streets: Colvin Run West, Delta Glen Ct, Colvin Forest Dr

Area 3 Highlights

- Due to minimal utility and ROW impacts this Area is constructed first minimizing potential delays to the Project
- Improves safety through staging of pedestrian tunnel construction
- Mitigates 54" waterline impacts, wherever possible, to reduce overall Project schedule



Area 3-Stage 1

Temporary pavement will be installed to shift traffic to the outside lanes to construct the proposed median improvements. The center portion of the pedestrian tunnel work will begin in this stage.

Area 3-Stage 2

Shift traffic onto the WB lanes to perform the proposed EB improvements.

Area 3-Stage 3

Shift traffic into EB lanes constructed in Stage two and construct the WB median travel lane improvements.

Area 3-Stage 4

Shift WB improvements to the completed median and construct outside WB improvements

Station 474+75 to 526+50

Major Work Item: Lewinsville Road Reconfiguration

Side Streets: Lewinsville Rd, Laurel Hill Rd

Area 5A Highlights

- Substantial completion of Area 5A by November 2023- six months ahead of schedule!
  - Early relief of congestion at heavily-traveled intersection, reduces impacts to businesses located near intersection
- Lewinsville Rd displaced left turn improvement, performed significantly earlier in the Project, will ensure safer travel through the corridor

Area 5A-Stage 1
Temporary pavement will be installed to shift traffic to the outside lanes to construct the proposed median improvements and needed temporary pavement.

Area 5A-Stage 2
Shift traffic onto the EB and median lanes, performed in Stage 1, to construct the proposed WB improvements. Majority of the Lewinsville Rd Intersection Improvements will be performed during this phase.

Area 5A-Stage 3
Shift traffic into WB and median lanes to construct proposed EB improvements.

Area 5A-Stage 4
Shift traffic into permanent lanes and construct remaining median improvements.

Station 166+78 to Station 258+00

Major Work Item: Fuel Pipeline Relocations

Side Streets: Reston Parkway, Utterback Store Road, Bishops Gate Way, Great Passage Blvd, Amanda Drive, Markall Court, and Riva Ridge Drive

Area 1 Highlights

- Fuel pipelines to be retrofitted with protective sleeves prior to start of construction which minimizes impacts to Project schedule

Area 1-Stage 1
Temporary asphalt widenings performed at night to facilitate moving traffic outside to perform proposed median improvements.

Area 1-Stage 2
Traffic will be relocated onto the newly constructed median and WB lanes so that the proposed EB outside work can be completed.

Area 1-Stage 3
Shift EB lanes to completed lanes. Construct median portion of WB lanes.

Area 1-Stage 4
Complete remaining WB improvements.

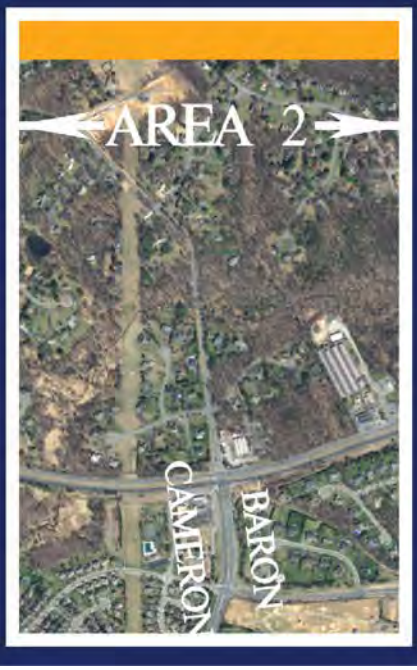
Baron Cameron Intersection Station 258+00 to Station 294+00

Major Work Item(s): Baron Cameron Intersection Improvements

Side Streets: Baron Cameron, Springvale Rd, Crippen Vale Ct

Area 2 Highlights

- Substantial completion of Area 2 by September 2022- 21 months ahead of schedule!
  - Early relief of congestion at heavily-traveled intersection, reduces impacts to businesses located near intersection
  - Construction complete near start of 2022 school year
- Improved traffic flow through the area with triple left hand turn movements from WB Rt 7 to SB Baron Cameron



Area 2-Stage 1

Temporary Pavement is placed to strengthen outside shoulders.

Area 2-Stage 2

Move traffic to outside EB and WB lanes to facilitate full depth reconstruction as well as buildup in the mill and overlay areas.

Area 2-Stage 3

Shift traffic to pavement constructed in Stage 2. Full depth shared use path as well as mill and overlay will be constructed in this phase**.**

Station 387+50 to 474+50

Major Work Item: 54" Watermain Relocation

Side Streets: Beulah Rd, Towlston Rd, Trapp Rd

Area 5 Highlights

- Due to the long lead times associated with the utility and ROW relocations, Area 5 is split into two Areas, 5 and 5A, to maximize work areas and expedite progress
- Minimizes impacts to Andrews Chapel Cemetery
- Sequencing allows utilities the time needed to perform all relocation work without impacts to the Project Schedule

Area 5-Stage 1

Temporary pavement installed as needed for median construction to facilitate Stage 2 traffic switch.

Area 5-Stage 2
Traffic placed on existing EB and temporary pavements to perform WB widening.

Area 5-Stage 3
Traffic will be placed on WB lanes to build EB improvements.

Area 5-Stage 4
Remaining median construction is performed.

Difficult Run Bridge - Station 346+00 to 387+50

Major Work Item: Difficult Run Bridge, Colvin Run Ditch Relocation

Side Streets: Colvin Run West, Carpers Farm Way

Area 4 Highlights

- Difficult Run Bridge is constructed in two MOT stages
  - Reduced bridge staging results in less construction joints which minimizes long-term maintenance
- Innovative pier design minimizes environmental impacts

Area 4-Stage 1
Temporary pavement installed to shift traffic into WB lanes. Construct EB improvements. Construct EB portion of Difficult Run Bridge and relocate Colvin Run.

Area 4-Stage 2
Shift traffic to EB and construct WB improvements. Construction WB portion of Difficult Run Bridge.

Area 4-Stage 3
Shift traffic to the completed roadway and finish median and outside of EB.

Area 4-Stage 4
Complete remaining tie-in, median, and bridge shared use path work.

Mitigating Potential Construction Delays

Some potential delays include (but not limited to): utility relocation, environmental impacts, and ROW acquisition. The LANE-Wagman Team employs the following strategy to mitigate and avoid these potential delays:

Utility Relocation – Relocation of the existing 54" waterline is the "wet" utility with largest impact throughout the Project. Verizon duct bank is the "dry" utility with largest impact throughout the Project. The magnitude of impacts by these utilities varies in the six work Areas. The Team will start work in the least impacted Area – Area 3, and continue down the list to the most impacted Area.

Environmental / Permit Impacts – Environmental permits are required prior to the start of construction, however, the Team does not anticipate any potential impacts to the Project Schedule.

ROW Acquisition – Given the uncertainty that ROW acquisition can present, all parcel acquisition will be tracked as if it were on the Critical Path. This approach keeps a constant urgency to the process. The goal is to have amicable dealings with every parcel owner. However, the reality is that there will be some negotiations too far apart to reach agreement. In these situations, we will file for certificate of take (COT). However, during the administration processes associated with the COT, we will continue to negotiate with the property owner in hopes of reaching agreement.

4.5.2 Transportation Management Plan (TMP)

The LANE-Wagman Team is committed to providing exceptional safety standards and above average construction quality.

The LANE-Wagman Team's approach to the TMP focuses on safety and expedited Project delivery. The experience brought to the Project by both LANE and Wagman is exceptional. LANE has extensive D-B experience and success in northern Virginia. They recently completed the I-66/Route 15 Interchange Reconstruction Project, for which they were the Contractor and RDA was the Lead Designer. There were zero construction incidents, making it one of LANE's most successful "safety" projects. In addition, LANE, in combination with RK&K and RDA, successfully completed the Route 29 Solutions project in the Culpeper District. This project had several features nearly identical to the working environment of Route 7. Most notably, the Route 29 project involved constructing a grade separated intersection in the middle of a very congested intersection along with the widening of four miles of four-lane roadway to six lanes. Many of the proven strategies implemented on that project will be implemented in our plan on Route 7.

Wagman also brings an excellent D-B resume. Their Route 7 Bridge Replacement over the DTR and DAAH DB project, also with RDA as the lead designer, is in the final stages of construction and earned a score of 92.06 on the first design-build CQIP audit. The LANE-Wagman Team brings these highly successful experiences to this Project and is committed to providing exceptional safety performance and quality construction.

The following summarizes the goals of the TMP:

- Meets the requirements for final completion date and strives for early occupancy at Baron Cameron and Lewinsville Road intersections
- Maintains two-lanes of through traffic on Route 7, while minimizing temporary lane closures utilizing an efficient SOC plan
- Provides for all existing turning movements along the corridor during all stages of construction in accordance with the RFP, Part 2, Section 2.11.1
- Safe ingress and egress will be provided to accommodate bus stops along the corridor
- A SOC that considers the following:
    - An emphasis on construction efforts at Baron Cameron and Lewinsville Road intersections with the assurance that these locations can be delivered ahead of schedule
    - Minimizes roadway lane closures
    - The importance of multi-modal components, such as providing detailed directional signage for pedestrian and bicycle detours
- Investigates the crash history of the existing corridor and addresses safety concerns as part of the Project's construction activities.
- A commitment by the LANE-Wagman Team to provide extensive public outreach and utilize a wide range of public outreach tools, such as social media, PCMS signs, and an "Orange Cones. No Phones" campaign
- Contains a robust and prepared Incident Management Plan to simplify and streamline the process in the event of an incident within the work zone
- A TMP & SOC that includes public involvement from the stakeholders to ensure voices are heard

Figure 4.5.2-2 (on the following pages) describes the major components of the construction activities, anticipated TMP features depicted by representative typicals, and key public safety and mitigation measures to

be implemented throughout this Project. The LANE-Wagman Team's TMP addresses safety for all stakeholders to include: motor vehicles, pedestrians, bicyclists, equestrians, property owners, utility owners, transit operators/users, and construction workers. The TMP plan is being developed in accordance with VDOT's IIM-241/TE-351 for Type C, Category V Projects.

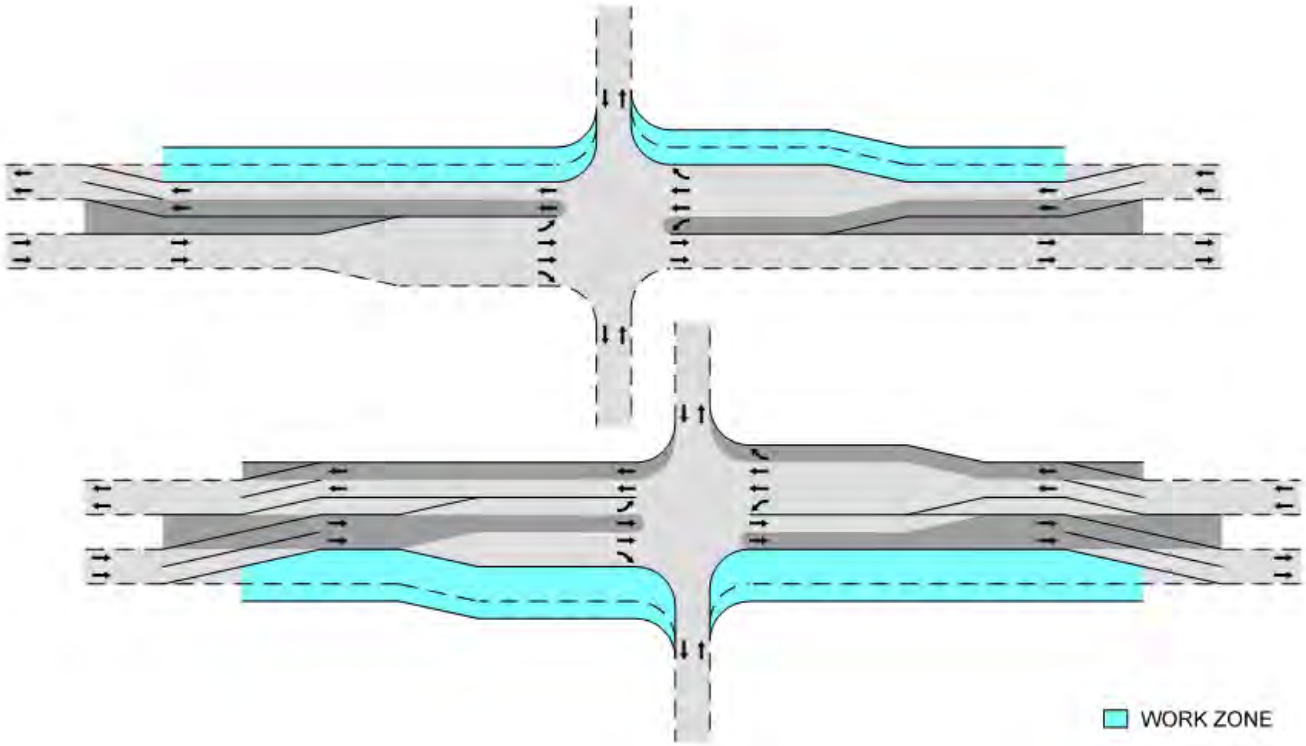
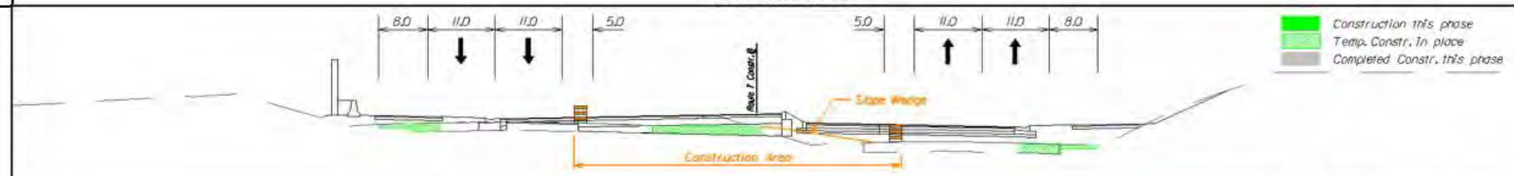
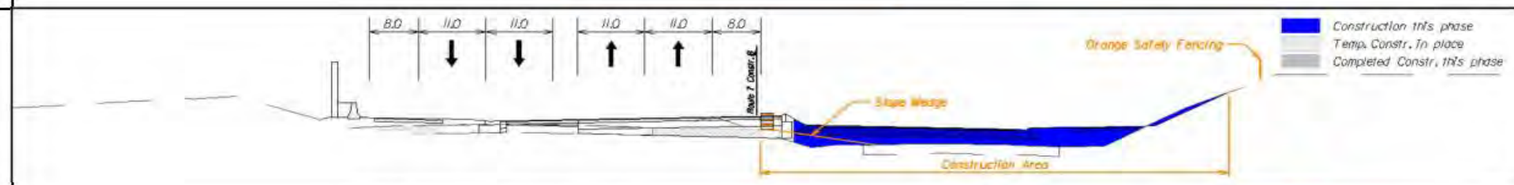
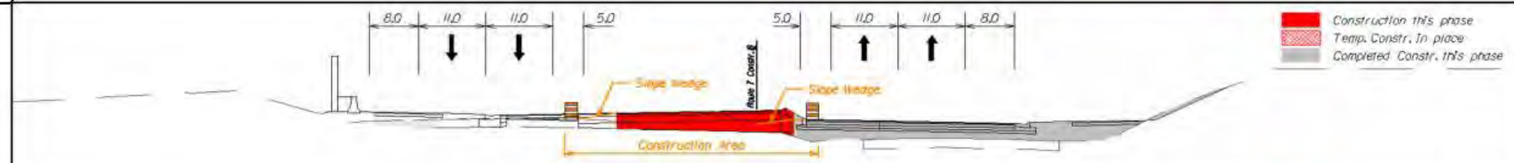
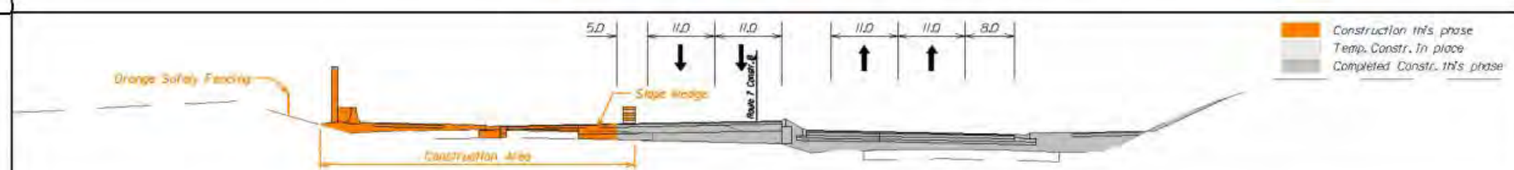


Figure 4.5.2-1- *Typical Schematic for Maintaining Turn Lanes*

Lane or Ramp Closures

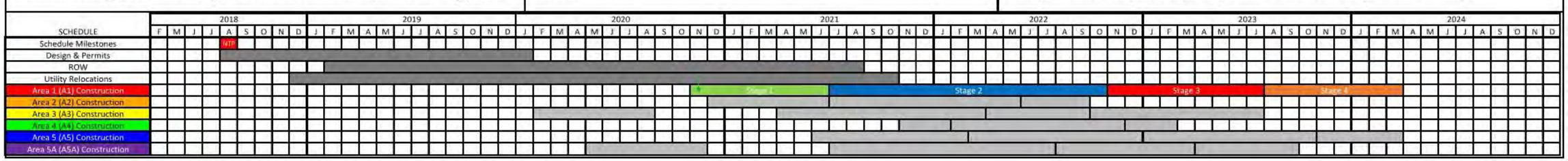
The LANE-Wagman Team acknowledges that lane closures are only allowed at the sole discretion of VDOT when necessary to ensure the safety of the traveling public and when no practical alternative exists in accordance with Part 2, Section 2.11.2. The Team will work closely with VDOT and throughout the public involvement process to ensure that all proposed lane closures are necessary, address public concerns, and enhance public safety. The LANE-Wagman Team will utilize practical alternatives to lane closures where feasible (i.e. constructing one direction at a time vs. both directions as intended in Areas 5 and 5A). The SOC concept for the Project, as discussed in Section 4.5.1, will initially use inside lane closures to generally establish a paved median section, then shift traffic to the median thereby providing ample room to maintain left and right turn lanes during construction of the remaining phases, see Figure 4.5.2-1. All temporary lane closures will follow the Lane and Road Closure Restrictions outlined in the RFP Part 2, Section 2.11.2.

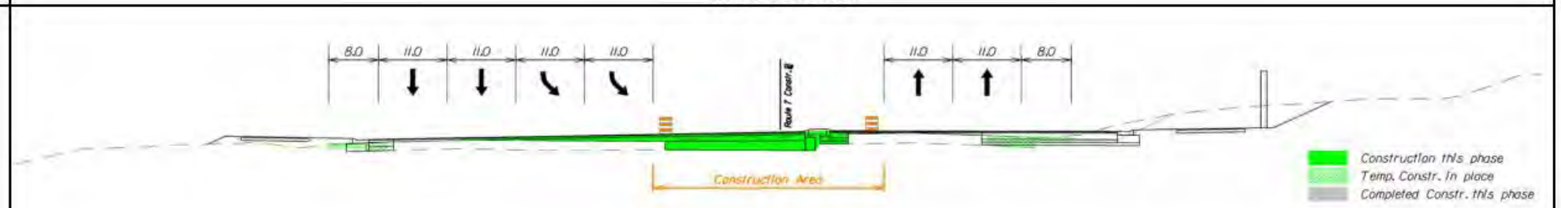
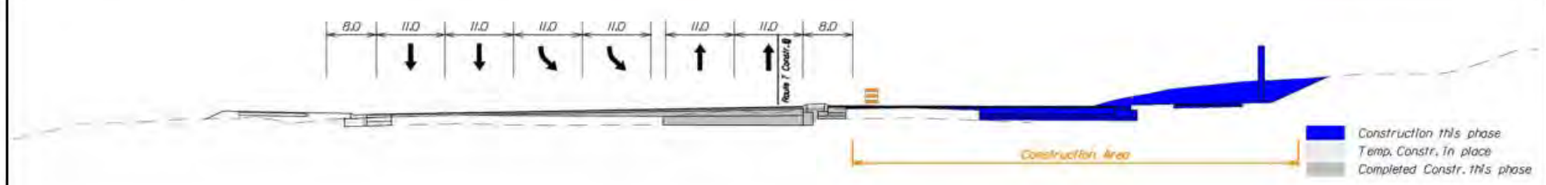
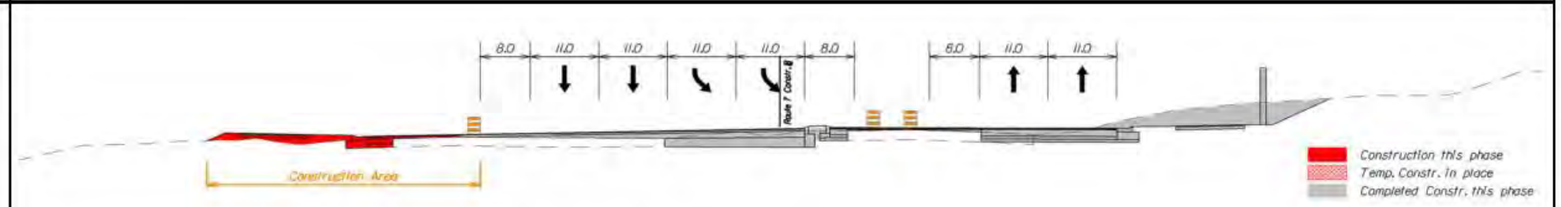
Figure 4.5.2-2 - *Major TMP Components*

Phase		Construction Activities	TMP Features
Area 1 Station 166+78 to Station 258+00	Stage 1	-While maintaining EB and WB traffic in its current location, construct temporary outside shoulder strengthening using lane closures -Construct temporary 8' outside usable shoulders -Construct temporary traffic signals -Shift EB and WB traffic to temporary outside strengthened shoulders -Delineate median work zone using Group 2 channelizing devices -Construct temporary median widening adjacent to existing WB lanes	
	Stage 2	-Modify temporary traffic signals for Stage 2 -Maintain WB traffic in Stage 1 location -Shift EB traffic to temporarily widened WB roadway -Delineate EB work zone using Group 2 channelizing devices -Construct EB drainage, SWM facilities and retaining walls -Construct EB roadway and shared use path -Construct EB noise walls and other permanent features	
	Stage 3	-Modify temporary traffic signals for Stage 3 -Maintain WB traffic in Stage 1 location -Shift EB traffic to completed EB roadway -Delineate median work zone using Group 2 channelizing devices -Construct WB median drainage -Construct WB median roadway -Construct other WB median permanent features	
	Stage 4	-Modify temporary traffic signals for Stage 4 -Maintain EB traffic in Stage 3 location -Shift WB traffic to completed WB roadway (median side) -Delineate WB work zone using Group 2 channelizing devices -Construct WB outside drainage, SWM facilities and retaining walls -Construct WB outside roadway and shared use path -Construct WB noise walls and other outside permanent features	

Key Public Safety and Mitigation Measures

- Temporary lane closures to be in accordance RFP Section 2.11.2 - Maintain 11' wide travel lanes including left and right turn lanes throughout area to minimize impact to traveling public, except during working hours - Maintain existing speed limit through work zone to minimize impact to traveling public	- Temporary pavement markings will be supplemented with temporary raised pavement makers for enhanced visibility. (Entire Project) - Awareness "Orange Cones. No Phones" campain project wide public safety measure	- Regularly inspect Group 2 devices at intersections to maintain sight distance - Intersection movements maintained during active construction using uniformed flaggers at signalized intersections and non-uniformed flaggers at unsignalized intersections. - New pavement/overlay in each phase provides fresh surface for pavement markings



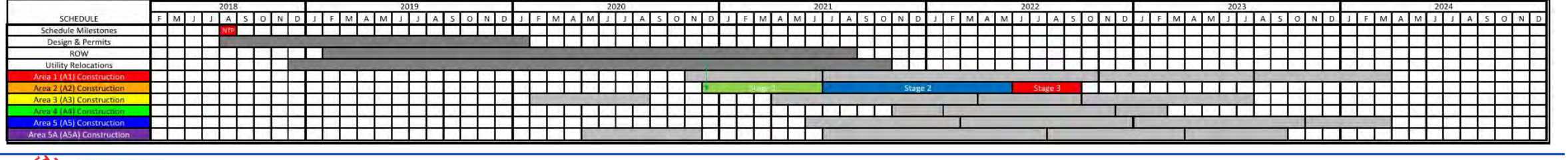
Phase	Construction Activities	TMP Features
Area 2 (Station 258+00 to Station 294+00) — Stage 1	-While maintaining EB and WB traffic in its current location, construct temporary outside shoulder strengthening using lane closures -Construct temporary 8' outside usable shoulders -Construct temporary traffic signals -Shift EB and WB traffic to temporary outside strengthened shoulders -Delineate median work zone using Group 2 channelizing devices	
Area 2 (Station 258+00 to Station 294+00) — Stage 2	-Modify temporary traffic signals for Stage 2 -Maintain WB traffic in Stage 1 location -Shift EB traffic to temporarily widened WB roadway -Delineate EB work zone using Group 2 channelizing devices -Construct EB drainage, SWM facilities and retaining walls -Construct EB roadway and shared use path -Construct EB noise walls and other permanent features	
Area 2 (Station 258+00 to Station 294+00) — Stage 3	-Modify temporary traffic signals for Stage 4 -Shift WB & EB traffic on completed roadway -Delineate outside work zones using Group 2 channelizing devices -Construct WB outside drainage, SWM facilities and retaining/noise walls -Complete WB wideing and shared use path -Construct permanent signal at Baron Cameron Avenue	

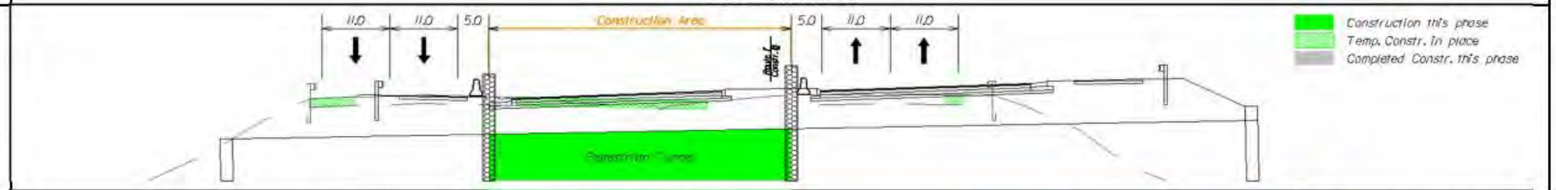
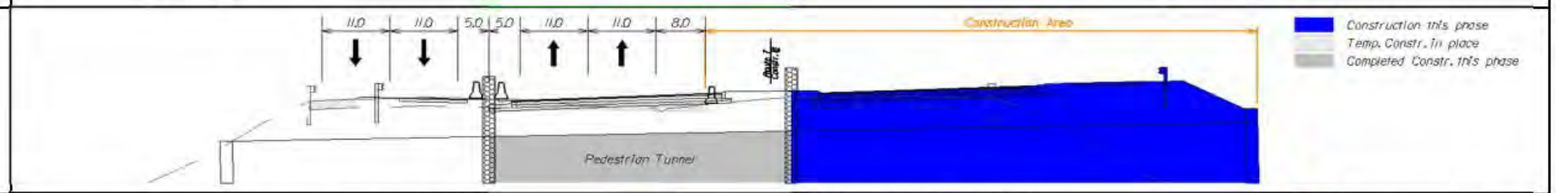
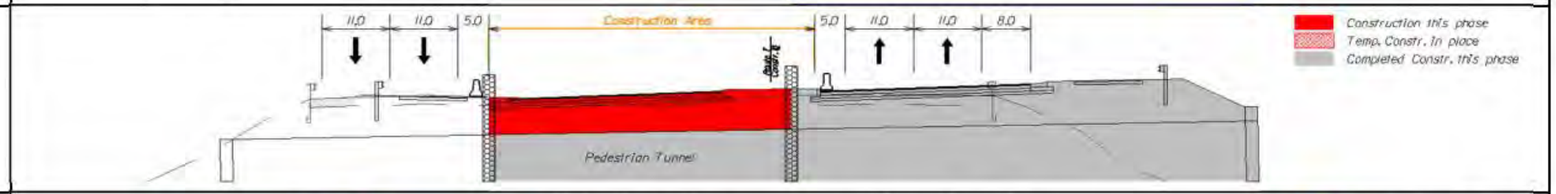
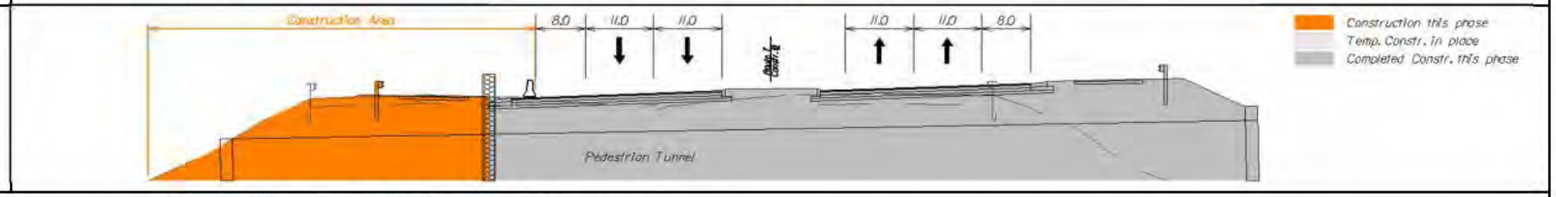
Key Public Safety and Mitigation Measures

- Temporary lane closures to be in accordance RFP Section 2.11.2
- Maintain 11' wide travel lanes including left and right turn lanes throughout area to minimize impact to traveling public, except during working hours
- Maintain existing speed limit through work zone to minimize impact to traveling public

- Provide for pedestrian/property owner safety by using orange safety fence to delineate work zone
- Bus Stops maintained during construction to ensure safe passage and access by the traveling public.

- Regularly inspect Group 2 devices at intersections to maintain sight distance
- Intersection movements maintained during active construction using uniformed flaggers at signalized intersections and non-uniformed flaggers at unsignalized intersections.
- New pavement/overlay in each phase provides fresh surface for pavement markings



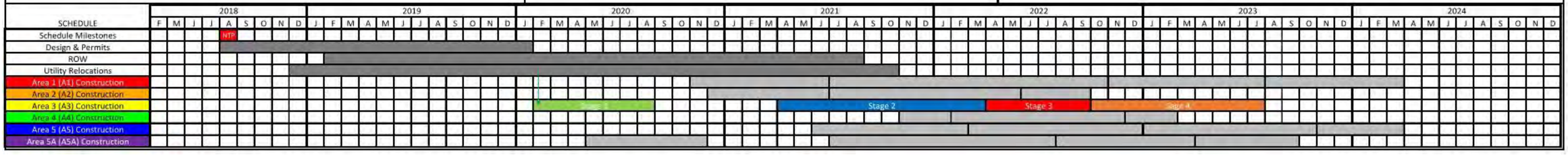
Phase		Construction Activities	TMP Features
Area 3 Station 294+00 to Station 346+00	Stage 1	-While maintaining EB and WB traffic in its current location, construct temporary outside shoulder strengthening using lane closures -Construct temporary traffic signals -Shift EB and WB traffic to temporary outside strengthened shoulders -Delineate median work zone using temporary barrier -Construct median portion of pedestrian underpass -Construct temporary median widening adjacent to existing WB lanes	
	Stage 2	-Modify temporary traffic signals for Stage 2 -Maintain WB traffic in Stage 1 location -Shift EB traffic to temporary WB median widening -Delineate outside EB work zone using temporary barrier -Construct EB portion of pedestrian underpass -Construct EB drainage, SWM facilities and retaining/noise walls -Construct EB roadway and shared use path	
	Stage 3	-Modify temporary traffic signals for Stage 3 -Maintain WB traffic in Stage 1 location -Shift EB traffic to completed EB roadway -Delineate median work zone using temporary barrier -Demolish temporary WB median pavement -Construct WB median drainage -Construct WB median roadway	
	Stage 4	-Modify temporary traffic signals for Stage 4 -Maintain EB traffic in Stage 3 location -Shift WB traffic to completed median portion of WB roadway -Delineate WB outside work zone using temporary barrier -Construct WB portion of pedestrian underpass -Construct WB outside drainage, SWM facilities and retaining/noise walls -Construct WB outside roadway and shared use path	

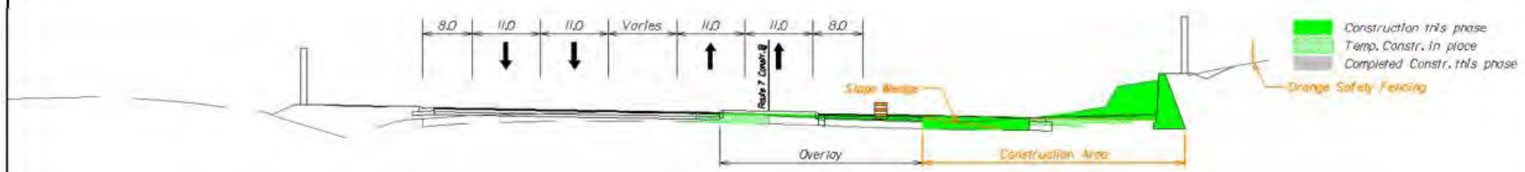
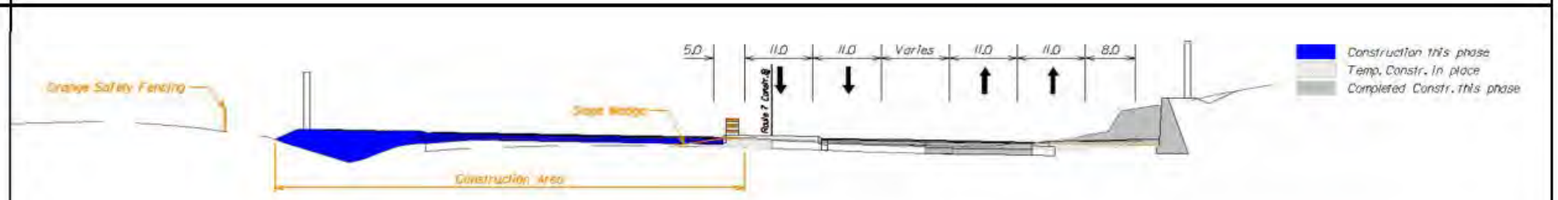
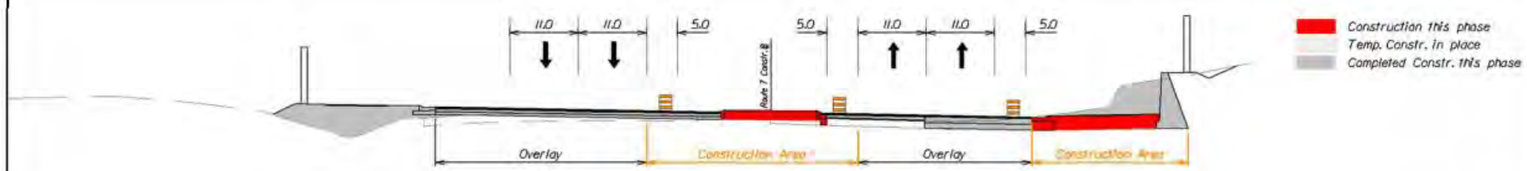
Key Public Safety and Mitigation Measures

- Temporary lane closures to be in accordance RFP Section 2.11.2
- Maintain 11' wide travel lanes including left and right turn lanes throughout area to minimize impact to traveling public, except during working hours
- Maintain existing speed limit through work zone to minimize impact to traveling public

- Provide for pedestrian/property owner safety by using orange safety fence to delineate work zone
- Bus Stops maintained during construction to ensure safe passage and access by the traveling public.

- Regularly inspect Group 2 devices at intersections to maintain sight distance
- Intersection movements maintained during active construction using uniformed flaggers at signalized intersections and non-uniformed flaggers at unsignalized intersections.
- New pavement/overlay in each phase provides fresh surface for pavement markings



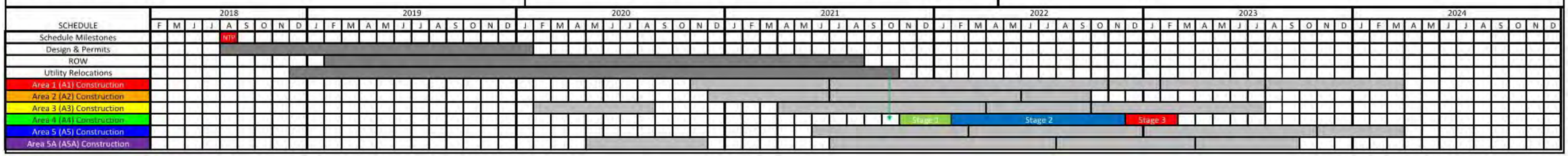
Phase	Construction Activities	TMP Features
Area 4 Station 346+00 to Station 387+50 — Stage 1	-While maintaining EB and WB traffic in its current location, construct temporary median widening using lane closures -Construct temporary traffic signals -Shift EB traffic to temporary median pavement -Delineate EB outside work zone using Group 2 channelizing devices -Partially demolish existing bridge over Difficult Run -Construct EB portion of new bridge over Difficult Run -Construct EB roadway, retaining walls, and channel relocation -Construct additional temporary EB outside widening	
Area 4 Station 346+00 to Station 387+50 — Stage 2	-Modify temporary traffic signals for Stage 2 -Shift EB & WB traffic to partially completed/widened EB roadway -Delineate WB outside work zone using Group 2 channelizing devices -Demolish remaining portion of existing bridge over Difficult Run -Construct remaining portion of new bridge over Difficult Run -Construct WB outside drainage, SWM facilities and retaining walls -Construct WB roadway and shared use path -Construct WB noise walls and other permanent features	
Area 4 Station 346+00 to Station 387+50 — Stage 3	-Modify temporary traffic signals for Stage 3 -Shift EB & WB traffic to completed EB & WB roadways -Delineate median and EB outside work zone using Group 2 channelizing devices -Construct median and EB shared use path on bridge over Difficult Run -Demolish temporary EB outside widening -Construct EB outside drainage -Construct EB curb & gutter and shared use path -Construct EB noise walls and other permanent features	

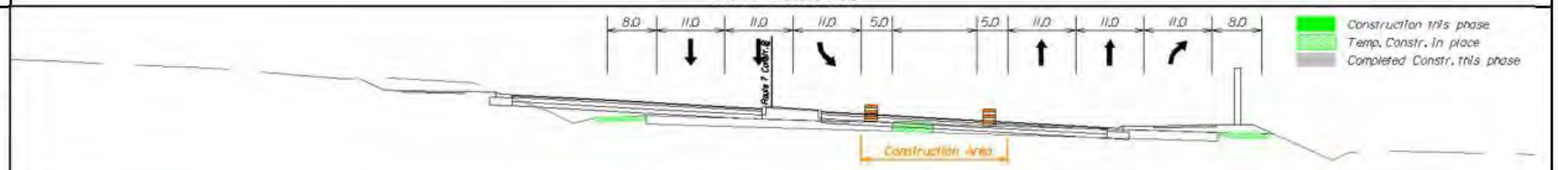
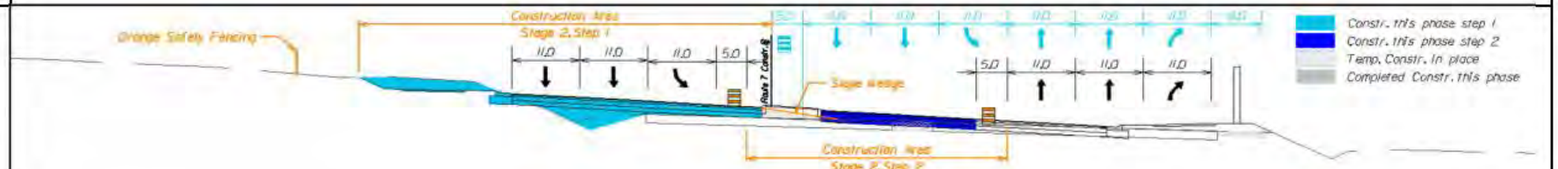
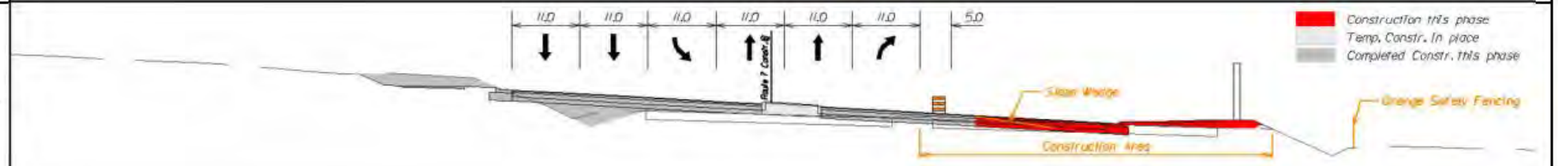
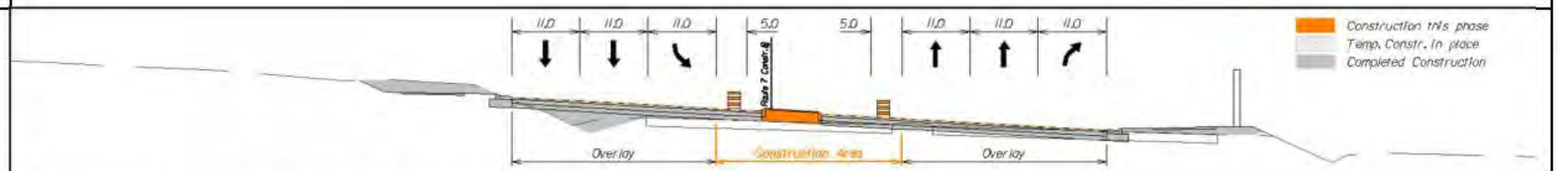
Key Public Safety and Mitigation Measures

- Opening pedestrian and equestrian trails early to bypass at grade crossings will be a benefit to the users and provides safe passage through the work zone prior to the final completion of Route 7. Where overhead drop hazards exist, the existing path will be protected for the safety of the users.

- Temporary lane closures to be in accordance RFP Section 2.11.2
- Maintain 11' wide travel lanes including left and right turn lanes throughout area to minimize impact to traveling public, except during working hours
- Maintain existing speed limit through work zone to minimize impact to traffic.

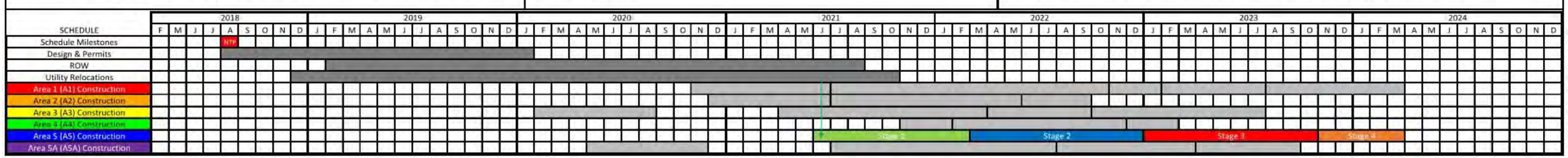
- Provide for pedestrian/property owner safety by using orange safety fence to delineate work zone
- Bus Stops maintained during construction to ensure safe passage and access by the traveling public.

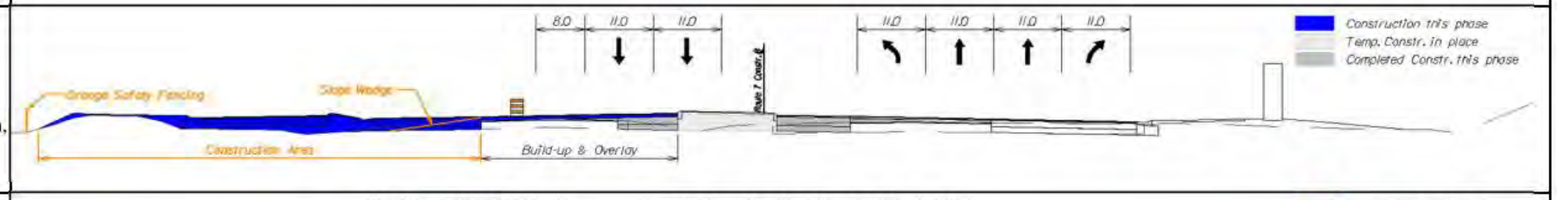
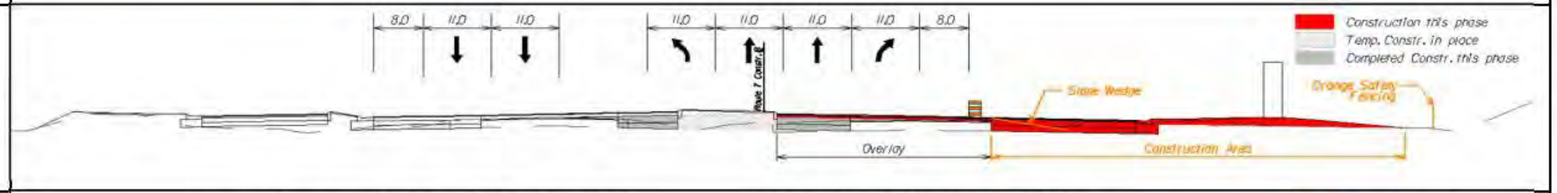
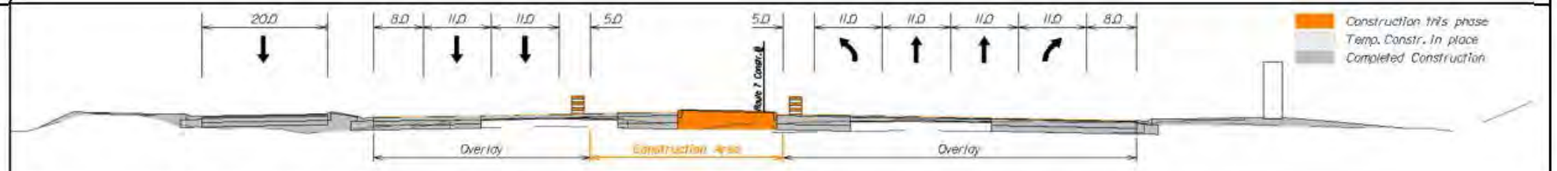


Phase	Construction Activities	TMP Features
Area 5 Station 387+50 to Station 474+75 — Stage 1	- Utilizing existing traffic patterns shift traffic to the outside - Delineate work zone using Group 2 channelizing devices - Widen and place temp. pavement in the median - Construct EB outside temporary pavement widening from Sta. 391+00 to Sta. 408+00 - Install temporary signal at (Beulah/Forestville)	
Area 5 Station 387+50 to Station 474+75 — Stage 2	- Maintain EB traffic in existing location; except at Sta. 391+00 to 408+00, where EB traffic is shifted to temp. pavement on the outside. - Shift WB traffic to median and delineate work zone using Group 2 channelizing devices - Construct the WB outside widening, shared use path, noise barriers, signals and lighting, and connections; then, shift WB traffic to outside lanes and complete median pavement construction	
Area 5 Station 387+50 to Station 474+75 — Stage 3	- Shift WB traffic to the outside travel lanes (2 through lanes) - Shift EB traffic on to temporary pavement located in the median - Delineate work zone using Group 2 channelizing devices - Construct EB outside widening, shared use path, noise barriers, service roads, and connections - Install proposed lighting along EB lanes - Install proposed traffic signals along EB lanes	
Area 5 Station 387+50 to Station 474+75 — Stage 4	- Maintain WB traffic in the current configuration & shift EB to the outside lanes (2 through lanes) - Delineate work zone using Group 2 channelizing devices - Demolish temporary median pavement and construct raised median - Finish and make operational proposed signals (Beulah/Forestville) - Final surface and stripe the proposed roadway - Open to traffic	

Key Public Safety and Mitigation Measures

- Temporary lane closures to be in accordance RFP Section 2.11.2
- Maintain 11' wide travel lanes including left and right turn lanes throughout area to minimize impact to traveling public, except during working hours
- Maintain existing speed limit through work zone to minimize impact to traveling public
- Outside temporary widening provided to ensure that all existing lanes can be maintained throughout full-depth reconstruction minimizing impact to the public
- Provide for pedestrian/property owner safety by using orange safety fence to delineate work zone
- Regularly inspect Group 2 devices at intersections to maintain sight distance
- Intersection movements maintained during active construction using uniformed flaggers at signalized intersections and non-uniformed flaggers at unsignalized intersections.
- New pavement/overlay in each phase provides fresh surface for pavement markings



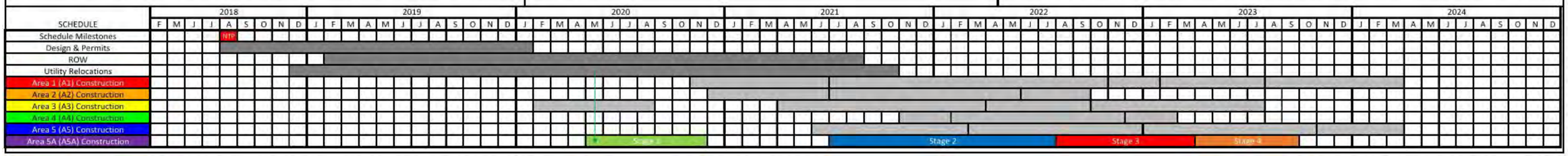
Phase	Construction Activities	TMP Features
Area 5A Station 474+75 to Station 526+50 — Stage 1	- Utilizing existing traffic patterns shift traffic to the outside - Delineate work zone using Group 2 channelizing devices - Widen and place temp. pavement in the median, from Sta. 502+00 to the end construct the median widening and proposed median curb - Mill & build-up existing lanes to reverse the crown and adjust to proposed grades - Install temporary signal at Lewinsville Road	
Area 5A Station 474+75 to Station 526+50 — Stage 2	- Maintain EB traffic in existing Location - Build-up WB pavement to proposed grade & Shift WB traffic to median - Delineate work zone using Group 2 channelizing devices - Install proposed traffic signals along WB lanes at Lewinsville Rd. - Construct the remaining portions of the WB outside widening, shared use path, noise barriers, and connections - Construct Lewinsville Rd. and connection to Brook Rd.	
Area 5A Station 474+75 to Station 526+50 — Stage 3	- Shift WB traffic to the outside travel lanes (2 through lanes) - Shift EB traffic on to temporary pavement located in the median - Delineate work zone using Group 2 channelizing devices - Construct EB outside widening, shared use path, noise barriers, service roads and connections & SWM ponds - Construct the Lewinsville Rd Displaced Left Intersection - Install proposed traffic signals along EB lanes	
Area 5A Station 474+75 to Station 526+50 — Stage 4	- Maintain WB traffic in the current configuration & shift EB to the outside lanes (2 through lanes) - Delineate work zone using Group 2 channelizing devices - Demolish temporary median pavement and construct raised median - Finish and make operational proposed signal and Displaced Left Intersection movements - Final surface and stripe the proposed roadway and open to traffic	

Key Public Safety and Mitigation Measures

- Temporary lane closures to be in accordance RFP Section 2.11.2
- Maintain 11' wide travel lanes including left and right turn lanes throughout phase to minimize impact to traveling public, except during working hours.
- Maintain existing speed limit through work zone to minimize impact to traveling public

- Outside temporary widening provided to ensure that all existing lanes can be maintained throughout full-depth reconstruction minimizing impact to the public
- Provide for pedestrian/property owner safety by using orange safety fence to delineate work zone

- Intersection movements maintained during active construction using uniformed flaggers at signalized intersections and non-uniformed flaggers at unsignalized intersections.
- New pavement/overlay in each phase provides fresh surface for pavement markings
- Bus Stops maintained during construction to ensure safe passage and access by the traveling public.



Temporary Detours

LANE-Wagman Team has developed and scheduled the Project to be performed without detours on Route 7 and major crossing roadways

The LANE-Wagman Team will adhere to the RFP requirement for no long-term detours for Route 7 through traffic. The team also recognizes that there are several reasonable short-term detours for side road connections that may improve the efficiency of construction. These will lessen the effects of construction on the traveling public by reducing the time traffic is exposed to construction hazards and improving the safety for the traveling public. These areas are limited to right turn lanes and intersection pavement replacements at the connections to Route 7. The Team anticipates that intersections without a practical detour alternative will be constructed with daily lane closures and flagging operations. The Team acknowledges that any detour is subject to review and approval by VDOT; as such the Team has developed and scheduled the Project to be performed without detours on Route 7 and major crossing roadways. By doing this the LANE-Wagman Team feels VDOT will not incur any risk, allowing the Team to develop a Final TMP design with efficiency for both the traveling public and the construction team.

Time of Day Restrictions

The LANE-Wagman Team will adhere to the RFP section 2.11.2 Lane and Road Closure Restrictions. The Team also acknowledges that lane user fees will be assessed if all lanes are not restored to traffic by the time required in the approved request for temporary lane closures. The Team's SOC has been developed to minimize disruptions to the travelway by constructing the median and pavement build-up early in construction. Then utilizing these areas to maintain existing traffic, the team will construct the outside widening with minimal lane closures. Difficult Run will require a slightly different method for construction, however the Team is committed to limiting lane closures and construction impacts in order to minimize disruption to normal traffic patterns.

Flagging Operations

The LANE-Wagman Team anticipates flagging operations will be utilized at intersections and along connecting streets where the minimum lane widths do not facilitate two-way traffic. Uniformed flagging operations will be necessary during installation of traffic signals. Where existing pedestrian and equestrian facilities cross into the construction work zone or pose a potential safety hazard, and alternate routes are not available, flagmen will be provided for the safety of the traveling public.

Minimum Lane Widths

In accordance with the RFP requirements in section 2.11.1, the LANE-Wagman Team will utilize a minimum 11-foot wide travel lane on all roadways affected by the work zone or traffic control devices. Where the travel lanes are adjacent to channelizing devices (Group 2 or Temporary Concrete Barrier Service) a two-foot minimum offset to the barrier will be maintained throughout the Project. Where Group 2 devices are utilized, a minimum 5' area (independent of usable shoulders) will be utilized for the placement of channelizing devices. Additionally, where usable shoulders are present an 8-foot shoulder will be provided as stipulated in the RFP Section 2.11.1.

Work Zone Speed Reductions

The LANE-Wagman Team acknowledges the RFP requirement in section 2.11.1 to design the TMP to meet the posted speed for each roadway. All elements of the TMP and specifically all temporary alignments, temporary lane closures, and temporary lane shifts will meet the requirements as specified in the Virginia Work Area Protection Manual for the full posted speed limit.

Incident Management Plan

The importance of this corridor with respect to mobility, commerce, and public safety are crucial to the entire Northern Virginia region. Our Team – modeled after our efforts on the Route 29 Solutions project – will have an Incident Management Plan (IMP) in place for any conceivable occurrence with alternatives available to our Team in response to any type of incident. The IMP will be developed with input and coordination from VDOT, Fairfax County, local EMS, state police and stakeholders. Our Team will meet with VDOT and stakeholders to review the Plan prior to implementation.

IMP detour routes will be coordinated with VDOT, Fairfax County, and other local jurisdictions as necessary and will include the potential detour routes described above and/or other routes in the area, depending on the severity, location, and length of time required. With any detour route that is being utilized, a WZTIA along with potential adjustments to signal timing, the use of flaggers and/or police officers will be implemented. The IMP will, at a minimum, include:

- Full-time (24/7) point(s) of contact within the Project Team
- Emergency detour routes with necessary signage and traffic control devices in place and at the ready
- A responsibility matrix and checklists for agencies, stakeholders, and the Project Team
- Coordination with First Responders, Reston, MedStar and Inova Hospitals, and stakeholders
- Access at all times for fire and rescue
- Contact lists for stakeholders and response personnel
- Other requirements and equipment as specified in RFP Part 2

Incidents could vary in severity by length of time and lack of warning. Incidents could include natural disasters, snow or floods, traffic accidents, special events, and other occurrences. We propose different levels of response based on the length of time and severity of the event. Our response to these events will be as follows:

- A limited incident is one which will take fifteen minutes or less to return to normal operations. In this type of event, primarily due to a minor accident or a planned event, response by local response teams would be expected with support, as necessary, by our Team. This will be classified as a short-term event.
- An incident which will impact traffic between 15 and 60 minutes but with no required roadway closures or detours will be considered a minor event. Our Team will respond with traffic control devices, coordinate with VDOT and signal timing adjustments to clear traffic, and will support local response teams as necessary. Contact lists will be utilized as necessary and close coordination with first responders and other primary stakeholders will be implemented.
- An incident which will take greater than 60 minutes to clear will be considered a major incident. In this case, detour routes will be implemented as necessary and traffic control devices, signal adjustments and other operational support will be implemented as described in the response to minor incidents, above. In the case of major incidents, contact lists will be fully utilized to notify impacted stakeholders, first responders, local hospitals and other critical facilities.

In all of the above incidents, close coordination with VDOT Northern Region Operations (NRO) will be maintained. This tiered system will provide an appropriate and efficient response should an incident occur. During the design stage, our Team will identify potential detour routes, analyze them in the WZTIA, and identify the need for adjustments or modifications along those routes before construction begins.

Public Safety

Safety is the highest priority for the LANE-Wagman Team. The TMP plan will utilize regular inspections of the work zone to ensure that all devices and measures are functioning and installed properly according to the approved TMP plan. The Team will perform additional inspections to ensure adequate sight distance is provided where channelizing devices are placed near intersections and along the inside of curves. The Team will inform the traveling public, stakeholders, and interested persons through a public outreach program to provide advanced notification of changes to the traffic patterns or pedestrian movements in and around the construction zones.

LANE-Wagman Team will use orange safety fence to enhance pedestrian awareness of construction activities

There are several pedestrian sidewalks/paths that will be impacted as part of the Project. The proposed sidewalk/paths will be constructed outside of the existing routes to provide safe passage for pedestrians, bicyclists, and equestrian users. **The LANE-Wagman Team will utilize an orange safety fence to enhance awareness of construction activities** and separate adjacent pedestrian routes from construction. Orange fencing will not be used as a channelizing device, but as a physical separation where undesired access may occur into the work zone. Where construction outside of the existing paths are not feasible, a detour or temporary path will

be developed for the time necessary to construct the sidewalk/path. Where pedestrian traffic crosses active construction zones or traffic, flagmen will be positioned to control construction traffic and allow safe passage of all pedestrians. In addition to providing orange safety fencing along the pedestrian routes where construction activities are present, the LANE-Wagman Team will utilize an orange safety fence along the outside of the Project limits adjacent to residential or other sensitive property, for the safety of the residents or businesses located adjacent to construction activities.

As noted in Addendum 4 of the RFP, Part 2, Section 2.2, there are 12 existing Fairfax Connector bus stops within the Project limits, for which boarding platforms are required (see table below). The Team is committed to providing safe operations for these bus stops, including maintaining the accessibility of these stops for the duration of the Project to ensure safe passage and access by the traveling public. Where lane closures will impact the total number of lanes, the Team will ensure that adequate room is provided for bus traffic to pull off, stop, and have room to accelerate/merge into the travelway.

Existing Fairfax Connector Bus Stops
• Baron Cameron Avenue @ Hunter Gate Way
• Leesburg Pike @ Downey Drive
• Leesburg Pike @ Colvin Run Road West
• Leesburg Pike @ Colvin Run Road East
• Leesburg Pike @ Faulkner Drive
• Leesburg Pike @ Middleton Ridge Road
• Leesburg Pike @ Forestville Drive
• Leesburg Pike @ Atwood Road
• Leesburg Pike @ Stokley Way
• Leesburg Pike @ Towlston Road
• Leesburg Pike @ Wolftrap Run Road
• Leesburg Pike @ Lewinsville Road

Where existing street lighting is impacted by construction, the first activity will be to provide temporary lighting or install new lighting to replace the impacted lights. This will ensure that visibility is maintained at night for the duration of the Project.

Project signs will be installed at the trail heads near Carpers Farm Way where the Difficult Run Stream Valley Trail crosses Route 7. Opening pedestrian and equestrian trails early to bypass at grade crossings will be a benefit to the users and provides safe passage through the work zone prior to the final completion of Route 7. Where overhead drop hazards exist, the existing path will be protected for the safety of the users.

Where travel lanes are shifted, temporary pavement markings **will be supplemented with temporary raised pavement makers for an enhanced visibility within the construction zone**.

A 2’ offset to channelizing devices will be utilized while providing a minimum 5’ area to accommodate channelizing devices adjacent to the travel lane. The LANE-Wagman Team will utilize a 6:1 sloped wedge adjacent to the shoulder to address drop-offs within the clear zone to provide enhanced safety for vehicular traffic and facilitate easier bus access where required. Where bifurcation between EB and WB travel lanes makes a 6:1 wedge impractical, the Team will follow the hierarchy for Clear Zone and Drop-Off Requirements outlined in the VWAPM Appendix A.

The Project’s IMP, as it relates to public safety, is a key component to the success of the Project. The Route 7 corridor is a heavily congested 4-lane roadway with numerous access points including driveways, intersections, and commercial establishments. Maintaining safety of the traveling public and construction crews alike is of utmost importance to the LANE-Wagman Team. An IMP that is clear, concise, and comprehensive to anticipate potential incidents will prepare the LANE-Wagman Team to quickly respond and mitigate the impact to traffic and restore full traffic operations for first-responders to access the site and clear the incident. The LANE-Wagman Team will employ a “tool box” of techniques to ensure traffic operations are restored which consists of the following key components:

- Contact list for notifications protocols including a single point of contact for critical stakeholders, local officials, and emergency management personnel;
- Pre-planned messages for PCMS boards at defined locations that convey pertinent information to reduce impact on the travel public and improve their ability to navigate the work zones;
- Pre-planned detour routes for first-responders;

- Stand-by equipment (i.e. "**pink**" VWAPM signs for emergency use) will be available; and on-site, existing equipment (i.e. PCMS, drums) will be re-used for full mobilization and implementation by dedicated crews trained for incident management;
- Training for construction Team members and continued training on-site as the Project's TMP plan is modified during the construction of the Project.

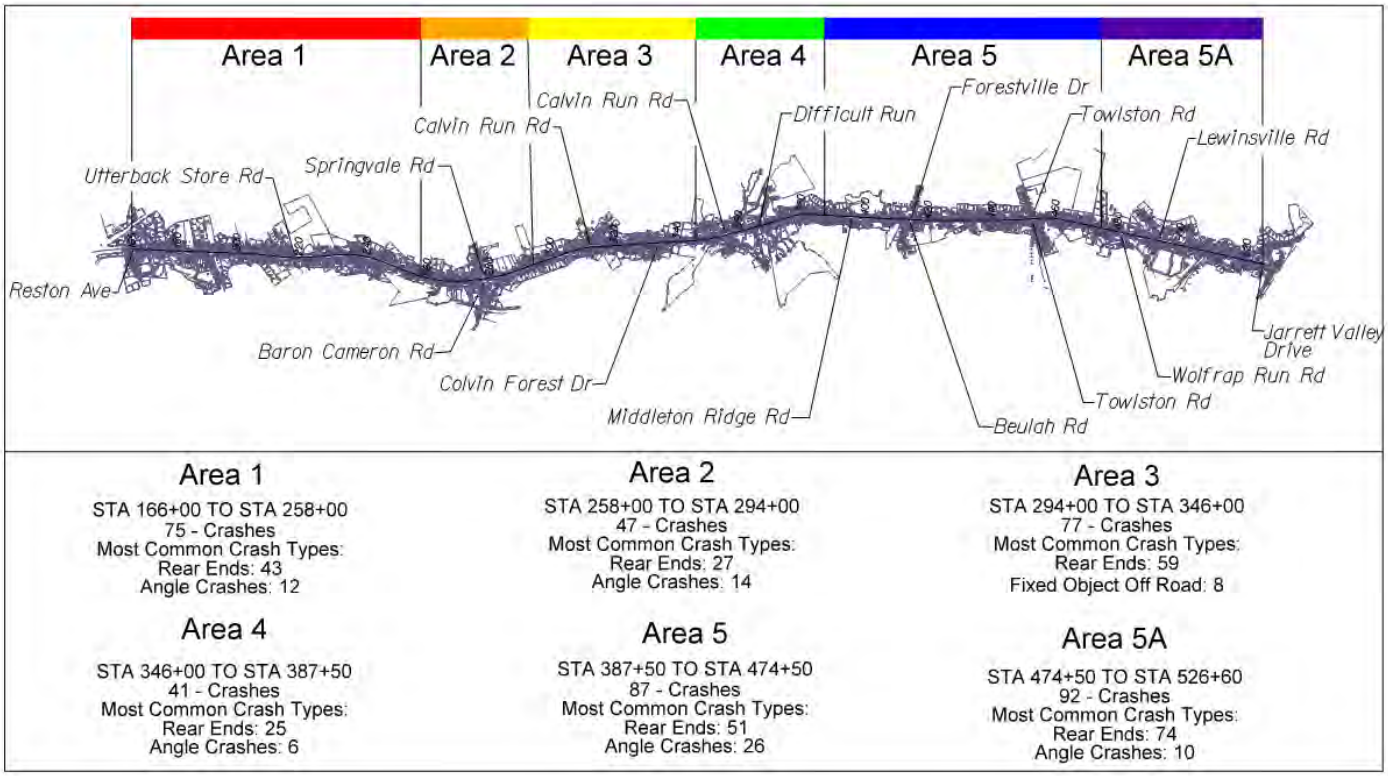


Figure 4.5.2-3- *Historical crash data for Route 7 corridor*

The LANE-Wagman Team has evaluated the existing conditions along the Project limits as part of the overall Project safety awareness (Figure 4.5.2-3). The 3-year crash history for the Route 7 corridor revealed a total of 419 crashes along the 6.81 miles within the Project limits between Jarrett Valley Drive and Reston Ave. The two most common crash categories for this segment of roadway were Rear-End Crashes with 279 crashes reported and Angle Crashes with 76 crashes reported. Our TMP and MOT design will enhance safety throughout the work zones by minimizing these crash types through queue/congestion management in addition to providing clear and concise guidance to motorists with uniform and well-maintained traffic control devices. The Team will implement a variety of additional mitigation measures to increase visibility, warn of potential congestion, and delineate the construction work zone. These measures include:

- Awareness "**ORANGE CONES. NO PHONES**" campaign
- Additional Warning Signs
- Temporary pavement markings supplemented with Temporary Raised Pavement Markers
- PCMS signs for Congestion Ahead, New Traffic Patterns, and Temporary Shut Downs (i.e. signals, overhead signs, bridge beams)
- Orange Safety Fencing adjacent to residential or pedestrian routes that parallel construction
- Temporary Street lights where existing lighting is impacted

4.6 PROPOSAL SCHEDULE

4.6| PROPOSAL SCHEDULE

The Proposal Schedule developed by the LANE-Wagman Team illustrates our proposed overall Project sequence, timing of design deliverables, and details the construction activities required to achieve an early Final Completion on or before May 30, 2024. The Proposal Schedule is organized by using a hierarchical Work Breakdown Structure (WBS) which shows the major phases of the Project. These includes Project milestones, design, scope validation period, environmental permitting, ROW acquisition, utility relocation, public involvement and construction. The Proposal Schedule also depicts the anticipated Critical Path, VDOT, FHWA, and other regulatory agencies submittal reviews, material procurement, and schedule for the Washington Gas Transmission Line project.

The LANE-Wagman Team offers two Unique Milestones to the Project:

- Area 2 – Baron Cameron Intersection Improvements – **September 2, 2022**
- Area 5A (includes Lewinsville Rd and McLean Bible Church) – **November 23, 2023**
- **Early Project Final Completion – May 30, 2024**

4.6.1 Proposal Schedule

The LANE-Wagman Team has developed the Proposal Schedule utilizing Primavera P6 software and CPM scheduling to depict the scope and sequence of work to design and construct the Project per the RFP requirements. Per the RFP requirement, the LANE-Wagman Team has provided "PDF" copies of the Proposal Schedule and Schedule Narrative, as well as a copy of the schedule source file in "XER" format on a CD-ROM.

4.6.2 Proposal Schedule Narrative

The LANE-Wagman Team has developed the following Proposal Schedule narrative for our overall plan to execute the work. The narrative includes overall sequencing of Project, the Critical Path, the LANE-Wagman Team's strategy to ensure the successful delivery of the Project on-time and within budget, and other key assumptions on which the schedule is based. We also explain how the LANE-Wagman Team optimizes the benefits of our approach to mitigate known risks, conform to MOT requirements, minimize impacts of construction activities on the stakeholders, and deliver the Project on-time.

Critical Milestones

The LANE-Wagman Team is committed to the Final Completion Milestone of May 30, 2024. The table below identifies Key Milestone dates which will require coordination not only between the D-B Team, and VDOT but also other reviewing agencies (FHWA, City of Arlington, etc.). Post Project award, the LANE-Wagman Team will implement our assertive D-B approach, local experience, and relationships to potentially improve these dates to meet the Final Completion.

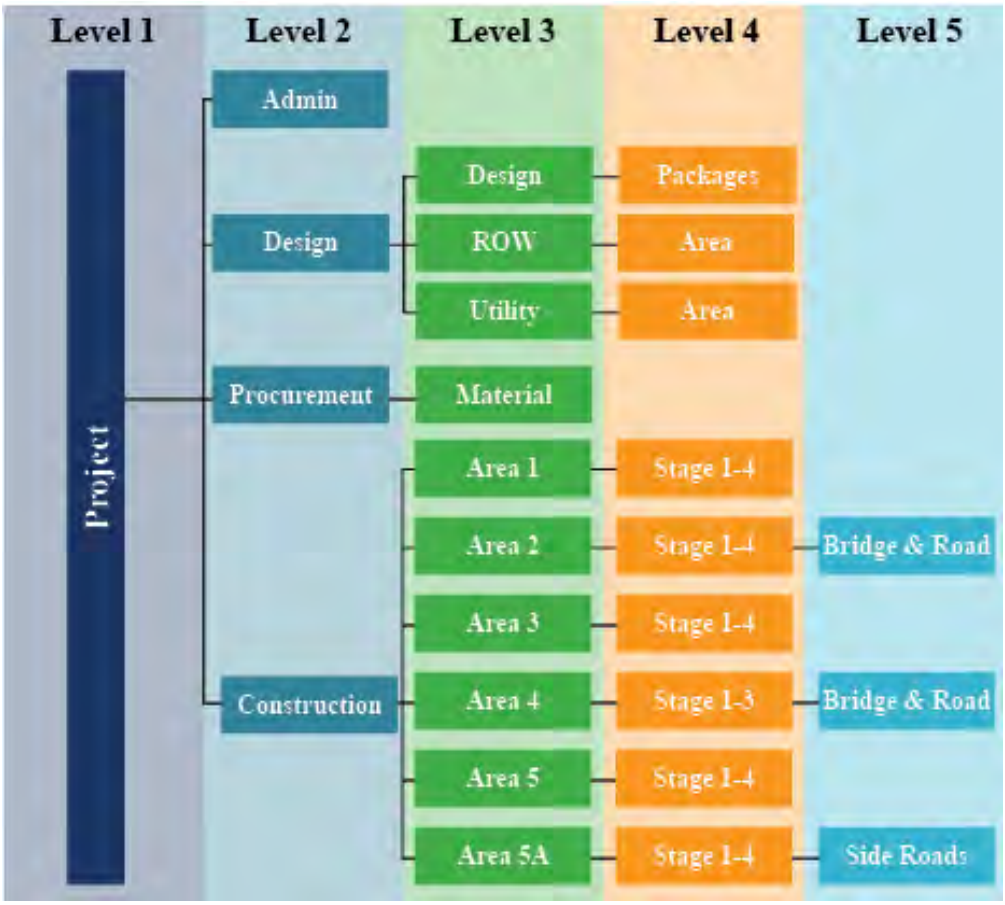
The LANE-Wagman Team has also committed to two Unique Milestones illustrated in the chart below.

Key Milestone	Milestone Date
Revised Technical Proposal Submission Date	June 19, 2018
Revised Price Proposal Submission Date	June 27, 2018
Notice of Intent to Award	July 2, 2018
CTB Approval / Notice to Award	July 18, 2018
Design-Build Contract Execution	August 13, 2018
NTP	August 20, 2018
Scope Validation Period Complete	December 17, 2018
Unique Milestone #1 – Area 2 Substantial Completion	September 2, 2022
Unique Milestone #2 – Area 5A Substantial Completion	November 23, 2023
Final Completion Date (Early)	May 30, 2024

Work Breakdown Structure (WBS)

The WBS is a multi-level, hierarchical arrangement of the work to be performed on the Project. The LANE-Wagman Team has laid out the WBS to break down the major phases of the Project by Area and type of work. The type of work has been broken down by Areas/ Stages and respective components such as Milestones, Project Management, Scope Validation, Environmental/Permitting, ROW, Design, Public Involvement, Utility Relocation, and Construction.

The LANE-Wagman Team's WBS reflects a collaborative effort between the design and construction teams by evaluating the components of the Project including type of work along the alignments, design considerations, and management of the construction efforts.



As depicted in the Project Schedule, Level 1 of the WBS is the overall Project, Level 2 details the major Work phases, Levels 3 and 4 illustrate the major design packages and construction of Base Scope and Option 1 Areas and Stages, and Level 5 further organizes the different construction activities within any given Area and Stage.

Calendars

The LANE-Wagman Team uses 5 different calendars to represent a variety of work scenarios:

- **"5 Days with Holiday"** – Based on five working days per week and includes standard holidays. Used for design activities and work not impacted by adverse weather and holiday restrictions.
- **"5 Days with Weather & Holidays"** – Based on five working days per week, specified holiday restrictions, and anticipated weather days. Used for construction activities.
- **"5 Days with Paving & Holidays"** – Based on the "*5 Days with Weather & Holidays*" with non-working periods from December through February. Used for asphalt paving activities.

- **"5 Days with Final Paving"** – Based on the *"5 Days with Weather & Holidays"* with non-working periods from December through April. Used for mill-and-overlay and final asphalt paving activities.
- **"Calendar Days"** – Based on seven days per week and is used for review periods and milestones.

For weather analysis, the LANE-Wagman Team has reviewed the weather data (April 2012 to March 2017) provided by NOAA observation center at McLean, VA. Using on 0.1 inch of participation per day as the threshold for weather impact and taking into consideration of weekends, the LANE-Wagman Team schedule accounts the following number of weather days each month:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Anticipated Weather Days	4	4	5	4	6	4	4	3	3	4	4	6

The LANE-Wagman Team will observe the New Year, Memorial Day, 4th of July, Labor Day, Thanksgiving, Friday after Thanksgiving, and Christmas holidays from 2018 to 2023, and marks these dates as non-work days in the schedule.

Activity Identification

The LANE-Wagman Team is proposing a smart activity identification system in the Proposal Schedule, in which a unique alphanumeric is utilized. Each activity identification is broken down into five parts: Phase of Work, Work Area, Sub-Location, and Unique Identifier, described in detail below:

As an example is **C 000 - 2680**

Type of Work	Area – Stage	Sub-Area	Unique Identifier
Types of work for the Project with the abbreviations	Construction phasing of the Project with the abbreviations:	Sub-Area of construction	The last four digits in the activity identification structure are numeric increments starting with 1000, and incremented in steps of 10. This is done to leave ample room between activities so that additional activities may be inserted as necessary.
A = Administration	000 = Project	"-" = Area	
D = Design	100, 200, etc… = Area 1, Area 2, etc.	A = Sub-Area A	
P = Procurement	110, 210, etc… = Area 1 Stage 1, Area 2 Stage 2, etc.	B = Sub-Area B	
C = Construction			

Scope Validation Period

The scope validation period is 120 days after NTP, and the Schedule lists the activities that are applicable to the work and VDOT review of the submittal.

Plan and Strategy

The LANE-Wagman Team has developed a strategic plan to design and build the Project. Our goal is to construct the Project with minimal impact to the local residents, the environment, the travelling public, and other stakeholders. This plan considered the following elements, and will continue to evaluate and modify our plan as the Project develops:

- VDOT reserves the right to award Option 1 – Phase II Construction up to 6 months after NTP. Since Option 1 - Phase II construction cannot start work until ROW and permit acquisition, design, and utility

conflict resolutions are complete, the deferred award of Option 1 construction should not impact the progress of the Project.

- ROW acquisition controls access to certain locations.
- Utility conflicts controls the start of roadway and bridge construction.
- Resolve utility conflict with the most effective method to minimize impacts to the public, the utility owner, and construction progress.
- Maintain traffic on Route 7 as its preconstruction capacity, and not utilize long-term detours for the connecting roadways.
- Environmental coordination will begin immediately and environmental clearances will be obtained well ahead of construction activities.
- Design deliverables will be packaged in accordance with the Project areas. These packages will proceed together through 60% design phase to allow for early environmental and water quality clearances to be obtained. After that stage design packages will flow in accordance with the work plan.
- The Change in Limited Access process will begin at the 30% design stage and will proceed along with 60% design development and will be approved in time for Authorization of Right of Way for properties not impacted by noise barriers.
- The noise report and final acceptance will proceed through final design of the roadway plans. Our design will assume that all walls will be constructed to facilitate final approval of the plans. After balloting and final VDOT / FHWA concurrence, if noise walls are eliminated they will be removed from the plans and not constructed. This will allow for manufacture of the noise walls to begin on standard wall elements while final balloting and concurrence occurs.

The LANE-Wagman Team's strategic plan is to organize the Project into six work Areas, and they are as follows:

LANE-Wagman Team's six Area approach minimizes the construction phasing requirements, reduces Project construction time, and decreases disruption to the travelling public and local residents.

1. **Area 1** – Station 166+78 to 258+00. The Area includes the Work from west terminus of the Project to Baron Cameron Intersection Improvements
2. **Area 2** – Station 258+00 to 294+00. The area includes the construction of the Baron Cameron Intersection Improvements, and the widening of existing roadway.
3. **Area 3** – Station 294+00 to346+00. The Area includes the construction of the roadway between Baron Cameron interchange and the Difficult Run Bridge, including the pedestrian tunnel.
4. **Area 4** - Station 346+00 to 387+50. The Area includes the stream relocation, the removal and replacement of the Difficult Run Bridge, and the realignment of the connecting roadway.
5. **Area 5** – Station 387+50 to 474+50. The area includes the roadway work east of Difficult Run Bridge to just west of Lewinsville Road.
6. **Area 5A** – Station 474+50 to 526+50. The Area includes the work from west of Lewinsville Road to the east end of the Project. It also includes the construction of the deferred left turn and Lewinsville Road Intersection work.

This approach offers the following advantages:

Organizing the Project into six independent Areas, improves construction efficiency and schedule robustness against impacts.

- The magnitude of utility and ROW impacts in these six Areas varies. The Team can start construction in the least impacted Area, and then allocate resources to other areas as they become available for construction. This approach **minimizes the impacts of utility conflict and ROW acquisitions** to the construction progress.
- The scope of work varies significantly between adjacent areas. This Area separation allows the Project team to develop a MOT plan that is optimal for the Area. It **minimizes the construction phasing**

requirements, reduces Project construction time, and decreases disruption to the traveling public and the local residents.

- Each Area can progress independently in this approach. It **improves efficiency**, because the Project team can advance the stages of work without being bogged down by the progress of the adjacent Area(s). It also **mitigates schedule delay**, because the effect of any schedule delay is automatically confined within the Area.

Design

The design of this Project includes preliminary (30%), semi-final (60%) and final design packages for each of the roadway areas 1-5 and 5A. Our schedule is to obtain water quality permits and ROW authorization for those parcels not impacted by noise walls at the 60% plan stage. This will allow us to begin construction in areas where there are no impacts to ROW. Our schedule includes internal Quality Control reviews prior to the submission of any report or plan design submission and provides review times for VDOT. Preparation and approval of the change in Limited Access has been accommodated in the schedule as well. Activities are included for the geotechnical investigations, reports and a 90-day period for VDOT review of the geotechnical report prior to submission of final plans that are dependent on the geotechnical recommendations. Activities for reevaluation of noise and a complete noise analysis are also included.

Environmental /Permitting

Our Team has established schedules for environmental studies completion, noise study completion and the acquisition of the water quality permit with milestone dates. These milestone dates are established as environmental hold points in the Project Schedule to ensure that any regulatory issues that may arise are dealt prior to the start of construction. Our environmental lead will participate in Team meetings to report the status of the environmental milestones and ensure the environmental commitments are incorporated into the design. Our Team will use an environmental commitments database to track the Project's environmental commitments and establish a detailed construction schedule that considers many variables such as seasonal time of year restrictions, required permit water quality monitoring, phased erosion and sediment controls and stormwater management implementation.

The Project Schedule also includes activities related to the preparation, submission and approval of the individual permits, agency coordination, and environmental commitment implementation. These activities will be reviewed and tracked to minimize the possibility of delays to the Project due to environmental concerns.

ROW Acquisition

The LANE Team will evaluate the proposed ROW and easements as shown on the plans. If changes are required either due to a change in the required ROW (i.e. noise barrier maintenance widths), or a change based on the results of legal research, the Team will prepare updated preliminary ROW plans and a ROW data sheet for VDOT review and approval. Preliminary ROW activities will begin after receiving NTP. Our Team will begin performing the legal research for the identified parcels on the preliminary plans in Prioritization Groupings as discussed in Section 4.4.5 Right of Way Management in conjunction with our survey crews validation of field run data. The ROW base file will be updated as well as areas of take based on our Team's design. ROW plans will then be submitted for approval, followed by appraisals, appraisal reviews and negotiations. ROW will conclude either with closing of the property or condemnation in order to maintain schedule.

Utility Relocation

Utility coordination will continue based on the information obtained during the development of this Technical Proposal. After NTP and development of UT-9s (based on preliminary design), a Utility Field Investigation (UFI) will be held. Each utility company will be supplied with the preliminary plans and a UT-9 of their facilities. The UT-9 will show our understanding of cost responsibility (prior rights) based on available ROW information shown on the plans. The utility companies will be given the opportunity to produce documentation that may change our assessment of prior rights. After which, pro-rates will be established for the Project. Every

effort will be made to avoid or minimize utility impacts. However, for those utilities that cannot be avoided, relocation plans will be requested, reviewed and approved prior to relocation.

Procurement

The Procurement Stage includes activities related to the material procurement efforts in the Project, which includes the development shop drawings, VDOT review and approval of the documents, and the fabrication of the material. The types of material are as follows:

- Noise barrier on roadway
- Beams for Difficult Run Bridge

Construction

The LANE-Wagman Team's SOC on which this schedule is based, has been developed to achieve Project milestones, mitigate impacts to the traveling public, avoid delays to construction and ultimately, to facilitate successful completion of the Project. **Our SOC allows for the Project to achieve early completion.**

Sequence of Construction

The LANE-Wagman Team organized the Project into the six Areas, and we will construct each Area with the minimum amount of Stages so we can construct each area as quickly as possible. This will **improve public safety, reduce traveler's confusion, and decrease overall disruptions to the public and other stakeholders**. The SOC of the proposed constructions is as follows:

- **Area 3** – Station 294+00 to346+00. The LANE-Wagman Team will construct the roadway, retaining wall, the drainage, ITS, traffic signals, signs, SWM facilities, lighting, erosion control, and MOT in the area.
    - Stage 1 – The Team will construct temporary paving, and shift the traffic towards to the outside curbs. Then the Team will partially construct the proposed median, and temporary pavement. The sequence of work is as follow:
        - Construct temporary pavement under lane closure.
        - Construct the new roadway and median.
        - Construct pedestrian tunnel.
        - Install signal, lighting and ITS.
    - Stage 2 – The Team will maintain WB traffic towards the curb and shift EB traffic onto the median. The Team will construct the Route 7 EB alignment. The sequence of work is as follow:
        - Construct new roadway, SUP and mill-and-overlay existing roadway.
        - Construct pedestrian tunnel.
        - Install sound barrier wall.
        - Place and finish the subbase.
        - Install signs, lighting and ITS.
    - Stage 3 – The Team will shift EB traffic into its final alignment, and maintain WB traffic in its current location. The Team will construct the remaining of the WB median, and the general sequence of work is as follow:
        - Install MOT devices, temporary signals, and the erosion control measures.
        - Construct new median and roadway, and mill-and-overlay existing roadway.
        - Construct pedestrian tunnel.
        - Install sound barrier wall.
        - Install signs, lighting and ITS.
    - Stage 4 – The Team will shift WB traffic to the completed median lanes, and construct the outside WB improvements.
        - Construct new roadway, and SUP.
        - Construct pedestrian tunnel.
        - Install sound barrier wall.
        - Finish signs, signal and lighting.

- Stage 1 Temporary pavement and shoulder strengthening to facilitate shift to outside travel lanes.
- Stage 2 - The Team will push both EB and WB traffic to the outside pavements built in Stage One. Full depth reconstruction, mill and overlay and other permanent improvements will be constructed.
- Stage 3 –Traffic will be stage onto the pavement built in Stage 2. Full Depth Reconstruction, drainage, mill and overlay and SUP will be constructed during this Stage:
  - Install sound barrier wall E-3 and G1.
  - Finish signs, signal, lighting and ITS.

- **Area 5A** – Station 474+75 to 526+50. The LANE-Wagman Team will construct the roadway, retaining wall, the drainage, ITS, traffic signals, signs, SWM facilities, lighting, erosion control, and MOT in the Area. Utility relocation will drive the start of construction in the Area.

Unique Milestone – Area 5A substantially complete by November 23, 2023.

  - Stage 1 – The Team will install MOT devices and shift traffic towards the curbs, and construct the inside lanes and median. The general sequence of work is as follows:
    - Construct new roadway.
    - Install signal, lighting and ITS.
  - Stage 2 – The Team will maintain EB traffic in the existing location, and shift WB traffic into the median; except at Station 391+00 to 408+00, where the Team will shift the EB traffic onto the temporary outside widening. The Team will construct the WB outside lanes and portion of EB outside lanes (Sta. 501+20 to 526+63). The general sequence of work is as follows:
    - Construct new roadway, SUP, and retaining walls.
    - Install sound barrier walls.
    - Mill-and-overlay existing pavement.
    - Install signal, signs, lighting and ITS.
    - Construct Lewinsville Rd and Service Rds.
  - Stage 3 – The Team will shift the WB traffic to its final location (two lanes), and shift EB traffic to the median. Then the Team will construct the remaining EB alignment of Route 7. The general sequence of work is as follows:
    - Construct new roadway, SUP retaining walls.
    - Install sound barrier wall.
    - Mill-and-overlay existing pavement.
    - Install signal, signs, lighting and ITS.
    - Concurrently construct Lewinsville Rd and Displaced Turn Lanes.
  - Stage 4 – The Team will keep WB traffic at its current location and shift EB traffic to its final location, two lanes in both direction. Then the Team will finish the medians and finalize the signal.

Construct median and remaining roadway.Finish signs, signal, ITS, and lighting

- **Area 1** – Station 166+78 to 258+00. The LANE-Wagman Team will construct the roadway, retaining wall, the drainage, ITS, traffic signals, signs, SWM facilities, lighting, erosion control, and MOT in the Area.
  - Stage 1 – The Team will shift traffic to the outside, and construct inside EB to the existing grade and temporary pavement over the proposed median:
    - Construct temporary pavement under lane closure.
    - Construct new roadway and median.
    - Construct ITS, lighting and temporary signal.
    - Build the SWM facilities concurrently with the grading and paving operations.

- Stage 2 – Stage 2 will start after the completion of Stage 1. The Team will shift EB traffic to the overbuild and inside, and WB traffic will remain at its Stage 1 alignment. The Team will construct the proposed roadway on the outside of the traffic.
  - Construct new roadway, SUP, and mill-and-overlay existing roadway.
  - Install sound barrier wall.
  - Install signal, signs, lighting and ITS.
- Stage 3 - Stage 3 will start after the completion of Stage 2. The Team will shift EB traffic outside against the curb, keep WB traffic on its Stage 1 alignment, and close the inside and median for construction.
  - Construct new roadway and mill-over-lay existing roadway.
  - Install signs, and lighting.
- Stage 4 – Stage 4 will start after the completion of Stage 3. The Team will shift EB traffic into its permanent alignment, push WB traffic to inside, and construct the remaining WB roadway.
  - Construct new roadway, SUP, and mill-and-overlay existing roadway.
  - Construct retaining walls.
  - Install sound barrier wall.
  - Finish signs, signal, lighting and ITS.

  - Construct median on the connecting roadway.
  - Finish signals, signs, ITS and lighting.

- **Area 2** – Station 258+00 to 294+00. The LANE-Wagman Team will utilize the same sequence as Area 1 to construct the roadway, retaining wall, the drainage, ITS, traffic signals, signs, , lighting, erosion control, and MOT in the area.

Unique Milestone – Area 2 substantially completes by September 2, 2022.

  -
  - Stage 1 Temporary pavement and shoulder strengthening to facilitate shift to outside travel lanes.
  - Stage 2 - The Team will push both EB and WB traffic to the outside pavements built in Stage One. Full depth reconstruction, mill and overlay and other permanent improvements will be constructed.
  - Stage 3 –Traffic will be stage onto the pavement built in Stage 2. Full Depth Reconstruction, drainage, mill and overlay and SUP will be constructed during this Stage:
    - Install sound barrier wall E-3 and G1.
    - Finish signs, signal, lighting and ITS.

- **Area 5** – Station 387+50 to 474+75. The LANE-Wagman Team will construct the roadway, retaining wall, the drainage, ITS, traffic signals, signs, SWM facilities, lighting, erosion control, and MOT in the area.
  - Stage 1 – The Team will construct temporary pavements and shift traffic towards the curbs, and construct the inside lanes and median. The general sequence of work is as follow:
    - Construct temporary pavement under lane closure.
    - Construct new roadway.
    - Install signal, lighting and ITS.
  - Stage 2 – The Team will maintain EB traffic in the existing location, and shift WB traffic into the median; except at Station 391+00 to 408+00, where the Team will shift the EB traffic onto the temporary outside widening. The Team will construct the WB outside lanes. The general sequence of work is as follow:
    - Construct new roadway and retaining walls, and mill-overlay existing roadway.
    - Install sound barrier wall.
    - Install signs, signal, lighting and ITS.

- Stage 3 – The Team will shift the WB traffic to its final location (two lanes), and shift EB traffic to the median. Then the Team will construct the proposed EB alignment of R-7. The general sequence of work is as follow: Install MOT devices, temporary signals, and the erosion control measures.
  - Construct new roadway, SUP, and retaining walls.
  - Mill-and-overlay existing pavement.
  - Install sound barrier.
  - Install signal, signs, lighting and ITS.
- Stage 4 – The Team will keep WB traffic at its current location and shift EB traffic to its final location, two lanes in both direction. Then the Team will finish the medians and finalize the signal.
  - Construct new roadway and median.
  - Finish signs, signal, ITS and lighting.

- **Area 4** – Station 346+00 to 387+50. The LANE-Wagman Team will construct the roadway realignment, the stream relocation, the Difficult Run bridge, erosion control, and MOT in the area.
  - Stage 1 – The Team will shift the EB traffic north, and keep WB traffic in its current alignment. The Team will partially demolish the existing bridge and construct portion of the new bridge.
    - Relocate the stream to the new location in two steps.
    - Partial demolish existing bridge. Concurrent with stream relocation.
    - Construct south half of the new Difficult Run Bridge and EB Roadway Improvements.
    - Construct roadway and SUP connecting to the bridge.
    - Install sound barrier wall.
    - Install signal, signs, lighting and ITS.
  - Stage 2 - The Team will shift the EB and WB traffic onto the new bridge. The Team will relocate traffic to the new bridge, demolish the reminder of the existing bridge and construct the remaining portion of the new bridge.
    - Demolish the remainder of the existing bridge.
    - Construct the remainder of the new Difficult Run Bridge and WB roadway improvements..
    - Construct SUP and roadway connecting to the bridge.
    - Install sound barrier wall.
    - Install signal, signs, lighting and ITS.
  - Stage 3 – The Team will shift WB onto its permanent alignment, and temporary alignment EB to construct the bridge railing.
    - Construct deck median and railings.

Means and Methods

Drawing from decades of civil infrastructure design and construction experience, the LANE-Wagman Team has developed various mean and methods for the design and construction of the Project to meet/exceed the RFP requirements. Our objective is to provide VDOT with a facility requires low long-term maintenance, is safe for both the builder and the general public, and minimize disruption to public.

Baron Cameron Intersection Improvements

MOT/Phasing – The LANE-Wagman Team has developed a MOT/phasing plan that requires no detours of Baron Cameron Ave traffic. This plan utilizes the general construction as adjacent work areas, thus provide a sense of familiarity to the travelling public reducing confusion. The LANE-Wagman Team recognizes the importance of this intersection, so we

The LANE-Wagman Team offers the following advantages at Baron Cameron:

- **Early completion of intersection.**
- **No detour of Baron Cameron.**
- **Minimal traffic switches to reduce impact to the traveling public.**

deliberately break-out the intersection as Area 2. As a result, the LANE-Wagman can deliver the improved intersection to the public ahead of final completion.

Difficult Run Bridge Replacement

MOT/Phasing - The LANE-Wagman Team will construct the new Difficult Run Bridge in two Stages. In Stage 1, we shift EB traffic on the bridge onto the median; then partially demolish the existing bridge and partially construct the new stage. For Stage 2, we shift bridge traffic onto the new bridge, and then completely remove the remainder of the existing bridge, and completely construct the remainder of the new bridge. Hence, the bridge only has 1 longitudinal joint. This **improves overall quality of the construction and bridge rideability, and it also reduces long term maintenance for VDOT.**

The LANE-Wagman Team offers the following advantages at Difficult Run Bridge:

- **Bridge is constructed in two stages.**
- **No closure of Carpers Farm Way.**
- **Sequence work to minimize utility impacts.**

Environmental Impact / Permit – The schedule accounts for TOY restriction of Wood Turtle on the stream relocation work.

Stream Relocation – This work is critical to the start of bridge and west approach roadway construction. There are two components to the proposed new stream - constructing the box culverts underneath Carpers Farm Way, and excavating and lining the new stream bed in its new alignment. The Team will construct the box culvert crossing at Carpers Farm Way in two steps to maintain traffic on the roadway. When the box culverts and the new stream bed are completed, the LANE-Wagman Team will relocate the stream to its new alignment, and the pending roadway and bridge work can start.

Washington Gas Transmission Line Coordination

The LANE-Wagman Team has analyzed the Washington Gas relocation project plan and schedule against the Project MOT Plan (area and stages). The location of the Washington Gas relocation project can be summarized as follows:

	Station			Project Location
Washington Gas Strip 2	229+00	to	239+80	Area 1 Stage 1
Washington Gas Strip 1				
Dranesville Gate Station to Great Passage Blvd	230+00	to	237+75	Area 1 Stage 2
Great Passage Blvd to Downey Dr	237+75	to	293+00	Area 1 Stage 2 & Area 2 Stage 1
Downey Drive to Colvin Run Rd	293+00	to	355+70	Area 2 Stage 3, Area 3 Stage 4 & Area 4 Stage 2
Colvin Run Rd to Beulah Rd	355+70	to	414+89	Area 4 Stage 2 & Area 5 Stage 2
Beulah Rd to Royal Estates Dr (L)	414+89	to	430+75	Area 5 Stage 2
Beulah Rd to Royal Estates Dr (R)	430+75	to	474+86	Area 5 Stage 3 & Area 5A Stage 3
Royal Estates Dr to Jarrett Valley Dr (R)	474+86	to	479+05	Area 5A Stage 3
Royal Estates Dr to Jarrett Valley Dr (L)	479+05	to	526+61	Area 5A Stage 2

Roadway Sequence

MOT / Phasing Plan – The Proposal Schedule reflects the Team's MOT plans for Areas 1 – 5A. We have analyzed the effects of utility conflicts and ROW acquisition on the construction schedule and devised this phasing to minimize the magnitude of impact by the aforementioned issues. The LANE-Wagman Team also utilized temporary pavement and other temporary construction to reduce the number of construction stages, whenever it was reasonable and feasible.

ROW and Utility Conflicts – Dry utilities are the largest schedule risk in the Proposal schedule and impacts the start of work in Area 5. The impact is also cumulative with ROW acquisition because the relocation efforts

require ROW acquisitions. The LANE-Wagman Team will continue to review and revise our design to reduce the utility conflicts. The Proposal Schedule currently contains activities to represent the known utility conflicts in the Project and accounts for those impacts.

Project QA and QC

Design – The Proposal Schedule has incorporated activities to present the QA/QC process. They are the predecessor to the submission of all design packages and therefore design and engineering QA/QC is accounted for in the Schedule.

Construction – When the LANE-Wagman Team estimated the duration of a construction operation, we accounted for the time required for appropriate QA/QC testing for that operation. For the documentation of QA and QC test results, the results will be submitted periodically; therefore, it does not require representation in the Proposal schedule.

Inspection, Testing and Acceptance – The Proposal Schedule has incorporated inspection testing and acceptance activities for the Baron Cameron Bridge, Difficult Run Bridge, and the ITS, lighting and signalization systems in all six Areas. These activities also provide the time reference necessary for test coordination. The Proposal Schedule also includes "burn-in period" activities for lighting and signalization systems.

Public Involvement / Public Relations

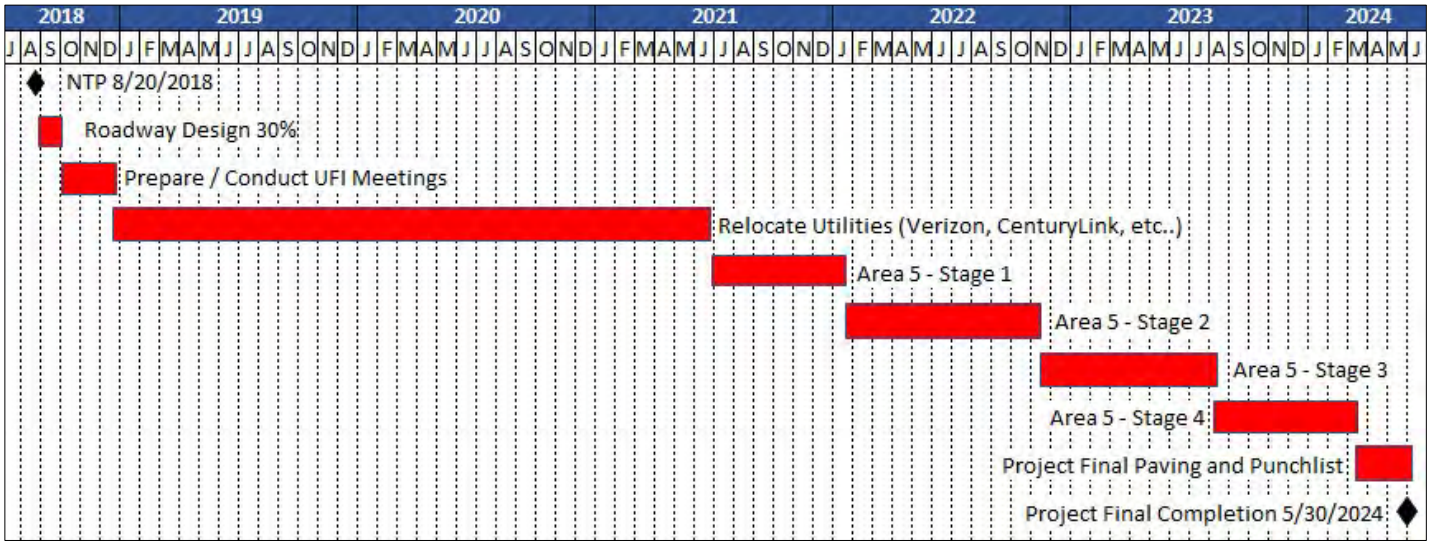
The LANE-Wagman Team will provide the Public Involvement / Public Relations service in accordance with the RFP requirements. Outreach will commence shortly after Notice to Proceed and on an as-needed basis thereafter. We propose reconvening the Route 7 Working Group at this time (to redefine its scope during design) and hosting meetings of the group thereafter at key milestones, including when there are meaningful departures from previously-shared design concepts. At the outset of construction, we recommend calling a meeting of the group to announce the new phase and reposition the scope of the group as more informational in function. Two Public Meetings, one on each end of the corridor, are proposed for July 2018 to introduce preliminary design concepts. Briefings and other outreach to elected officials, HOAs and other stakeholders will occur throughout the duration of the Project.

Critical Path

The LANE-Wagman Team determines the Critical Path for the Proposal Schedule based on the Longest Path. It starts with 30% roadway design and UFI Meetings, which is followed by the relocation of Verizon, CenturyLink (formerly Level 3), MCI, and Fiberlight communication lines. The completion of the utility relocation allows the LANE-Wagman Team to start construction of Area 5.

The Critical Path of the construction phase follows the phasing sequence of Area 5: Stage 1, 2, 3, and 4. In Stage 1, the Critical Path runs through the MOT, erosion control, earthwork, drainage, underground lighting / ITS conduit, base, asphalt paving of new roadway, and mill-and-overlay existing pavement. In Stage 2, the Critical Path runs through the MOT, erosion control, earthwork, drainage, subbase, underground lighting / ITS conduit, base, curb-and-gutter; this is followed by the SUP construction, and the noise barrier wall panel erections. In Stage 3, the Critical Path similarly runs through the MOT, erosion control, existing roadway demolition, earthwork, drainage, subbase, underground lighting / ITS conduit, base, curb-and-gutter, and asphalt paving; this is followed by the SUP construction, and the noise barrier wall panel erections. In Stage 4, the Critical Path runs through the MOT, temporary pavement demolition, earthwork, median, base, and asphalt paving. This is followed by the finalization of traffic signals and system testing and acceptance.

The Final Completion of the Project ends with the final paving and the final punchlist.



Key Assumptions

In addition to the calendars and weather days, the LANE-Wagman Team made the following key assumptions on which our Schedule is based:

- Effective partnering and coordination efforts between the LANE-Wagman Team, VDOT, the Route 7 Working Group, Fairfax County, the Town of Vienna, Washington Gas, the adjacent active contracts, and all other stakeholders.
- The LANE-Wagman Team uses the weather data from the past five years as a basis for estimating the weather impact throughout the year. It should provide a reasonably reliable estimate for normal weather impact.
- ROW procurement time is based on the past experiences of the LANE-Wagman Team,
- Per RFP Part 2 Section 2.4.8, the Proposal Schedule reflects an anticipated noise wall quantity of 581,406 sf not including gaps/overlaps.

Schedule Management & Mitiagtion of Delay Risk

Effective management and control of a Project requires a properly managed scheduling program, documentation control, cost control, and an integrated design-to-construction process. The LANE-Wagman Team will develop and maintain the Project Schedule in accordance with the VDOT Special Provision for Design-Build Project Schedule (RFP Exhibit 11.1).

The LANE-Wagman Team will use Primavera P6 (P6) scheduling software to plan, schedule, and monitor this Project. The Project Schedule will be developed, maintained, and updated by the Project Scheduler. The Project Scheduler, supported by the Project Engineer and DBPM, is ultimately responsible for the management of the schedule.

Upon award of the contract, the LANE-Wagman Team will collaborate with VDOT to develop a detailed Baseline Schedule using the proposal design plans. After an internal analysis and review of the general schedule logic and Critical Path, the schedule is completed. The Project Control Team will generate the Baseline Schedule document, as required, for submission to VDOT.

The Baseline Schedule will indicate the necessary procurement and construction activities for each Segment of the project. Various calendars will be incorporated into the Project Schedule to reflect holidays, seasonal work, temperature, and other requirements. The activities within the Project Schedule will be organized by WBS. An Activity Coding Structure will be utilized in the Project Schedule to organize data output. The Schedule will be the tool used for coordination by the design and construction teams. Schedule updates will be used by design and construction managers to review progress and coordinate the efforts of all entities involved.

Separate short-term (3-week look-ahead) detailed schedules (Level 5) will be used by the Construction Manager to plan and monitor specific items of work and will be prepared, as necessary, to deal with specific work packages or smaller work activities as the need arises. As the work progresses, start dates, finish dates, percent complete, and remaining durations will be updated to report the progress of each work activity. The Construction Manager will incorporate updated data into the CPM schedule on a monthly basis, review the results internally and with VDOT, and prepare the required reports for submittal. Monthly updates of the CPM schedule provide the foundation of progress reports utilized by the Team.

Separate short-term detailed schedules will be used to plan and monitor day-to-day operation and specific items.

Necessary resources will be mobilized to correct the slippage and maintain the schedule

When changes or unforeseen circumstances arise that impacts the Project Schedule, the LANE-Wagman Team will immediately notify VDOT (and other appropriate stakeholders) and begin incorporating changes into the "live" CPM schedule. If any changes result in schedule slippage, the DBPM will evaluate the issue to determine if additional manpower, equipment, multiple shifts, a change in subcontractor, or additional subcontractors are required. If so, the necessary resources will be mobilized to correct the slippage and maintain the schedule. Throughout the Project, the Schedule will be clearly communicated to all subcontractors and key suppliers. **Delays and schedule slippage will not be tolerated.**

Incentive for Early Completion

The Proposal Schedule shows the LANE-Wagman Team achieving an Early Final Completion Milestone date of May 30, 2024. VDOT has offered an "No Excuse" incentive for early completion of the Final Completion Milestone and our Team will make every effort to expedite the Project to meet this early completion:

- The LANE-Wagman Team (at our own risk) will mobilize the design team and the planning process at Notice to Award in lieu of the NTP to set-up the design process to cut down non-production time at the start of the Project.
- The LANE-Wagman Team considers the McLean Bible Church a critical facility. By separating 5A from Area 5, we can expedite the roadway work and substantially complete Area 5A on November 23, 2023 – six (6) months ahead of the Early Final Completion Milestone. This will reduce the overall construction impact to the travelling public in the area, which includes the McLean Bible Church.
- The LANE-Wagman Team has identified the Baron Cameron Intersection Improvements as a critical feature on the Project. As a result, we will expedite the Area, and open the intersection on September 2, 2022 – 21 months ahead of the Early Final Completion Milestone.

Conclusion

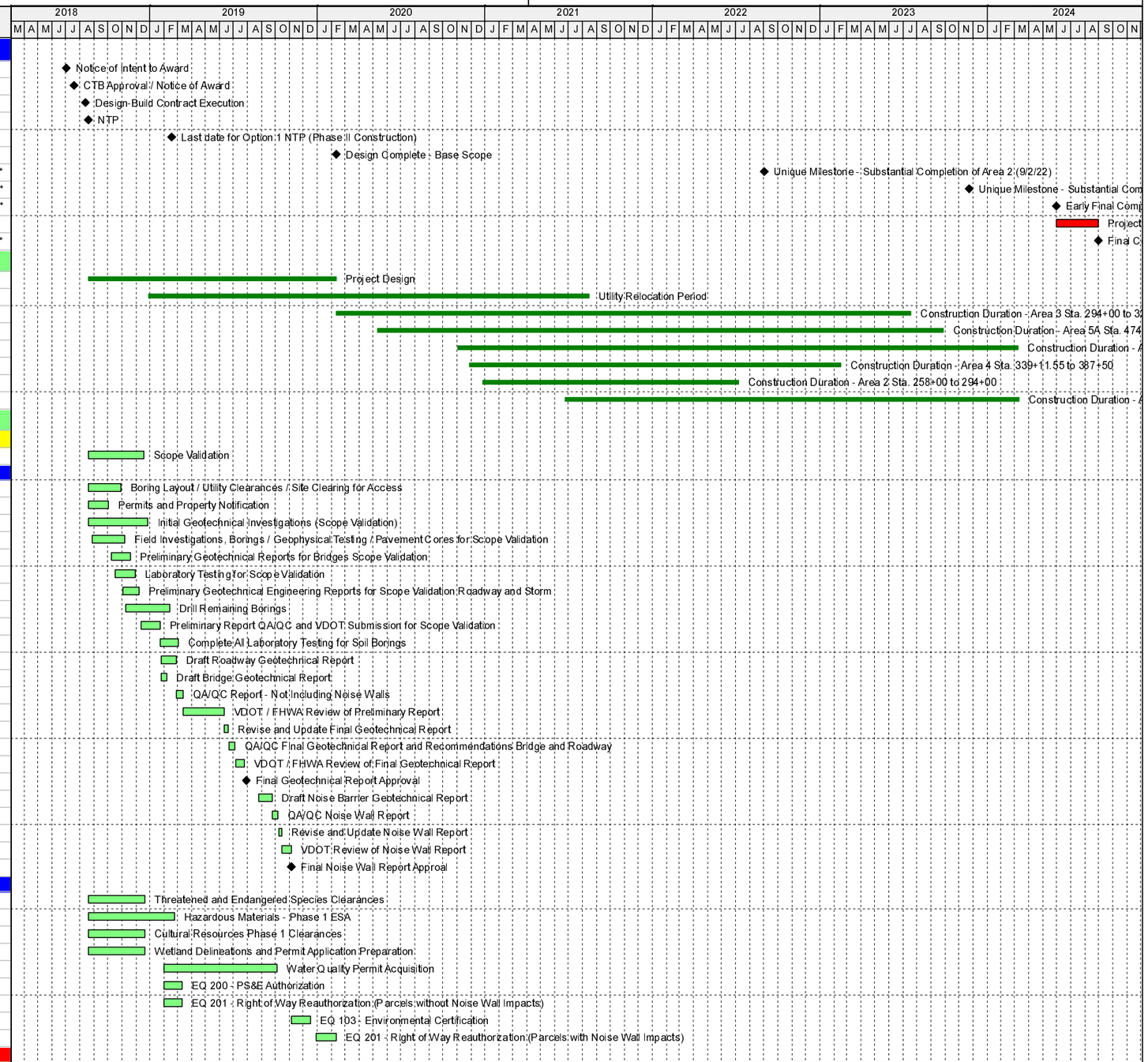
LANE-Wagman Team has developed a Proposal Schedule and Proposal Schedule Narrative that demonstrates our understanding of the complexities and interrelationships of the technical elements of the Project. The LANE-Wagman Team Proposal Schedule offers the following advantages:

- Early Final Completion Milestone of May 30, 2024.
- Unique Milestone to complete and turnover Area 2 (Baron Cameron Intersection Improvements) of September 2, 2022.
- Unique Milestone to complete and turnover Area 5A (Lewinsville Road and McLean Bible Church) of November 23, 2023.
- MOT phasing with minimum number of traffic shifts.
- No detour of traffic to or from major intersections.
- Accommodates the Washington Gas project to avoid schedule conflict with the Project.

Additionally, our Proposal Schedule considers: internal plan reviews, VDOT plan reviews and approvals, environmental permitting, right of way acquisitions, utility relocations, QA/QC testing and inspection, and construction activities.

The LANE-Wagman Team is committed to develop an accurate and robust Baseline Schedule to better serve VDOT, stakeholders, and the traveling public. Once we have NTP and the final design process begins, our Team will actively work to make this Project a success.

Activity ID	Activity Name	Original Duration	Start	Finish
Route 7 Corridor Improvements - BAFO		1266	02-Jul-18	30-Aug-24
A000-1000	Notice of Intent to Award	0	02-Jul-18*	
A000-1010	CTB Approval / Notice of Award	0	18-Jul-18*	
A000-1020	Design-Build Contract Execution	0	13-Aug-18*	
A000-1030	NTP	0	20-Aug-18*	
A000-1160	Last date for Option 1 NTP (Phase II Construction)	0	16-Feb-19	
A000-1070	Design Complete - Base Scope	0		10-Feb-20
A000-1050	Unique Milestone - Substantial Completion of Area 2 (9/2/22)	0		02-Sep-22*
A000-1060	Unique Milestone - Substantial Completion of Area 5A (11/23/23)	0		23-Nov-23*
A000-1040	Early Final Completion (5/30/24)	0		30-May-24*
A000-1180	Project Early Completion (90 Days)	92	31-May-24	30-Aug-24
A000-1170	Final Completion (8/30/24)	0		30-Aug-24*
Admin		2030	20-Aug-18	10-Mar-24
A000-1080	Project Design	540	20-Aug-18	10-Feb-20
A000-1090	Utility Relocation Period	963	28-Dec-18	16-Aug-21
A000-1120	Construction Duration - Area 3 Sta. 294+00 to 339+11.55	1254	11-Feb-20	18-Jul-23
A000-1150	Construction Duration - Area 5A Sta. 474+75 to 562+60	1236	11-May-20	28-Sep-23
A000-1100	Construction Duration - Area 1 Sta. 166+78 to 258+00	1223	02-Nov-20	08-Mar-24
A000-1130	Construction Duration - Area 4 Sta. 339+11.55 to 387+50	811	27-Nov-20	15-Feb-23
A000-1110	Construction Duration - Area 2 Sta. 258+00 to 294+00	559	27-Dec-20	08-Jul-22
A000-1140	Construction Duration - Area 5 Sta. 387+50 to 474+75	990	25-Jun-21	10-Mar-24
Design		1173	20-Aug-18	30-May-24
Route 7 Design		1167	20-Aug-18	14-May-24
D000-1480	Scope Validation	120	20-Aug-18	17-Dec-18
Geotechnical Engineering		249	20-Aug-18	05-Nov-19
D000-1520	Boring Layout / Utility Clearances / Site Clearing for Access	50	20-Aug-18	29-Oct-18
D000-1510	Permits and Property Notification	30	20-Aug-18	01-Oct-18
D000-1500	Initial Geotechnical Investigations (Scope Validation)	90	20-Aug-18	27-Dec-18
D000-1530	Field Investigations, Borings / Geophysical Testing / Pavement Core	52	27-Aug-18	07-Nov-18
D000-1560	Preliminary Geotechnical Reports for Bridges Scope Validation	30	09-Oct-18	19-Nov-18
D000-1540	Laboratory Testing for Scope Validation	30	17-Oct-18	29-Nov-18
D000-1550	Preliminary Geotechnical Engineering Reports for Scope Validation F	24	02-Nov-18	07-Dec-18
D000-1580	Drill Remaining Borings	65	08-Nov-18	12-Feb-19
D000-1570	Preliminary Report QA/QC and VDOT Submission for Scope Validat	30	11-Dec-18	23-Jan-19
D000-1590	Complete All Laboratory Testing for Soil Borings	30	22-Jan-19	04-Mar-19
D000-1610	Draft Roadway Geotechnical Report	25	24-Jan-19	27-Feb-19
D000-1600	Draft Bridge Geotechnical Report	10	24-Jan-19	06-Feb-19
D000-1620	QA/QC Report - Not Including Noise Walls	10	28-Feb-19	13-Mar-19
D000-1630	VDOT / FHWA Review of Preliminary Report	90	14-Mar-19	11-Jun-19
D000-1640	Revise and Update Final Geotechnical Report	7	12-Jun-19	20-Jun-19
D000-1650	QA/QC Final Geotechnical Report and Recommendations Bridge ar	10	21-Jun-19	05-Jul-19
D000-1660	VDOT / FHWA Review of Final Geotechnical Report	21	06-Jul-19	26-Jul-19
D000-1670	Final Geotechnical Report Approval	0	29-Jul-19	
D000-1680	Draft Noise Barrier Geotechnical Report	20	26-Aug-19	23-Sep-19
D000-1690	QA/QC Noise Wall Report	10	24-Sep-19	07-Oct-19
D000-1700	Revise and Update Noise Wall Report	5	08-Oct-19	14-Oct-19
D000-1710	VDOT Review of Noise Wall Report	21	15-Oct-19	04-Nov-19
D000-1720	Final Noise Wall Report Approal	0	05-Nov-19	
Environmental Engineering and Permits		301	20-Aug-18	10-Feb-20
D000-1800	Threatened and Endangered Species Clearances	85	20-Aug-18	19-Dec-18
D000-1790	Hazardous Materials - Phase 1 ESA	130	20-Aug-18	22-Feb-19
D000-1780	Cultural Resources Phase 1 Clearances	85	20-Aug-18	19-Dec-18
D000-1760	Wetland Delineations and Permit Application Preparation	85	20-Aug-18	19-Dec-18
D000-1770	Water Quality Permit Acquisition	175	30-Jan-19	04-Oct-19
D000-1750	EQ 200 - PS&E Authorization	30	30-Jan-19	12-Mar-19
D000-1730	EQ 201 - Right of Way Reauthorization (Parcels without Noise Wall	30	30-Jan-19	12-Mar-19
D000-1740	EQ 103 - Environmental Certification	30	04-Nov-19	17-Dec-19
D000-4530	EQ 201 - Right of Way Reauthorization (Parcels with Noise Wall Imp	30	30-Dec-19	10-Feb-20
Noise Analysis and Final Noise Report		276	20-Aug-18	27-Dec-19



Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

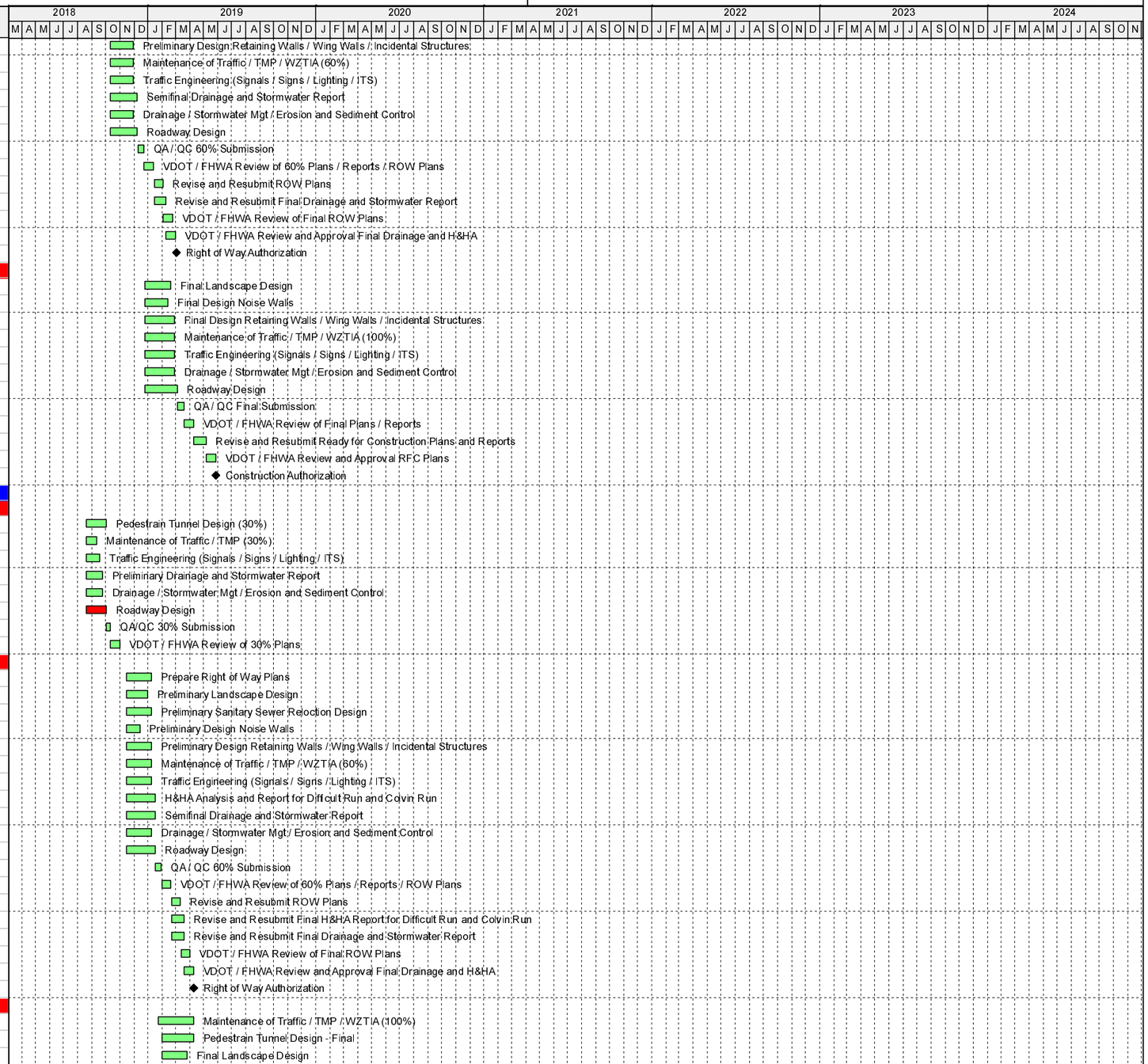
Activity ID	Activity Name	Original Duration	Start	Finish
D000-1810	Data Collection and Review	20	20-Aug-18	17-Sep-18
D000-1830	TNM Modeling	200	04-Sep-18	17-Jun-19
D000-1820	Ambient Noise Measurements	40	11-Sep-18	05-Nov-18
D000-1840	Impact Analysis	20	25-Mar-19	19-Apr-19
D000-1850	Mitigation Analysis	50	08-Apr-19	17-Jun-19
D000-1860	Prepare Draft Report	50	22-Apr-19	01-Jul-19
D000-1870	VDOT Review of Draft Report	21	02-Jul-19	22-Jul-19
D000-1880	Prepare Final Report	20	23-Jul-19	19-Aug-19
D000-1890	Public Meeting / Balloting	60	20-Aug-19	12-Nov-19
D000-1900	Prepare Addendum Report	15	13-Nov-19	05-Dec-19
D000-1910	VDOT Concurrence	15	06-Dec-19	27-Dec-19
Incidental Survey		105	20-Aug-18	18-Jan-19
D000-1920	Property Owner Survey Letters (covers all field investigations)	11	20-Aug-18	04-Sep-18
D000-1930	Establish project controls	10	05-Sep-18	18-Sep-18
D000-1950	Perform Incidental Survey and Update Base Survey	65	19-Sep-18	20-Dec-18
D000-1940	LIDAR/Low level aerial for pavement elevations	40	19-Sep-18	13-Nov-18
D000-1970	Locate Borings	15	25-Oct-18	14-Nov-18
D000-1960	Survey Wetland Stakeout	20	20-Dec-18	18-Jan-19
Area 1 - Station 166+78 to Station 258+00		187	20-Aug-18	23-Jul-19
30% Design		44	20-Aug-18	31-Oct-18
T000-3580	Maintenance of Traffic / TMP (30%)	15	20-Aug-18	10-Sep-18
T000-3590	Traffic Engineering (Signals / Signs / Lighting / ITS)	20	20-Aug-18	17-Sep-18
T000-3600	Preliminary Drainage and Stormwater Report	25	20-Aug-18	24-Sep-18
T000-3610	Drainage / Stormwater Mgt / Erosion and Sediment Control	25	20-Aug-18	24-Sep-18
T000-3620	Roadway Design	30	20-Aug-18	01-Oct-18
T000-3570	QA/QC 30% Submission	7	02-Oct-18	10-Oct-18
T000-3560	VDOT / FHWA Review of 30% Plans	21	11-Oct-18	31-Oct-18
60% Design / FI / Right of Way		78	11-Oct-18	01-Mar-19
T000-3470	Preliminary Sanitary Sewer Relocation Design	35	11-Oct-18	03-Dec-18
T000-3490	Preliminary Design Retaining Walls / Wing Walls / Incidental Structur	35	11-Oct-18	03-Dec-18
T000-3500	Maintenance of Traffic / TMP / WZTIA (60%)	35	11-Oct-18	03-Dec-18
T000-3510	Traffic Engineering (Signals / Signs / Lighting / ITS)	35	11-Oct-18	03-Dec-18
T000-3520	H&HA Analysis and Report for Dog Run	40	11-Oct-18	07-Dec-18
T000-3530	Semifinal Drainage and Stormwater Report	40	11-Oct-18	07-Dec-18
T000-3540	Drainage / Stormwater Mgt / Erosion and Sediment Control	35	11-Oct-18	03-Dec-18
T000-3550	Roadway Design	40	11-Oct-18	07-Dec-18
T000-3450	Prepare Right of Way Plans	35	18-Oct-18	07-Dec-18
T000-3460	Preliminary Landscape Design	30	18-Oct-18	03-Dec-18
T000-3480	Preliminary Design Noise Walls	20	01-Nov-18	03-Dec-18
T000-3440	QA / QC 60% Submission	10	10-Dec-18	21-Dec-18
T000-3430	VDOT / FHWA Review of 60% Plans / Reports / ROW Plans	21	22-Dec-18	11-Jan-19
T000-3390	Revise and Resubmit ROW Plans	15	14-Jan-19	01-Feb-19
T000-3410	Revise and Resubmit Final H&HA Report for Dog Run	20	14-Jan-19	08-Feb-19
T000-3420	Revise and Resubmit Final Drainage and Stormwater Report	20	14-Jan-19	08-Feb-19
T000-3380	VDOT / FHWA Review of Final ROW Plans	21	02-Feb-19	22-Feb-19
T000-3400	VDOT / FHWA Review and Approval Final Drainage and H&HA	21	09-Feb-19	01-Mar-19
T000-3370	Right of Way Authorization	0	28-Feb-19	
Final Design		85	19-Feb-19	23-Jul-19
T000-3290	Final Landscape Design	40	19-Feb-19	15-Apr-19
T000-3300	Final Sanitary Sewer Relcation Design	40	19-Feb-19	15-Apr-19
T000-3310	Final Design Noise Walls	35	19-Feb-19	08-Apr-19
T000-3320	Final Design Retaining Walls / Wing Walls / Incidental Structures	45	19-Feb-19	22-Apr-19
T000-3330	Maintenance of Traffic / TMP / WZTIA (100%)	45	19-Feb-19	22-Apr-19
T000-3340	Traffic Engineering (Signals / Signs / Lighting / ITS)	45	19-Feb-19	22-Apr-19
T000-3350	Drainage / Stormwater Mgt / Erosion and Sediment Control	45	19-Feb-19	22-Apr-19
T000-3360	Roadway Design	50	19-Feb-19	29-Apr-19
T000-3280	QA/ QC Final Submission	10	30-Apr-19	13-May-19
T000-3270	VDOT / FHWA Review of Final Plans / Reports	21	14-May-19	03-Jun-19
T000-3260	Revise and Resubmit Ready for Construction Plans and Reports	20	04-Jun-19	01-Jul-19
T000-3250	VDOT / FHWA Review and Approval RFC Plans	21	02-Jul-19	22-Jul-19

Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-3240	Construction Authorization	0	23-Jul-19	
Area 2 - Station 258+00 to Station 294+00		204	20-Aug-18	22-Aug-19
30% Design		44	20-Aug-18	31-Oct-18
T000-3210	Preliminary Drainage and Stormwater Report	25	20-Aug-18	25-Sep-18
T000-3220	Drainage / Stormwater Mgt / Erosion and Sediment Control	25	20-Aug-18	25-Sep-18
T000-3230	Roadway Design	30	20-Aug-18	01-Oct-18
T000-3200	Traffic Engineering (Signals / Signs / Lighting / ITS)	20	27-Aug-18	25-Sep-18
T000-3190	Maintenance of Traffic / TMP (30%)	15	04-Sep-18	25-Sep-18
T000-3180	QA/QC 30% Submission	7	02-Oct-18	10-Oct-18
T000-3170	VDOT / FHWA Review of 30% Plans	21	11-Oct-18	31-Oct-18
Change in Limited Access Approval		65	01-Nov-18	01-Mar-19
T000-3160	Prepare Change in Limited Access Package	15	01-Nov-18	21-Nov-18
T000-3150	VDOT Review	21	22-Nov-18	12-Dec-18
T000-3140	Update Change in Limited Access Package and Resubmit Final	10	13-Dec-18	27-Dec-18
T000-3130	VDOT and CTB Approval of Change in Limited Access	45	28-Dec-18	01-Mar-19
60% Design / FI / Right of Way		78	11-Oct-18	04-Mar-19
T000-3060	Preliminary Design Retaining Walls / Wing Walls / Incidental Structu	35	11-Oct-18	03-Dec-18
T000-3070	Maintenance of Traffic / TMP / WZTIA (60%)	35	11-Oct-18	03-Dec-18
T000-3080	Traffic Engineering (Signals / Signs / Lighting / ITS)	35	11-Oct-18	03-Dec-18
T000-3090	H&HA Analysis and Report for Piney Run	40	11-Oct-18	07-Dec-18
T000-3100	Semifinal Drainage and Stormwater Report	40	11-Oct-18	07-Dec-18
T000-3110	Drainage / Stormwater Mgt / Erosion and Sediment Control	35	11-Oct-18	03-Dec-18
T000-3120	Roadway Design	40	11-Oct-18	07-Dec-18
T000-3030	Prepare Right of Way Plans	35	18-Oct-18	07-Dec-18
T000-3040	Preliminary Landscape Design	30	18-Oct-18	03-Dec-18
T000-3050	Preliminary Design Noise Walls	20	01-Nov-18	03-Dec-18
T000-3020	QA / QC 60% Submission	10	10-Dec-18	21-Dec-18
T000-3010	VDOT / FHWA Review of 60% Plans / Reports / ROW Plans	21	22-Dec-18	11-Jan-19
T000-2970	Revise and Resubmit ROW Plans	15	14-Jan-19	01-Feb-19
T000-2990	Revise and Resubmit Final H&HA Report for Piney Run	20	14-Jan-19	08-Feb-19
T000-3000	Revise and Resubmit Final Drainage and Stormwater Report	20	14-Jan-19	08-Feb-19
T000-2960	VDOT / FHWA Review of Final ROW Plans	21	02-Feb-19	22-Feb-19
T000-2980	VDOT / FHWA Review and Approval Final Drainage and H&HA	21	09-Feb-19	01-Mar-19
T000-2950	Right of Way Authorization	0	04-Mar-19	
Final Design		86	19-Mar-19	22-Aug-19
T000-2880	Final Landscape Design	40	19-Mar-19	13-May-19
T000-2900	Final Design Retaining Walls / Wing Walls / Incidental Structures	45	19-Mar-19	20-May-19
T000-2910	Maintenance of Traffic / TMP / WZTIA (100%)	45	19-Mar-19	20-May-19
T000-2920	Traffic Engineering (Signals / Signs / Lighting / ITS)	45	19-Mar-19	20-May-19
T000-2930	Drainage / Stormwater Mgt / Erosion and Sediment Control	45	19-Mar-19	20-May-19
T000-2940	Roadway Design	50	19-Mar-19	28-May-19
T000-2890	Final Design Noise Walls	35	02-Apr-19	20-May-19
T000-2870	QA / QC Final Submission	10	29-May-19	11-Jun-19
T000-2860	VDOT / FHWA Review of Final Plans / Reports	21	12-Jun-19	02-Jul-19
T000-2850	Revise and Resubmit Ready for Construction Plans and Reports	20	03-Jul-19	31-Jul-19
T000-2840	VDOT / FHWA Review and Approval RFC Plans	21	01-Aug-19	21-Aug-19
T000-2830	Construction Authorization	0	22-Aug-19	
Area 3 - Station 294+00 to Station 339+11.55		156	20-Aug-18	29-May-19
30% Design		44	20-Aug-18	31-Oct-18
T000-2780	Maintenance of Traffic / TMP (30%)	15	20-Aug-18	10-Sep-18
T000-2790	Traffic Engineering (Signals / Signs / Lighting / ITS)	20	20-Aug-18	17-Sep-18
T000-2800	Preliminary Drainage and Stormwater Report	25	20-Aug-18	24-Sep-18
T000-2810	Drainage / Stormwater Mgt / Erosion and Sediment Control	25	20-Aug-18	24-Sep-18
T000-2820	Roadway Design	30	20-Aug-18	01-Oct-18
T000-2770	QA/QC 30% Submission	7	02-Oct-18	10-Oct-18
T000-2760	VDOT / FHWA Review of 30% Plans	21	11-Oct-18	31-Oct-18
60% Design / FI / Right of Way		78	11-Oct-18	04-Mar-19
T000-2670	Prepare Right of Way Plans	35	11-Oct-18	30-Nov-18
T000-2680	Preliminary Landscape Design	30	11-Oct-18	21-Nov-18
T000-2690	Preliminary Design Noise Walls	20	11-Oct-18	07-Nov-18

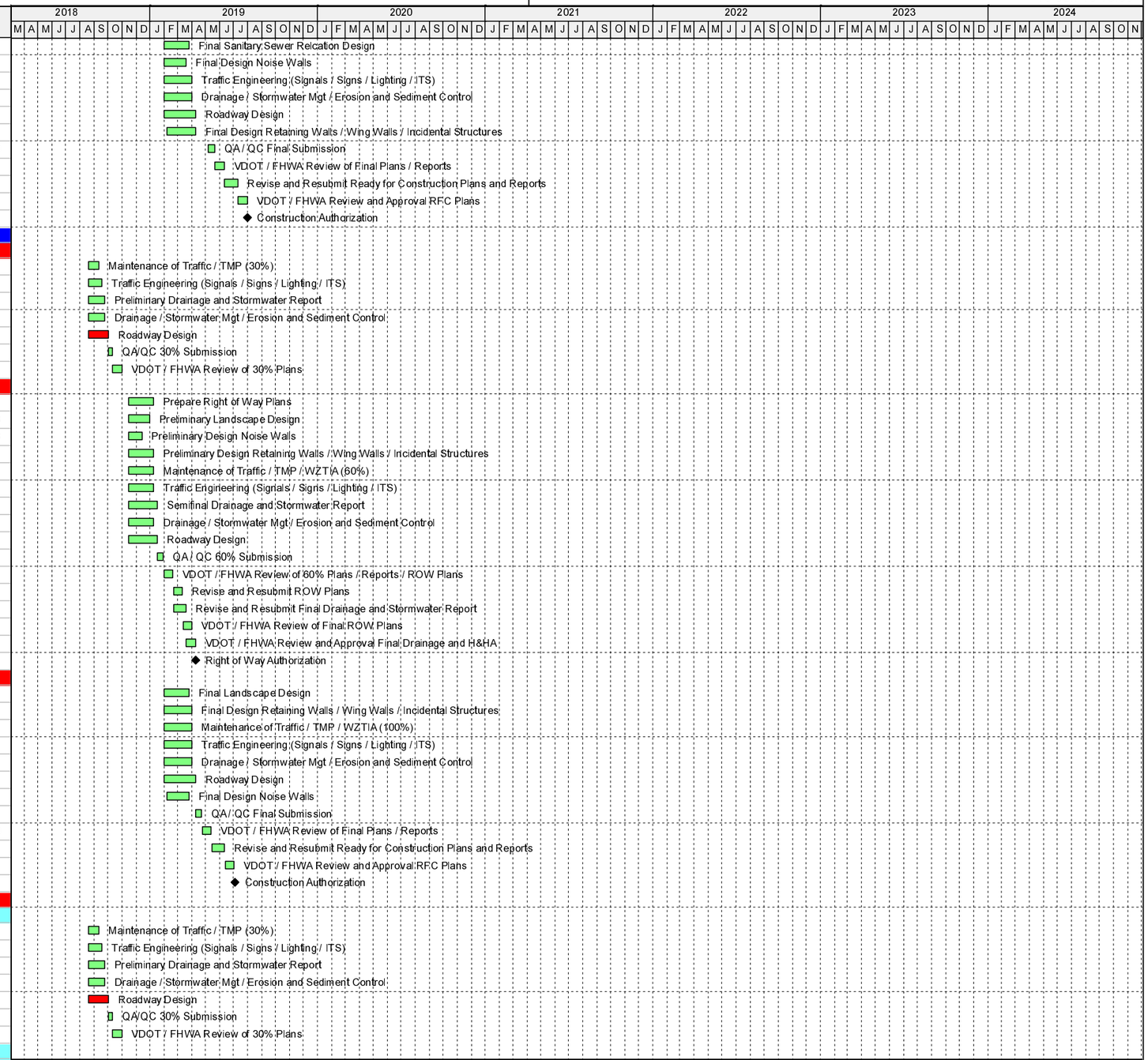
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-2700	Preliminary Design Retaining Walls / Wing Walls / Incidental Structur	35	11-Oct-18	30-Nov-18
T000-2710	Maintenance of Traffic / TMP / WZTIA (60%)	35	11-Oct-18	30-Nov-18
T000-2720	Traffic Engineering (Signals / Signs / Lighting / ITS)	35	11-Oct-18	30-Nov-18
T000-2730	Semifinal Drainage and Stormwater Report	40	11-Oct-18	07-Dec-18
T000-2740	Drainage / Stormwater Mgt / Erosion and Sediment Control	35	11-Oct-18	30-Nov-18
T000-2750	Roadway Design	40	11-Oct-18	07-Dec-18
T000-2660	QA / QC 60% Submission	10	10-Dec-18	21-Dec-18
T000-2650	VDOT / FHWA Review of 60% Plans / Reports / ROW Plans	21	22-Dec-18	11-Jan-19
T000-2620	Revise and Resubmit ROW Plans	15	14-Jan-19	01-Feb-19
T000-2640	Revise and Resubmit Final Drainage and Stormwater Report	20	14-Jan-19	08-Feb-19
T000-2610	VDOT / FHWA Review of Final ROW Plans	21	02-Feb-19	22-Feb-19
T000-2630	VDOT / FHWA Review and Approval Final Drainage and H&HA	21	09-Feb-19	01-Mar-19
T000-2600	Right of Way Authorization	0	04-Mar-19	
Final Design		86	24-Dec-18	29-May-19
T000-2530	Final Landscape Design	40	24-Dec-18	19-Feb-19
T000-2540	Final Design Noise Walls	35	24-Dec-18	12-Feb-19
T000-2550	Final Design Retaining Walls / Wing Walls / Incidental Structures	45	24-Dec-18	26-Feb-19
T000-2560	Maintenance of Traffic / TMP / WZTIA (100%)	45	24-Dec-18	26-Feb-19
T000-2570	Traffic Engineering (Signals / Signs / Lighting / ITS)	45	24-Dec-18	26-Feb-19
T000-2580	Drainage / Stormwater Mgt / Erosion and Sediment Control	45	24-Dec-18	26-Feb-19
T000-2590	Roadway Design	50	24-Dec-18	05-Mar-19
T000-2520	QA / QC Final Submission	10	06-Mar-19	19-Mar-19
T000-2510	VDOT / FHWA Review of Final Plans / Reports	21	20-Mar-19	09-Apr-19
T000-2500	Revise and Resubmit Ready for Construction Plans and Reports	20	10-Apr-19	07-May-19
T000-2490	VDOT / FHWA Review and Approval RFC Plans	21	08-May-19	28-May-19
T000-2480	Construction Authorization	0	29-May-19	
Area 4 - Station 339+11.55 to Station 387+50		192	20-Aug-18	01-Aug-19
30% Design		44	20-Aug-18	31-Oct-18
D000-4390	Pedestrain Tunnel Design (30%)	30	20-Aug-18	01-Oct-18
D000-3170	Maintenance of Traffic / TMP (30%)	15	20-Aug-18	10-Sep-18
D000-3160	Traffic Engineering (Signals / Signs / Lighting / ITS)	20	20-Aug-18	17-Sep-18
D000-3150	Preliminary Drainage and Stormwater Report	25	20-Aug-18	24-Sep-18
D000-3140	Drainage / Stormwater Mgt / Erosion and Sediment Control	25	20-Aug-18	24-Sep-18
D000-3130	Roadway Design	30	20-Aug-18	01-Oct-18
D000-3180	QA/QC 30% Submission	7	02-Oct-18	10-Oct-18
D000-3190	VDOT / FHWA Review of 30% Plans	21	11-Oct-18	31-Oct-18
60% Design / FI / Right of Way		79	15-Nov-18	10-Apr-19
D000-3300	Prepare Right of Way Plans	35	15-Nov-18	08-Jan-19
D000-3290	Preliminary Landscape Design	30	15-Nov-18	31-Dec-18
D000-3280	Preliminary Sanitary Sewer Relocation Design	35	15-Nov-18	08-Jan-19
D000-3270	Preliminary Design Noise Walls	20	15-Nov-18	14-Dec-18
D000-3260	Preliminary Design Retaining Walls / Wing Walls / Incidental Structur	35	15-Nov-18	08-Jan-19
D000-3250	Maintenance of Traffic / TMP / WZTIA (60%)	35	15-Nov-18	08-Jan-19
D000-3240	Traffic Engineering (Signals / Signs / Lighting / ITS)	35	15-Nov-18	08-Jan-19
D000-3230	H&HA Analysis and Report for Difficult Run and Colvin Run	40	15-Nov-18	15-Jan-19
D000-3220	Semifinal Drainage and Stormwater Report	40	15-Nov-18	15-Jan-19
D000-3210	Drainage / Stormwater Mgt / Erosion and Sediment Control	35	15-Nov-18	08-Jan-19
D000-3200	Roadway Design	40	15-Nov-18	15-Jan-19
D000-3310	QA / QC 60% Submission	10	16-Jan-19	29-Jan-19
D000-3320	VDOT / FHWA Review of 60% Plans / Reports / ROW Plans	21	30-Jan-19	19-Feb-19
D000-3360	Revise and Resubmit ROW Plans	15	20-Feb-19	12-Mar-19
D000-3340	Revise and Resubmit Final H&HA Report for Difficult Run and Colvir	20	20-Feb-19	19-Mar-19
D000-3330	Revise and Resubmit Final Drainage and Stormwater Report	20	20-Feb-19	19-Mar-19
D000-3370	VDOT / FHWA Review of Final ROW Plans	21	13-Mar-19	02-Apr-19
D000-3350	VDOT / FHWA Review and Approval Final Drainage and H&HA	21	20-Mar-19	09-Apr-19
D000-3380	Right of Way Authorization	0	10-Apr-19	
Final Design		105	23-Jan-19	01-Aug-19
D000-3420	Maintenance of Traffic / TMP / WZTIA (100%)	55	23-Jan-19	09-Apr-19
D000-4400	Pedestrain Tunnel Design - Final	50	30-Jan-19	09-Apr-19
D000-3460	Final Landscape Design	40	30-Jan-19	26-Mar-19



Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
D000-3450	Final Sanitary Sewer Relcation Design	40	30-Jan-19	26-Mar-19
D000-3440	Final Design Noise Walls	35	30-Jan-19	19-Mar-19
D000-3410	Traffic Engineering (Signals / Signs / Lighting / ITS)	45	30-Jan-19	02-Apr-19
D000-3400	Drainage / Stormwater Mgt / Erosion and Sediment Control	45	30-Jan-19	02-Apr-19
D000-3390	Roadway Design	50	30-Jan-19	09-Apr-19
D000-3430	Final Design Retaining Walls / Wing Walls / Incidental Structures	45	06-Feb-19	09-Apr-19
D000-3470	QA/ QC Final Submission	10	08-May-19	21-May-19
D000-3480	VDOT / FHWA Review of Final Plans / Reports	21	22-May-19	11-Jun-19
D000-3490	Revise and Resubmit Ready for Construction Plans and Reports	20	12-Jun-19	10-Jul-19
D000-3500	VDOT / FHWA Review and Approval RFC Plans	21	11-Jul-19	31-Jul-19
D000-3510	Construction Authorization	0	01-Aug-19	
Area 5 - Station 387+50 to Station 474+75		177	20-Aug-18	05-Jul-19
30% Design		44	20-Aug-18	31-Oct-18
D000-3560	Maintenance of Traffic / TMP (30%)	15	20-Aug-18	10-Sep-18
D000-3550	Traffic Engineering (Signals / Signs / Lighting / ITS)	20	20-Aug-18	17-Sep-18
D000-3540	Preliminary Drainage and Stormwater Report	25	20-Aug-18	24-Sep-18
D000-3530	Drainage / Stormwater Mgt / Erosion and Sediment Control	25	20-Aug-18	24-Sep-18
D000-3520	Roadway Design	30	20-Aug-18	01-Oct-18
D000-3570	QA/QC 30% Submission	7	02-Oct-18	10-Oct-18
D000-3580	VDOT / FHWA Review of 30% Plans	21	11-Oct-18	31-Oct-18
60% Design / FI / Right of Way		79	15-Nov-18	10-Apr-19
D000-3670	Prepare Right of Way Plans	35	15-Nov-18	08-Jan-19
D000-3660	Preliminary Landscape Design	30	15-Nov-18	31-Dec-18
D000-3650	Preliminary Design Noise Walls	20	15-Nov-18	14-Dec-18
D000-3640	Preliminary Design Retaining Walls / Wing Walls / Incidental Structui	35	15-Nov-18	08-Jan-19
D000-3630	Maintenance of Traffic / TMP / WZTIA (60%)	35	15-Nov-18	08-Jan-19
D000-3620	Traffic Engineering (Signals / Signs / Lighting / ITS)	35	15-Nov-18	08-Jan-19
D000-3610	Semifinal Drainage and Stormwater Report	40	15-Nov-18	15-Jan-19
D000-3600	Drainage / Stormwater Mgt / Erosion and Sediment Control	35	15-Nov-18	08-Jan-19
D000-3590	Roadway Design	40	15-Nov-18	15-Jan-19
D000-3680	QA/ QC 60% Submission	10	16-Jan-19	29-Jan-19
D000-3690	VDOT / FHWA Review of 60% Plans / Reports / ROW Plans	21	30-Jan-19	19-Feb-19
D000-3720	Revise and Resubmit ROW Plans	15	20-Feb-19	12-Mar-19
D000-3700	Revise and Resubmit Final Drainage and Stormwater Report	20	20-Feb-19	19-Mar-19
D000-3730	VDOT / FHWA Review of Final ROW Plans	21	13-Mar-19	02-Apr-19
D000-3710	VDOT / FHWA Review and Approval Final Drainage and H&HA	21	20-Mar-19	09-Apr-19
D000-3740	Right of Way Authorization	0	10-Apr-19	
Final Design		87	30-Jan-19	05-Jul-19
D000-3810	Final Landscape Design	40	30-Jan-19	26-Mar-19
D000-3790	Final Design Retaining Walls / Wing Walls / Incidental Structures	45	30-Jan-19	02-Apr-19
D000-3780	Maintenance of Traffic / TMP / WZTIA (100%)	45	30-Jan-19	02-Apr-19
D000-3770	Traffic Engineering (Signals / Signs / Lighting / ITS)	45	30-Jan-19	02-Apr-19
D000-3760	Drainage / Stormwater Mgt / Erosion and Sediment Control	45	30-Jan-19	02-Apr-19
D000-3750	Roadway Design	50	30-Jan-19	09-Apr-19
D000-3800	Final Design Noise Walls	35	06-Feb-19	26-Mar-19
D000-3820	QA / QC Final Submission	10	10-Apr-19	23-Apr-19
D000-3830	VDOT / FHWA Review of Final Plans / Reports	21	24-Apr-19	14-May-19
D000-3840	Revise and Resubmit Ready for Construction Plans and Reports	20	15-May-19	12-Jun-19
D000-3850	VDOT / FHWA Review and Approval RFC Plans	21	13-Jun-19	03-Jul-19
D000-3860	Construction Authorization	0	05-Jul-19	
Area 5A - Station 474+50 to Station 526+50		177	20-Aug-18	05-Jul-19
30% Design		44	20-Aug-18	31-Oct-18
D000-3910	Maintenance of Traffic / TMP (30%)	15	20-Aug-18	10-Sep-18
D000-3900	Traffic Engineering (Signals / Signs / Lighting / ITS)	20	20-Aug-18	17-Sep-18
D000-3890	Preliminary Drainage and Stormwater Report	25	20-Aug-18	24-Sep-18
D000-3880	Drainage / Stormwater Mgt / Erosion and Sediment Control	25	20-Aug-18	24-Sep-18
D000-3870	Roadway Design	30	20-Aug-18	01-Oct-18
D000-3920	QA/QC 30% Submission	7	02-Oct-18	10-Oct-18
D000-3930	VDOT / FHWA Review of 30% Plans	21	11-Oct-18	31-Oct-18
60% Design / FI / Right of Way		79	15-Nov-18	10-Apr-19

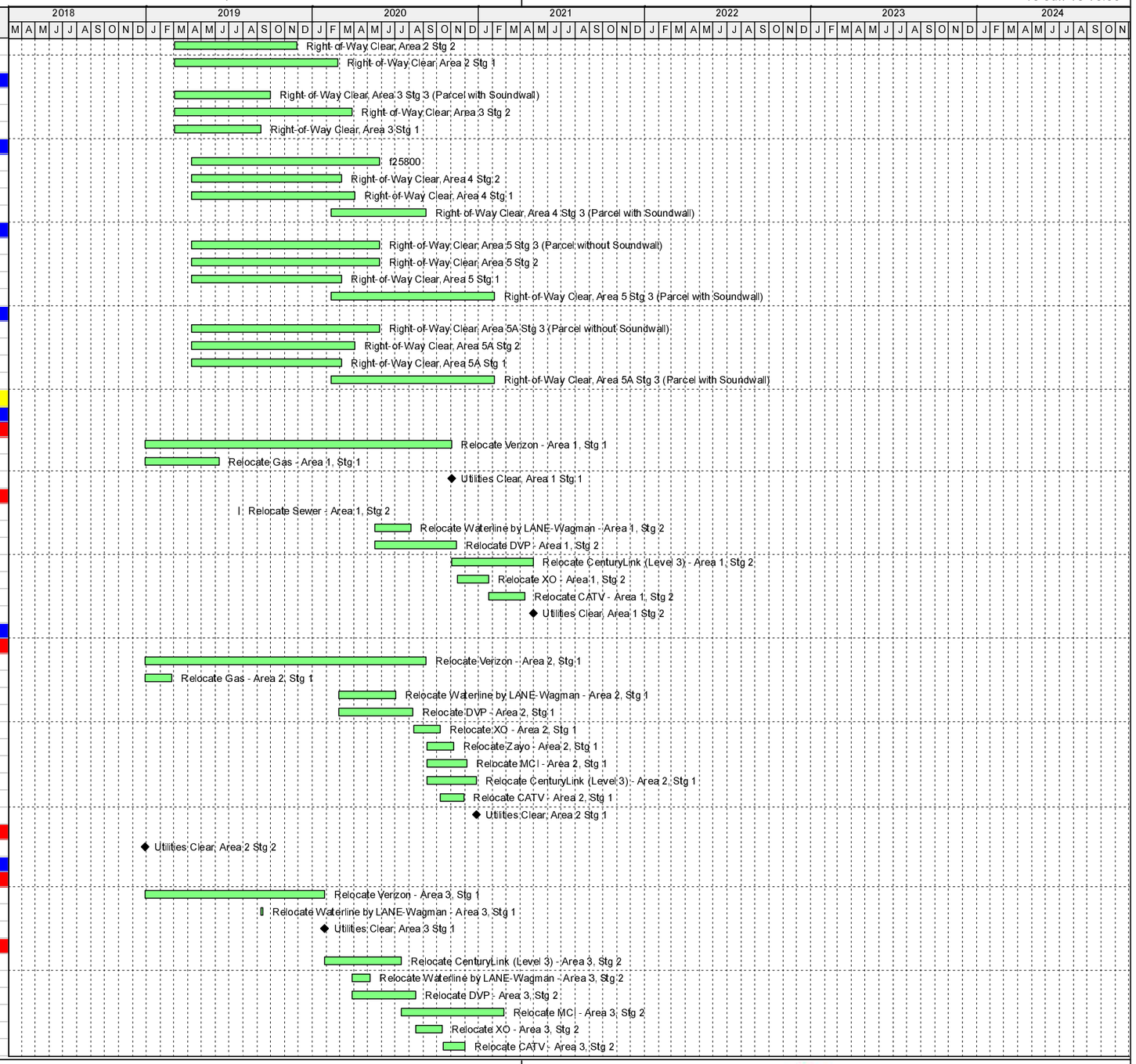


Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
D000-4020	Prepare Right of Way Plans	35	15-Nov-18	08-Jan-19
D000-4010	Preliminary Landscape Design	30	15-Nov-18	31-Dec-18
D000-4000	Preliminary Design Noise Walls	20	15-Nov-18	14-Dec-18
D000-3990	Preliminary Design Retaining Walls / Wing Walls / Incidental Structur	35	15-Nov-18	08-Jan-19
D000-3980	Maintenance of Traffic / TMP / WZTIA (60%)	35	15-Nov-18	08-Jan-19
D000-3970	Traffic Engineering (Signals / Signs / Lighting / ITS)	35	15-Nov-18	08-Jan-19
D000-3960	Semifinal Drainage and Stormwater Report	40	15-Nov-18	15-Jan-19
D000-3950	Drainage / Stormwater Mgt / Erosion and Sediment Control	35	15-Nov-18	08-Jan-19
D000-3940	Roadway Design	40	15-Nov-18	15-Jan-19
D000-4030	QA / QC 60% Submission	10	16-Jan-19	29-Jan-19
D000-4040	VDOT / FHWA Review of 60% Plans / Reports / ROW Plans	21	30-Jan-19	19-Feb-19
D000-4070	Revise and Resubmit ROW Plans	15	20-Feb-19	12-Mar-19
D000-4050	Revise and Resubmit Final Drainage and Stormwater Report	20	20-Feb-19	19-Mar-19
D000-4080	VDOT / FHWA Review of Final ROW Plans	21	13-Mar-19	02-Apr-19
D000-4060	VDOT / FHWA Review and Approval Final Drainage and H&HA	21	20-Mar-19	09-Apr-19
D000-4090	Right of Way Authorization	0	10-Apr-19	
Final Design		87	30-Jan-19	05-Jul-19
D000-4160	Final Landscape Design	40	30-Jan-19	26-Mar-19
D000-4150	Final Design Noise Walls	35	30-Jan-19	19-Mar-19
D000-4140	Final Design Retaining Walls / Wing Walls / Incidental Structures	45	30-Jan-19	02-Apr-19
D000-4130	Maintenance of Traffic / TMP / WZTIA (100%)	45	30-Jan-19	02-Apr-19
D000-4120	Traffic Engineering (Signals / Signs / Lighting / ITS)	45	30-Jan-19	02-Apr-19
D000-4110	Drainage / Stormwater Mgt / Erosion and Sediment Control	45	30-Jan-19	02-Apr-19
D000-4100	Roadway Design	50	30-Jan-19	09-Apr-19
D000-4170	QA / QC Final Submission	10	10-Apr-19	23-Apr-19
D000-4180	VDOT / FHWA Review of Final Plans / Reports	21	24-Apr-19	14-May-19
D000-4190	Revise and Resubmit Ready for Construction Plans and Reports	20	15-May-19	12-Jun-19
D000-4200	VDOT / FHWA Review and Approval RFC Plans	21	13-Jun-19	03-Jul-19
D000-4210	Construction Authorization	0	05-Jul-19	
Route 7 and Bridge over Difficult Run		217	20-Aug-18	10-Sep-19
D000-4290	Prepare Preliminary Stage 1 Plans and Bridge Report	40	20-Aug-18	15-Oct-18
D000-4300	QA/QC Stage 1 Submission	10	16-Oct-18	29-Oct-18
D000-4310	VDOT / FHWA Review of Stage 1 Submission	21	30-Oct-18	19-Nov-18
D000-4440	Prepare 60% Bridge Plans	40	20-Nov-18	18-Jan-19
D000-4450	QA/QC 60% Plan Submission	10	21-Jan-19	01-Feb-19
D000-4460	VDOT / FHWA Review of 60% Plan Submission	21	02-Feb-19	22-Feb-19
D000-4320	Prepare Final Bridge Plans	50	25-Feb-19	03-May-19
D000-4470	QA/QC Final Bridge Plans	10	12-Jun-19	25-Jun-19
D000-4330	VDOT Review of Final Bridge Plans	21	26-Jun-19	16-Jul-19
D000-4340	Revise and Resubmit Final Bridge Plans	25	17-Jul-19	20-Aug-19
D000-4350	VDOT Review and Approval of Final Bridge Plans	21	21-Aug-19	10-Sep-19
Utility Design		132	20-Aug-18	11-Apr-19
D000-4500	Preliminary Utility Status Report (Hold Point)	120	20-Aug-18	17-Dec-18
D000-4490	Meeting with VDOT Regional Utility Manager (Hold Point)	45	20-Aug-18	03-Oct-18
D000-4510	Prepare/Conduct UFI Meeting	60	02-Oct-18	27-Dec-18
D000-4550	Water Line Relocation Design and Permit	105	28-Dec-18	11-Apr-19
D000-4520	Review Utility Plan & Estimates	60	28-Dec-18	22-Mar-19
As Built Drawings and Sketches		42	18-Mar-24	14-May-24
D000-4380	As-Built Drawings	20	18-Mar-24	12-Apr-24
D000-4370	As-Built Sketches for Storm Water Permit	20	18-Mar-24	12-Apr-24
D000-4360	As-Built Surveys for Storm Water Devices	30	03-Apr-24	14-May-24
ROW Acquisition		708	28-Feb-19	04-Feb-21
Area 1 - Sta 166+78 to 258+00		445	28-Feb-19	17-May-20
T000-1040	Right-of-Way Clear, Area 1 Stg 3 (Parcel without Soundwall)	445	28-Feb-19	17-May-20
T000-11970	Right-of-Way Clear, Area 1 Stg 3 (Parcel with Soundwall)	360	28-Feb-19	22-Feb-20
T000-12030	Right-of-Way Clear, Area 1 Stg 2	445	28-Feb-19	17-May-20
T000-12090	Right-of-Way Clear, Area 1 Stg 1	330	28-Feb-19	23-Jan-20
Area 2 - Sta 258+00 to 294+00		445	04-Mar-19	21-May-20
T000-1030	Right-of-Way Clear, Area 2 Stg 3 (Parcel with Soundwall)	360	04-Mar-19	26-Feb-20
T000-11960	Right-of-Way Clear, Area 2 Stg 3 (Parcel without Soundwall)	445	04-Mar-19	21-May-20

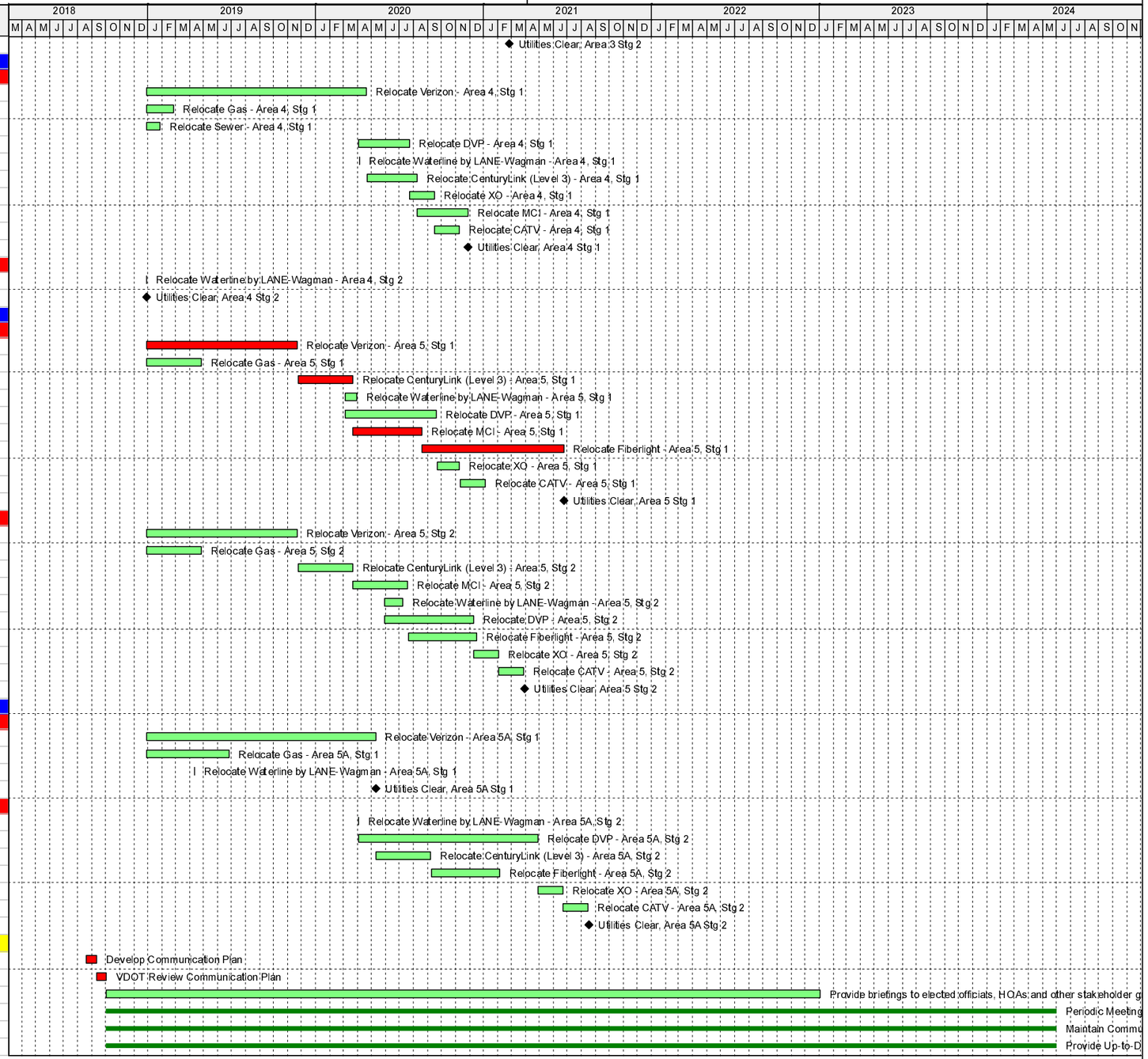
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-12020	Right-of-Way Clear, Area 2 Stg 2	270	04-Mar-19	28-Nov-19
T000-12080	Right-of-Way Clear, Area 2 Stg 1	360	04-Mar-19	26-Feb-20
Area 3 - Sta 294+08 to 339+11.55		390	04-Mar-19	27-Mar-20
T000-11950	Right-of-Way Clear, Area 3 Stg 3 (Parcel with Soundwall)	210	04-Mar-19	29-Sep-19
T000-12010	Right-of-Way Clear, Area 3 Stg 2	390	04-Mar-19	27-Mar-20
T000-12070	Right-of-Way Clear, Area 3 Stg 1	190	04-Mar-19	09-Sep-19
Area 4 - Sta 339+11.55 to 387+50		517	10-Apr-19	07-Sep-20
D000-4580	f25800	415	10-Apr-19	28-May-20
D000-1110	Right-of-Way Clear, Area 4 Stg 2	330	10-Apr-19	04-Mar-20
D000-1030	Right-of-Way Clear, Area 4 Stg 1	360	10-Apr-19	03-Apr-20
D000-1190	Right-of-Way Clear, Area 4 Stg 3 (Parcel with Soundwall)	210	11-Feb-20	07-Sep-20
Area 5 - Sta 387+50 to 474+75		667	10-Apr-19	04-Feb-21
D000-4590	Right-of-Way Clear, Area 5 Stg 3 (Parcel without Soundwall)	415	10-Apr-19	28-May-20
D000-1120	Right-of-Way Clear, Area 5 Stg 2	415	10-Apr-19	28-May-20
D000-1040	Right-of-Way Clear, Area 5 Stg 1	330	10-Apr-19	04-Mar-20
D000-1200	Right-of-Way Clear, Area 5 Stg 3 (Parcel with Soundwall)	360	11-Feb-20	04-Feb-21
Area 5A - Sta 474+75 to 562+60		667	10-Apr-19	04-Feb-21
D000-4600	Right-of-Way Clear, Area 5A Stg 3 (Parcel without Soundwall)	415	10-Apr-19	28-May-20
D000-1130	Right-of-Way Clear, Area 5A Stg 2	360	10-Apr-19	03-Apr-20
D000-1050	Right-of-Way Clear, Area 5A Stg 1	330	10-Apr-19	04-Mar-20
D000-1210	Right-of-Way Clear, Area 5A Stg 3 (Parcel with Soundwall)	360	11-Feb-20	04-Feb-21
Utilities		536	28-Dec-18	17-Aug-21
Area 1 - Sta 166+78 to 258+00		478	28-Dec-18	01-May-21
Stage 1		675	28-Dec-18	02-Nov-20
T000-6740	Relocate Verizon - Area 1, Stg 1	675	28-Dec-18	01-Nov-20
T000-6750	Relocate Gas - Area 1, Stg 1	165	28-Dec-18	10-Jun-19
T000-11910	Utilities Clear, Area 1 Stg 1	0	02-Nov-20	
Stage 2		363	23-Jul-19	01-May-21
T000-6730	Relocate Sewer - Area 1, Stg 2	2	23-Jul-19	24-Jul-19
T000-6710	Relocate Waterline by LANE-Wagman - Area 1, Stg 2	45	18-May-20	05-Aug-20
T000-6720	Relocate DVP - Area 1, Stg 2	180	18-May-20	13-Nov-20
T000-6690	Relocate CenturyLink (Level 3) - Area 1, Stg 2	180	02-Nov-20	30-Apr-21
T000-6700	Relocate XO - Area 1, Stg 2	70	14-Nov-20	22-Jan-21
T000-6680	Relocate CATV - Area 1, Stg 2	80	23-Jan-21	12-Apr-21
T000-11850	Utilities Clear, Area 1 Stg 2	0	01-May-21	
Area 2 - Sta 258+00 to 294+00		407	28-Dec-18	27-Dec-20
Stage 1		407	28-Dec-18	27-Dec-20
T000-6640	Relocate Verizon - Area 2, Stg 1	620	28-Dec-18	07-Sep-20
T000-6650	Relocate Gas - Area 2, Stg 1	60	28-Dec-18	25-Feb-19
T000-6660	Relocate Waterline by LANE-Wagman - Area 2, Stg 1	70	27-Feb-20	01-Jul-20
T000-6670	Relocate DVP - Area 2, Stg 1	165	27-Feb-20	09-Aug-20
T000-6630	Relocate XO - Area 2, Stg 1	60	10-Aug-20	08-Oct-20
T000-6600	Relocate Zayo - Area 2, Stg 1	60	08-Sep-20	06-Nov-20
T000-6610	Relocate MCI - Area 2, Stg 1	90	08-Sep-20	06-Dec-20
T000-6620	Relocate CenturyLink (Level 3) - Area 2, Stg 1	110	08-Sep-20	26-Dec-20
T000-6590	Relocate CATV - Area 2, Stg 1	52	09-Oct-20	29-Nov-20
T000-11900	Utilities Clear, Area 2 Stg 1	0	27-Dec-20	
Stage 2		0	28-Dec-18	28-Dec-18
T000-11840	Utilities Clear, Area 2 Stg 2	0	28-Dec-18	
Area 3 - Sta 294+00 to 339+11.55		790	28-Dec-18	25-Feb-21
Stage 1		395	28-Dec-18	27-Jan-20
T000-6570	Relocate Verizon - Area 3, Stg 1	395	28-Dec-18	26-Jan-20
T000-6580	Relocate Waterline by LANE-Wagman - Area 3, Stg 1	5	10-Sep-19	14-Sep-19
T000-11890	Utilities Clear, Area 3 Stg 1	0	27-Jan-20	
Stage 2		395	27-Jan-20	25-Feb-21
T000-6530	Relocate CenturyLink (Level 3) - Area 3, Stg 2	170	27-Jan-20	14-Jul-20
T000-6550	Relocate Waterline by LANE-Wagman - Area 3, Stg 2	40	28-Mar-20	06-May-20
T000-6560	Relocate DVP - Area 3, Stg 2	140	28-Mar-20	14-Aug-20
T000-6520	Relocate MCI - Area 3, Stg 2	225	15-Jul-20	24-Feb-21
T000-6540	Relocate XO - Area 3, Stg 2	60	15-Aug-20	13-Oct-20
T000-6510	Relocate CATV - Area 3, Stg 2	50	14-Oct-20	02-Dec-20



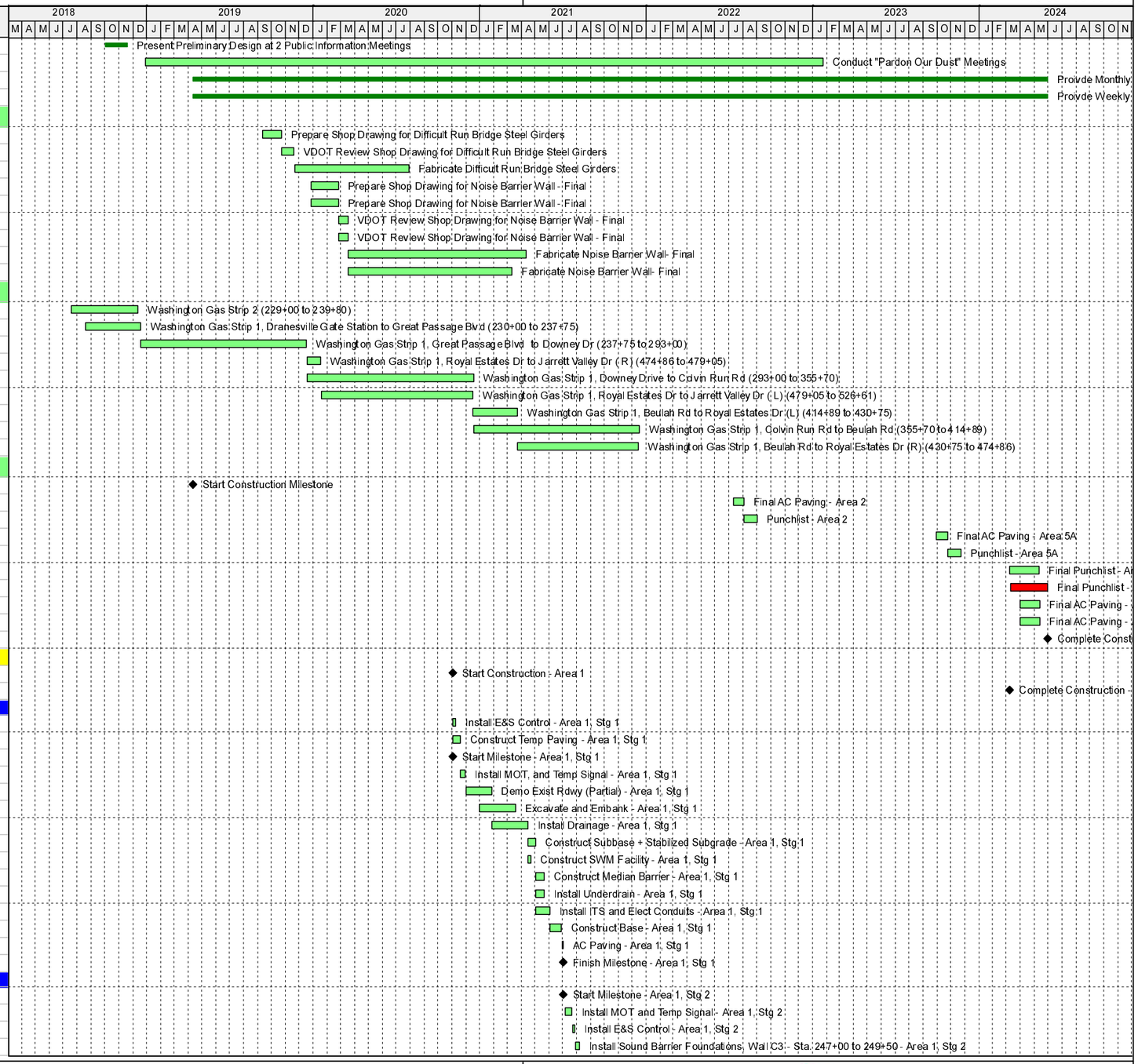
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-11830	Utilities Clear, Area 3 Stg 2	0	25-Feb-21	
Area 4 - Sta 339+11.55 to 387+50		393	28-Dec-18	27-Nov-20
Stage 1		393	28-Dec-18	27-Nov-20
U410-1040	Relocate Verizon - Area 4, Stg 1	480	28-Dec-18	20-Apr-20
U410-1030	Relocate Gas - Area 4, Stg 1	60	28-Dec-18	25-Feb-19
U410-1000	Relocate Sewer - Area 4, Stg 1	30	28-Dec-18	26-Jan-19
U410-1010	Relocate DVP - Area 4, Stg 1	110	04-Apr-20	22-Jul-20
U410-1020	Relocate Waterline by LANE-Wagman - Area 4, Stg 1	0	06-Apr-20	06-Apr-20
U410-1060	Relocate CenturyLink (Level 3) - Area 4, Stg 1	110	21-Apr-20	08-Aug-20
U410-1050	Relocate XO - Area 4, Stg 1	55	23-Jul-20	15-Sep-20
U410-1070	Relocate MCI - Area 4, Stg 1	110	09-Aug-20	26-Nov-20
U410-1080	Relocate CATV - Area 4, Stg 1	55	16-Sep-20	09-Nov-20
D000-1270	Utilities Clear, Area 4 Stg 1	0	27-Nov-20	
Stage 2		0	28-Dec-18	28-Dec-18
U420-1000	Relocate Waterline by LANE-Wagman - Area 4, Stg 2	0	28-Dec-18	28-Dec-18
D000-1350	Utilities Clear, Area 4 Stg 2	0	28-Dec-18	
Area 5 - Sta 387+50 to 474+75		910	28-Dec-18	25-Jun-21
Stage 1		910	28-Dec-18	25-Jun-21
U510-1030	Relocate Verizon - Area 5, Stg 1	330	28-Dec-18	22-Nov-19
U510-1020	Relocate Gas - Area 5, Stg 1	120	28-Dec-18	26-Apr-19
U510-1050	Relocate CenturyLink (Level 3) - Area 5, Stg 1	120	23-Nov-19	21-Mar-20
U510-1010	Relocate Waterline by LANE-Wagman - Area 5, Stg 1	25	05-Mar-20	29-Mar-20
U510-1000	Relocate DVP - Area 5, Stg 1	200	05-Mar-20	20-Sep-20
U510-1060	Relocate MCI - Area 5, Stg 1	150	22-Mar-20	18-Aug-20
U510-1070	Relocate Fiberlight - Area 5, Stg 1	310	19-Aug-20	24-Jun-21
U510-1040	Relocate XO - Area 5, Stg 1	50	21-Sep-20	09-Nov-20
U510-1080	Relocate CATV - Area 5, Stg 1	55	10-Nov-20	03-Jan-21
D000-1280	Utilities Clear, Area 5 Stg 1	0	25-Jun-21	
Stage 2		823	28-Dec-18	30-Mar-21
U520-1030	Relocate Verizon - Area 5, Stg 2	330	28-Dec-18	22-Nov-19
U520-1020	Relocate Gas - Area 5, Stg 2	120	28-Dec-18	26-Apr-19
U520-1050	Relocate CenturyLink (Level 3) - Area 5, Stg 2	120	23-Nov-19	21-Mar-20
U520-1060	Relocate MCI - Area 5, Stg 2	120	22-Mar-20	19-Jul-20
U520-1010	Relocate Waterline by LANE-Wagman - Area 5, Stg 2	40	29-May-20	07-Jul-20
U520-1000	Relocate DVP - Area 5, Stg 2	195	29-May-20	09-Dec-20
U520-1070	Relocate Fiberlight - Area 5, Stg 2	150	20-Jul-20	16-Dec-20
U520-1040	Relocate XO - Area 5, Stg 2	55	10-Dec-20	02-Feb-21
U520-1080	Relocate CATV - Area 5, Stg 2	55	03-Feb-21	29-Mar-21
D000-1360	Utilities Clear, Area 5 Stg 2	0	30-Mar-21	
Area 5A - Sta 474+75 to 562+60		963	28-Dec-18	17-Aug-21
Stage 1		500	28-Dec-18	11-May-20
U510A1020	Relocate Verizon - Area 5A, Stg 1	500	28-Dec-18	10-May-20
U510A1010	Relocate Gas - Area 5A, Stg 1	180	28-Dec-18	25-Jun-19
U510A1000	Relocate Waterline by LANE-Wagman - Area 5A, Stg 1	0	12-Apr-19	12-Apr-19
D000-1290	Utilities Clear, Area 5A Stg 1	0	11-May-20	
Stage 2		500	04-Apr-20	17-Aug-21
U520A1010	Relocate Waterline by LANE-Wagman - Area 5A, Stg 2	0	04-Apr-20	04-Apr-20
U520A1000	Relocate DVP - Area 5A, Stg 2	390	04-Apr-20	28-Apr-21
U520A1030	Relocate CenturyLink (Level 3) - Area 5A, Stg 2	120	11-May-20	07-Sep-20
U520A1040	Relocate Fiberlight - Area 5A, Stg 2	150	08-Sep-20	04-Feb-21
U520A1020	Relocate XO - Area 5A, Stg 2	55	29-Apr-21	22-Jun-21
U520A1050	Relocate CATV - Area 5A, Stg 2	55	23-Jun-21	16-Aug-21
D000-1370	Utilities Clear, Area 5A Stg 2	0	17-Aug-21	
Public Involvement / Public Relations		1173	20-Aug-18	30-May-24
D000-1380	Develop Communication Plan	15	20-Aug-18	10-Sep-18
D000-1390	VDOT Review Communication Plan	21	11-Sep-18	01-Oct-18
D000-4540	Provide briefings to elected officials, HOAs and other stakeholder gr	1079	02-Oct-18	03-Jan-23
D000-1460	Periodic Meetings with Focused Work Group and R-7 Working Group	1438	02-Oct-18	30-May-24
D000-1420	Maintain Communication Log and Action Matrix	1438	02-Oct-18	30-May-24
D000-1410	Provide Up-to-Date Information to Web Site and GIS Mapping Tool	1438	02-Oct-18	30-May-24



Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
D000-1400	Present Preliminary Design at 2 Public Information Meetings	35	02-Oct-18	19-Nov-18
D000-1440	Conduct "Pardon Our Dust" Meetings	1033	28-Dec-18	23-Jan-23
D000-1450	Proivde Monthly Project Update	1304	12-Apr-19	30-May-24
D000-1430	Proivde Weekly "Traffic Impacts" and "Traffic Alerts"	1304	12-Apr-19	30-May-24
Procurement		321	11-Sep-19	11-Apr-21
P0C0-1060	Prepare Shop Drawing for Difficult Run Bridge Steel Girders	30	11-Sep-19	22-Oct-19
P0C0-1070	VDOT Review Shop Drawing for Difficult Run Bridge Steel Girders	21	23-Oct-19	20-Nov-19
P0C0-1080	Fabricate Difficult Run Bridge Steel Girders	180	21-Nov-19	29-Jul-20
P0C0-1030	Prepare Shop Drawing for Noise Barrier Wall - Final	60	28-Dec-19	25-Feb-20
TP00-1020	Prepare Shop Drawing for Noise Barrier Wall - Final	60	28-Dec-19	25-Feb-20
P0C0-1040	VDOT Review Shop Drawing for Noise Barrier Wall - Final	21	26-Feb-20	17-Mar-20
TP00-1010	VDOT Review Shop Drawing for Noise Barrier Wall - Final	21	26-Feb-20	17-Mar-20
P0C0-1050	Fabricate Noise Barrier Wall- Final	390	18-Mar-20	11-Apr-21
TP00-1000	Fabricate Noise Barrier Wall- Final	360	18-Mar-20	12-Mar-21
Washington Gas		869	18-Jul-18	17-Dec-21
W000-1000	Washington Gas Strip 2 (229+00 to 239+80)	102	18-Jul-18*	11-Dec-18
W000-1010	Washington Gas Strip 1, Dranesville Gate Station to Great Passage	83	20-Aug-18*	17-Dec-18
W000-1020	Washington Gas Strip 1, Great Passage Blvd to Downey Dr (237+7	254	18-Dec-18	17-Dec-19
W000-1070	Washington Gas Strip 1, Royal Estates Dr to Jarrett Valley Dr (R) (	21	18-Dec-19	17-Jan-20
W000-1030	Washington Gas Strip 1, Downey Drive to Colvin Run Rd (293+00 t	255	18-Dec-19	17-Dec-20
W000-1080	Washington Gas Strip 1, Royal Estates Dr to Jarrett Valley Dr (L) (	232	20-Jan-20	15-Dec-20
W000-1050	Washington Gas Strip 1, Beulah Rd to Royal Estates Dr (L) (414+89	69	16-Dec-20	24-Mar-21
W000-1040	Washington Gas Strip 1, Colvin Run Rd to Beulah Rd (355+70 to 41	254	18-Dec-20	17-Dec-21
W000-1060	Washington Gas Strip 1, Beulah Rd to Royal Estates Dr (R) (430+75	185	25-Mar-21	15-Dec-21
Construction - Ph 1		1041	12-Apr-19	30-May-24
C000-1000	Start Construction Milestone	0	12-Apr-19	
T000-4190	Final AC Paving - Area 2	15	11-Jul-22	03-Aug-22
T000-4180	Punchlist - Area 2	30	04-Aug-22	02-Sep-22
C000-1050	Final AC Paving - Area 5A	15	29-Sep-23	24-Oct-23
C000-1040	Punchlist - Area 5A	30	25-Oct-23	23-Nov-23
T000-4200	Final Punchlist - Area 1 & 3	64	09-Mar-24	11-May-24
C000-1030	Final Punchlist - Area 4 & 5	81	11-Mar-24	30-May-24
C000-1020	Final AC Paving - Area 4, & 5	25	01-Apr-24	14-May-24
T000-4210	Final AC Paving - Area 1 & 3	25	01-Apr-24	14-May-24
C000-1010	Complete Construction Milestone - Base Scope	0		30-May-24
Area 1 - Sta 166+78 to 258+00		678	02-Nov-20	08-Mar-24
T000-11770	Start Construction - Area 1	0	02-Nov-20	
T000-11760	Complete Construction - Area 1	0		08-Mar-24
Stage 1		133	02-Nov-20	02-Jul-21
T000-11720	Install E&S Control - Area 1, Stg 1	5	02-Nov-20	09-Nov-20
T000-11740	Construct Temp Paving - Area 1, Stg 1	10	02-Nov-20	18-Nov-20
T000-11750	Start Milestone - Area 1, Stg 1	0	02-Nov-20	
T000-11730	Install MOT, and Temp Signal - Area 1, Stg 1	5	19-Nov-20	30-Nov-20
T000-11710	Demo Exist Rdwy (Partial) - Area 1, Stg 1	30	01-Dec-20	26-Jan-21
T000-11700	Excavate and Embank - Area 1, Stg 1	45	31-Dec-20	19-Mar-21
T000-11690	Install Drainage - Area 1, Stg 1	45	27-Jan-21	15-Apr-21
T000-11670	Construct Subbase + Stabilized Subgrade - Area 1, Stg 1	10	16-Apr-21	03-May-21
T000-11680	Construct SWM Facility - Area 1, Stg 1	5	16-Apr-21	23-Apr-21
T000-11640	Construct Median Barrier - Area 1, Stg 1	10	04-May-21	21-May-21
T000-11650	Install Underdrain - Area 1, Stg 1	10	04-May-21	21-May-21
T000-11660	Install ITS and Elect Conduits - Area 1, Stg 1	15	04-May-21	03-Jun-21
T000-11630	Construct Base - Area 1, Stg 1	15	04-Jun-21	29-Jun-21
T000-11620	AC Paving - Area 1, Stg 1	3	30-Jun-21	02-Jul-21
T000-11610	Finish Milestone - Area 1, Stg 1	0		02-Jul-21
Stage 2		290	03-Jul-21	05-Dec-22
T000-11600	Start Milestone - Area 1, Stg 2	0	03-Jul-21	
T000-11590	Install MOT and Temp Signal - Area 1, Stg 2	10	06-Jul-21	22-Jul-21
T000-11580	Install E&S Control - Area 1, Stg 2	3	23-Jul-21	27-Jul-21
T000-6040	Install Sound Barrier Foundations, Wall C3 - Sta. 247+00 to 249+50	6	29-Jul-21	06-Aug-21



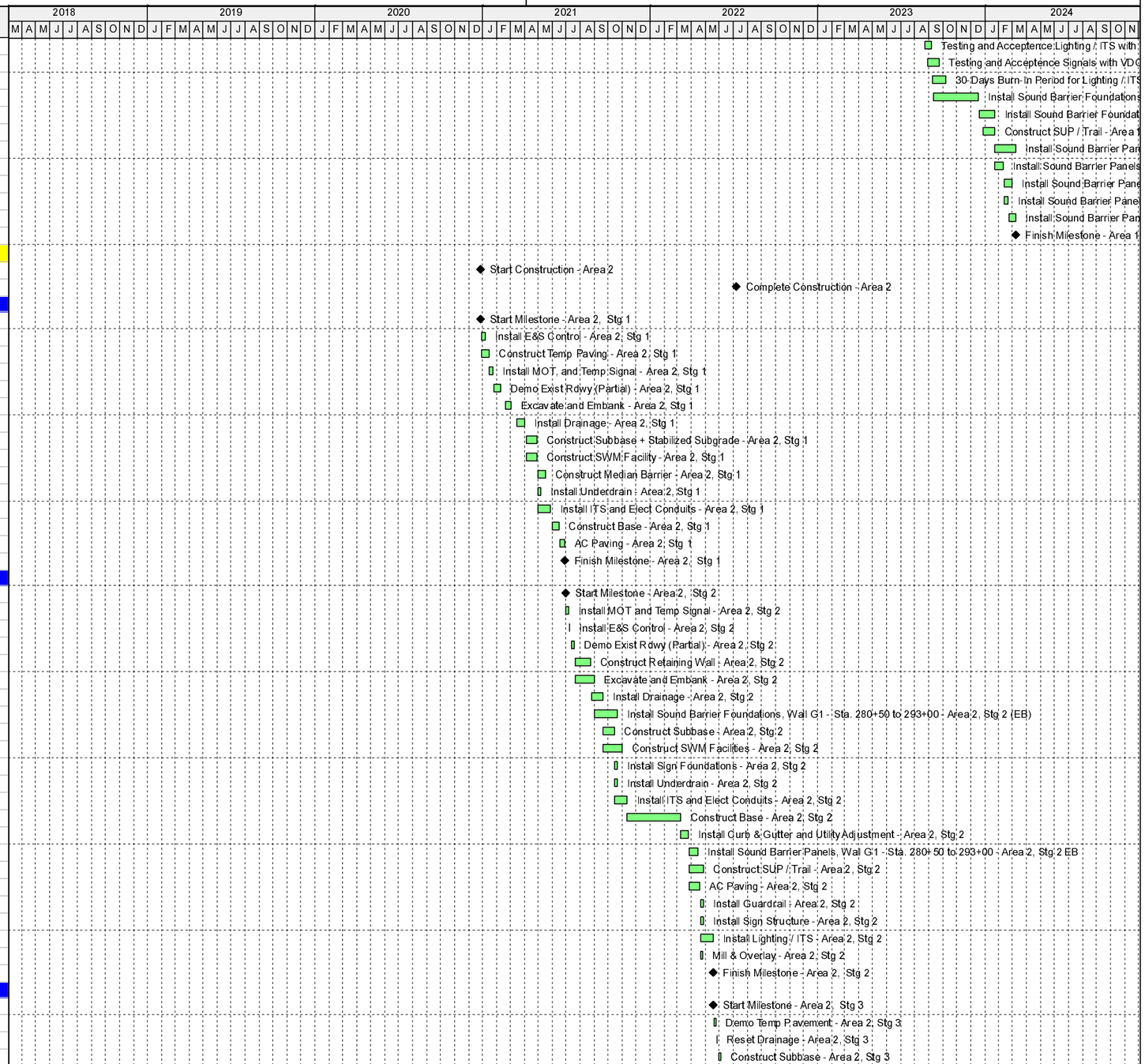
Remaining Level of Effort | Remaining Work | ◆ Milestone

Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-11570	Demo Exist Rdwy (Partial) - Area 1, Stg 2	5	29-Jul-21	05-Aug-21
T000-11550	Construct Retaining Wall - Area 1, Stg 2	30	06-Aug-21	27-Sep-21
T000-11560	Excavate and Embank - Area 1, Stg 2 (2 Crews)	45	06-Aug-21	21-Oct-21
T000-11540	Install Drainage - Area 1, Stg 2	45	10-Sep-21	26-Nov-21
T000-6120	Install Sound Barrier Foundations, Wall C1 - Sta. 193+00 to 227+50	79	22-Oct-21	15-Mar-22
T000-11520	Construct Subbase - Area 1, Stg 2	15	29-Nov-21	27-Dec-21
T000-11530	Construct SWM Facilities - Area 1, Stg 2	40	29-Nov-21	08-Feb-22
T000-11490	Install Sign Foundations - Area 1, Stg 2	5	28-Dec-21	06-Jan-22
T000-11500	Install Underdrain - Area 1, Stg 2	10	28-Dec-21	14-Jan-22
T000-11510	Install ITS and Elect Conduits - Area 1, Stg 2	15	28-Dec-21	24-Jan-22
T000-11480	Construct Base - Area 1, Stg 2	15	01-Mar-22	28-Mar-22
T000-6100	Install Sound Barrier Foundations, Wall C2 - Sta. 228+25 to 245+75	40	18-Mar-22	27-May-22
T000-11470	Install Curb & Gutter and Utility Adjustment - Area 1, Stg 2 (2 Crews	30	29-Mar-22	20-May-22
T000-11440	Construct SUP / Trail - Area 1, Stg 2	15	23-May-22	17-Jun-22
T000-11460	AC Paving - Area 1, Stg 2	4	23-May-22	27-May-22
T000-6080	Install Sound Barrier Foundations, Wall E1 - Sta. 238+25 to 245+75	18	31-May-22	29-Jun-22
T000-11410	Install Guardrail - Area 1, Stg 2	5	31-May-22	07-Jun-22
T000-11420	Install Sign Structure - Area 1, Stg 2	2	31-May-22	02-Jun-22
T000-11430	Install Lighting / ITS - Area 1, Stg 2	10	31-May-22	16-Jun-22
T000-11450	Mill & Overlay - Area 1, Stg 2	5	31-May-22	07-Jun-22
T000-6110	Install Sound Barrier Panels, Wall C1 - Sta. 193+00 to 227+50 - Area	50	20-Jun-22	09-Sep-22
T000-6060	Install Sound Barrier Foundations, Wall E2 - Sta. 247+00 to 254+00	16	30-Jun-22	28-Jul-22
T000-6090	Install Sound Barrier Panels, Wall C2 - Sta. 228+25 to 245+75 - Area	26	12-Sep-22	25-Oct-22
T000-6070	Install Sound Barrier Panels, Wall E1 - Sta. 238+25 to 245+75 - Area	9	27-Oct-22	11-Nov-22
T000-6050	Install Sound Barrier Panels, Wall E2 - Sta. 247+00 to 254+00 - Area	8	14-Nov-22	28-Nov-22
T000-6030	Install Sound Barrier Panels, Wall C3 - Sta. 247+00 to 249+50 - Area	4	29-Nov-22	05-Dec-22
T000-11400	Finish Milestone - Area 1, Stg 2	0		05-Dec-22
Stage 3		96	06-Dec-22	31-May-23
T000-11390	Start Milestone - Area 1, Stg 3	0	06-Dec-22	
T000-11380	Install MOT and Temp Signal - Area 1, Stg 3	5	07-Dec-22	15-Dec-22
T000-11370	Install E&S Control - Area 1, Stg 3	1	16-Dec-22	16-Dec-22
T000-11360	Demo Temp Pavement - Area 1, Stg 3	8	19-Dec-22	03-Jan-23
T000-11350	Reset Drainage - Area 1, Stg 3	10	04-Jan-23	20-Jan-23
T000-11340	Construct Subbase - Area 1, Stg 3	8	23-Jan-23	03-Feb-23
T000-11310	Install Sign Foundations - Area 1, Stg 3	7	06-Feb-23	16-Feb-23
T000-11320	Install Underdrain - Area 1, Stg 3	4	06-Feb-23	10-Feb-23
T000-11330	Install ITS and Elect Conduits - Area 1, Stg 3	15	06-Feb-23	02-Mar-23
T000-11300	Construct Median - Area 1, Stg 3	20	03-Mar-23	06-Apr-23
T000-11290	AC Paving - Area 1, Stg 3	15	07-Apr-23	02-May-23
T000-11250	Install Sign Structure - Area 1, Stg 3	5	04-May-23	12-May-23
T000-11260	Install Lighting / ITS - Area 1, Stg 3	10	04-May-23	22-May-23
T000-11270	Install Signals - Area 1, Stg 3	14	04-May-23	31-May-23
T000-11280	Mill & Overlay - Area 1, Stg 3	10	04-May-23	22-May-23
T000-11240	Finish Milestone - Area 1, Stg 3	0		31-May-23
Stage 4		159	01-Jun-23	08-Mar-24
T000-11220	Install MOT and Temp Signal - Area 1, Stg 4	5	01-Jun-23	08-Jun-23
T000-11230	Start Milestone - Area 1, Stg 4	0	01-Jun-23	
T000-11210	Install E&S Control - Area 1, Stg 4	4	09-Jun-23	15-Jun-23
T000-6000	Install Sound Barrier Foundations, Wall B3 - Sta. 177+00 to 181+50	11	16-Jun-23	05-Jul-23
T000-11200	Demo Temp Pavement - Area 1, Stg 4	5	16-Jun-23	23-Jun-23
T000-11190	Install Curb & Gutter and Utility Adjustment - Area 1, Stg 4	15	26-Jun-23	21-Jul-23
T000-6020	Install Sound Barrier Foundations, Wall B2 - Sta. 167+00 to 176+00	21	07-Jul-23	10-Aug-23
T000-11180	AC Paving - Area 1, Stg 4	8	24-Jul-23	03-Aug-23
T000-11120	Install Guardrail - Area 1, Stg 4	5	04-Aug-23	11-Aug-23
T000-11130	Install Sign Structure - Area 1, Stg 4	10	04-Aug-23	21-Aug-23
T000-11140	Install Lighting / ITS - Area 1, Stg 4	10	04-Aug-23	21-Aug-23
T000-11150	Install Signals - Area 1, Stg 4	14	04-Aug-23	28-Aug-23
T000-11170	Mill & Overlay - Area 1, Stg 4	10	04-Aug-23	21-Aug-23
T000-5980	Install Sound Barrier Foundations, Wall B4 - Sta. 182+75 to 190+00	17	11-Aug-23	08-Sep-23

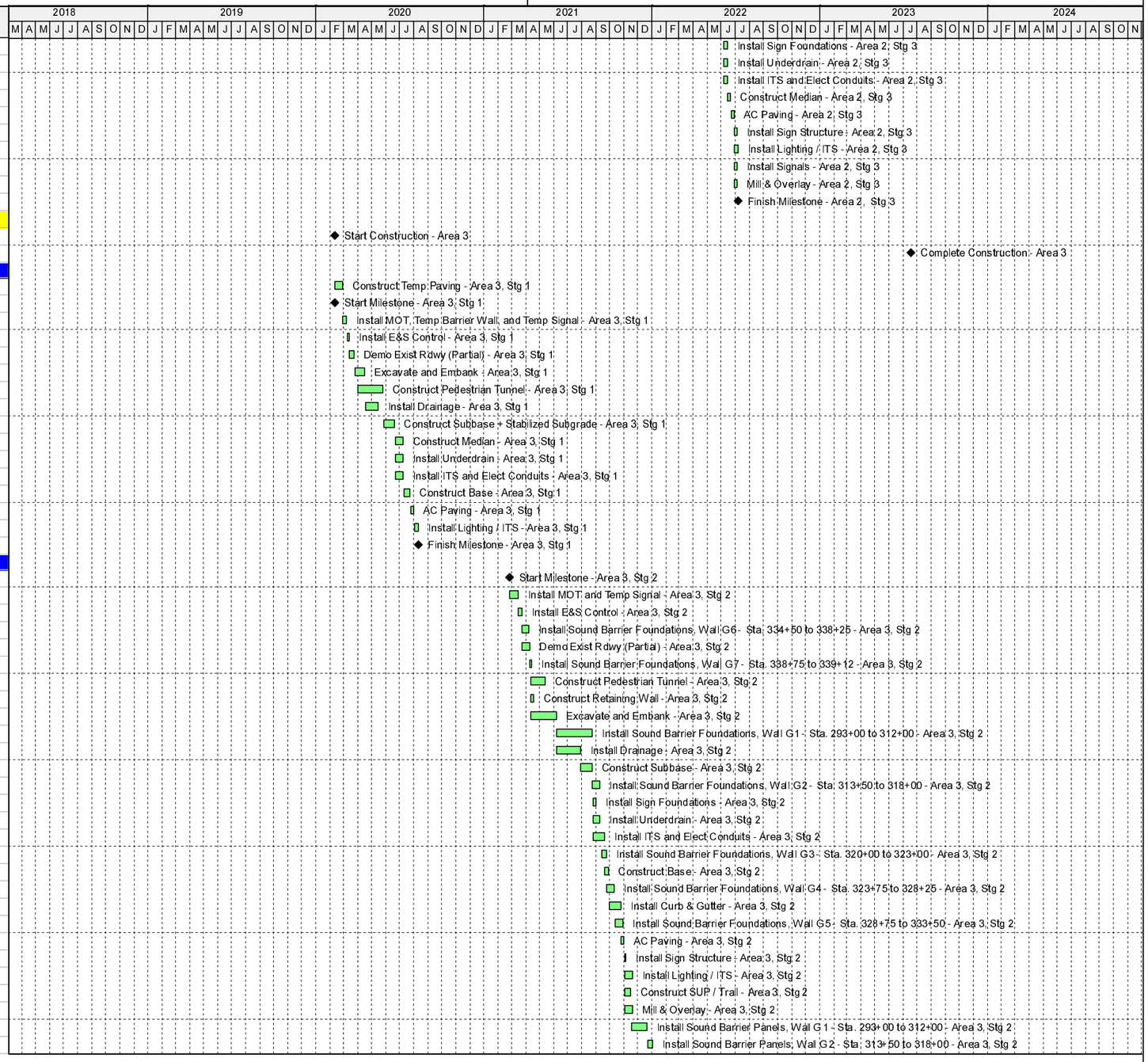
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-4390	Testing and Acceptence Lighting / ITS with VDOT - Area 1, Stg 4	10	22-Aug-23	07-Sep-23
T000-4400	Testing and Acceptence Signals with VDOT - Area 1, Stg 4	15	29-Aug-23	22-Sep-23
T000-4380	30-Days Burn-In Period for Lighting / ITS - Area 1, Stg 4	30	08-Sep-23	07-Oct-23
T000-5960	Install Sound Barrier Foundations, Wall B5 - Sta. 191+00 to 215+00	55	11-Sep-23	18-Dec-23
T000-5940	Install Sound Barrier Foundations, Wall D1 - Sta. 216+50 to 224+75	19	19-Dec-23	22-Jan-24
T000-11160	Construct SUP / Trail - Area 1, Stg 4	15	28-Dec-23	22-Jan-24
T000-5950	Install Sound Barrier Panels, Wall B5 - Sta. 191+00 to 215+00 - Area	27	23-Jan-24	08-Mar-24
T000-6010	Install Sound Barrier Panels, Wall B2 - Sta. 167+00 to 176+00 - Area	11	23-Jan-24	09-Feb-24
T000-5930	Install Sound Barrier Panels, Wall D1 - Sta. 216+50 to 224+75 - Area	10	12-Feb-24	28-Feb-24
T000-5990	Install Sound Barrier Panels, Wall B3 - Sta. 177+00 to 181+50 - Area	6	12-Feb-24	20-Feb-24
T000-5970	Install Sound Barrier Panels, Wall B4 - Sta. 182+75 to 190+00 - Area	9	23-Feb-24	07-Mar-24
T000-11110	Finish Milestone - Area 1, Stg 4	0		08-Mar-24
Area 2 - Sta 258+00 to 294+00 (Baron Cameron Intersection Improvements)		310	27-Dec-20	08-Jul-22
T000-11100	Start Construction - Area 2	0	27-Dec-20	
T000-11090	Complete Construction - Area 2	0		08-Jul-22
Stage 1		102	27-Dec-20	29-Jun-21
T000-11080	Start Milestone - Area 2, Stg 1	0	27-Dec-20	
T000-12100	Install E&S Control - Area 2, Stg 1	5	28-Dec-20	06-Jan-21
T000-12110	Construct Temp Paving - Area 2, Stg 1	10	28-Dec-20	14-Jan-21
T000-12120	Install MOT, and Temp Signal - Area 2, Stg 1	5	15-Jan-21	22-Jan-21
T000-12130	Demo Exist Rdwy (Partial) - Area 2, Stg 1	10	25-Jan-21	09-Feb-21
T000-12140	Excavate and Embank - Area 2, Stg 1	7	19-Feb-21	03-Mar-21
T000-12150	Install Drainage - Area 2, Stg 1	10	17-Mar-21	02-Apr-21
T000-12160	Construct Subbase + Stabilized Subgrade - Area 2, Stg 1	15	05-Apr-21	29-Apr-21
T000-12170	Construct SWM Facility - Area 2, Stg 1	15	05-Apr-21	29-Apr-21
T000-12180	Construct Median Barrier - Area 2, Stg 1	10	30-Apr-21	17-May-21
T000-12190	Install Underdrain - Area 2, Stg 1	5	30-Apr-21	07-May-21
T000-12200	Install ITS and Elect Conduits - Area 2, Stg 1	15	30-Apr-21	28-May-21
T000-12210	Construct Base - Area 2, Stg 1	10	02-Jun-21	16-Jun-21
T000-12220	AC Paving - Area 2, Stg 1	7	18-Jun-21	29-Jun-21
T000-10940	Finish Milestone - Area 2, Stg 1	0		29-Jun-21
Stage 2		180	30-Jun-21	17-May-22
T000-10780	Start Milestone - Area 2, Stg 2	0	30-Jun-21	
T000-12230	Install MOT and Temp Signal - Area 2, Stg 2	5	30-Jun-21	07-Jul-21
T000-12240	Install E&S Control - Area 2, Stg 2	2	08-Jul-21	09-Jul-21
T000-12250	Demo Exist Rdwy (Partial) - Area 2, Stg 2	5	12-Jul-21	19-Jul-21
T000-12260	Construct Retaining Wall - Area 2, Stg 2	20	22-Jul-21	24-Aug-21
T000-12270	Excavate and Embank - Area 2, Stg 2	25	22-Jul-21	31-Aug-21
T000-12280	Install Drainage - Area 2, Stg 2	15	25-Aug-21	20-Sep-21
T000-5920	Install Sound Barrier Foundations, Wall G1 - Sta. 280+50 to 293+00	29	01-Sep-21	21-Oct-21
T000-12290	Construct Subbase - Area 2, Stg 2	15	21-Sep-21	14-Oct-21
T000-12300	Construct SWM Facilities - Area 2, Stg 2	25	21-Sep-21	01-Nov-21
T000-12310	Install Sign Foundations - Area 2, Stg 2	5	15-Oct-21	22-Oct-21
T000-12320	Install Underdrain - Area 2, Stg 2	4	15-Oct-21	21-Oct-21
T000-12330	Install ITS and Elect Conduits - Area 2, Stg 2	15	15-Oct-21	11-Nov-21
T000-12340	Construct Base - Area 2, Stg 2	15	12-Nov-21	07-Mar-22
T000-12350	Install Curb & Gutter and Utility Adjustment - Area 2, Stg 2	10	08-Mar-22	25-Mar-22
T000-5910	Install Sound Barrier Panels, Wall G1 - Sta. 280+50 to 293+00 - Area	12	28-Mar-22	14-Apr-22
T000-12360	Construct SUP / Trail - Area 2, Stg 2	20	28-Mar-22	27-Apr-22
T000-12370	AC Paving - Area 2, Stg 2	15	28-Mar-22	19-Apr-22
T000-12380	Install Guardrail - Area 2, Stg 2	5	21-Apr-22	27-Apr-22
T000-12390	Install Sign Structure - Area 2, Stg 2	5	21-Apr-22	27-Apr-22
T000-12400	Install Lighting / ITS - Area 2, Stg 2	15	21-Apr-22	17-May-22
T000-12410	Mill & Overlay - Area 2, Stg 2	3	21-Apr-22	25-Apr-22
T000-10560	Finish Milestone - Area 2, Stg 2	0		17-May-22
Stage 3		28	18-May-22	08-Jul-22
T000-10460	Start Milestone - Area 2, Stg 3	0	18-May-22	
T000-12440	Demo Temp Pavement - Area 2, Stg 3	3	20-May-22	24-May-22
T000-12450	Reset Drainage - Area 2, Stg 3	2	26-May-22	27-May-22
T000-12460	Construct Subbase - Area 2, Stg 3	3	31-May-22	03-Jun-22



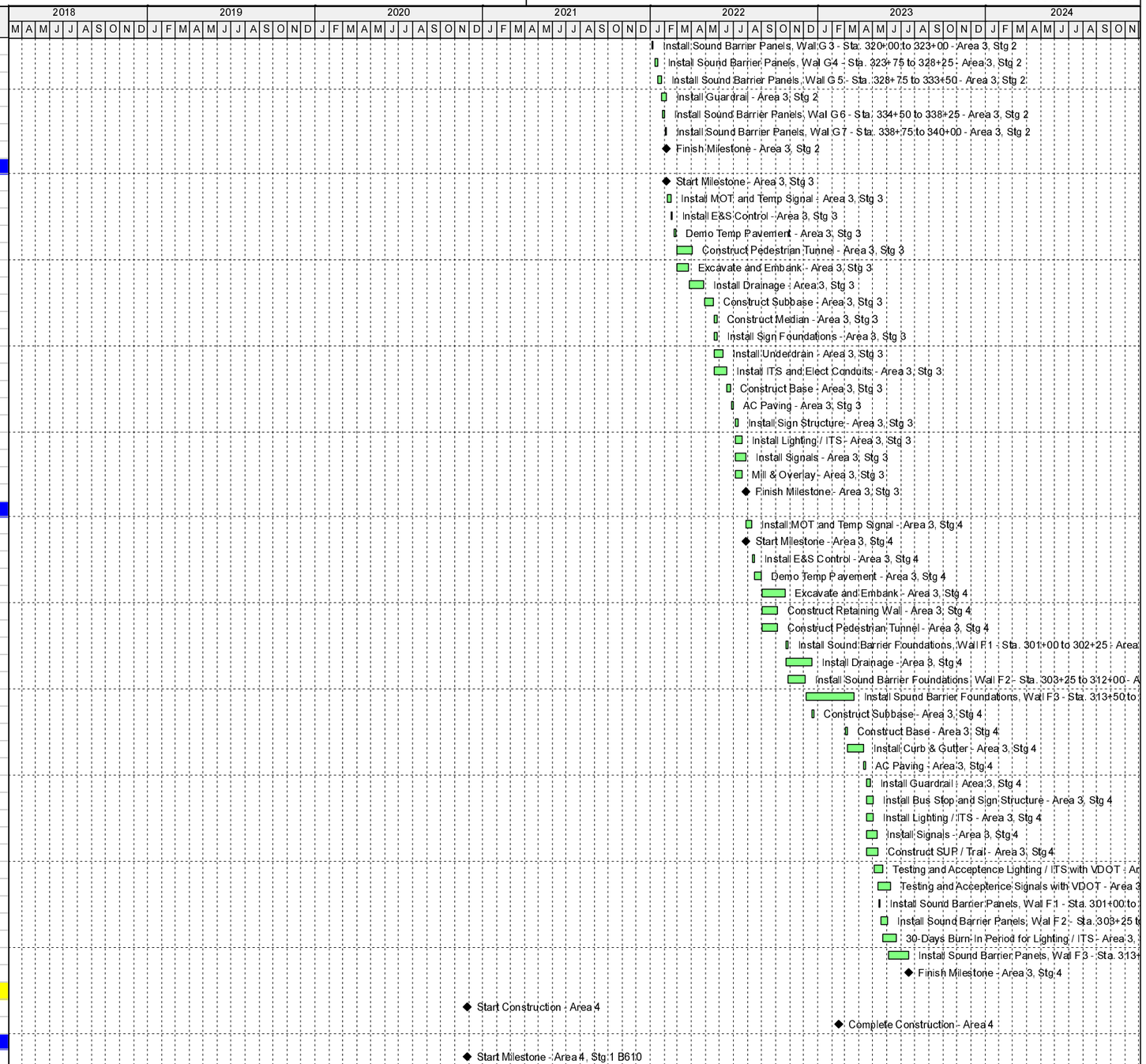
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-12470	Install Sign Foundations - Area 2, Stg 3	5	06-Jun-22	13-Jun-22
T000-12480	Install Underdrain - Area 2, Stg 3	5	06-Jun-22	13-Jun-22
T000-12490	Install ITS and Elect Conduits - Area 2, Stg 3	5	06-Jun-22	13-Jun-22
T000-12500	Construct Median - Area 2, Stg 3	5	14-Jun-22	21-Jun-22
T000-12510	AC Paving - Area 2, Stg 3	5	23-Jun-22	29-Jun-22
T000-12520	Install Sign Structure - Area 2, Stg 3	3	30-Jun-22	05-Jul-22
T000-12530	Install Lighting / ITS - Area 2, Stg 3	5	30-Jun-22	08-Jul-22
T000-12540	Install Signals - Area 2, Stg 3	3	30-Jun-22	05-Jul-22
T000-12550	Mill & Overlay - Area 2, Stg 3	3	30-Jun-22	05-Jul-22
T000-10230	Finish Milestone - Area 2, Stg 3	0		08-Jul-22
Area 3 - Sta 294+00 to 339+11.55		696	11-Feb-20	18-Jul-23
T000-10080	Start Construction - Area 3	0	11-Feb-20	
T000-10070	Complete Construction - Area 3	0		18-Jul-23
Stage 1		101	11-Feb-20	10-Aug-20
T000-10050	Construct Temp Paving - Area 3, Stg 1	10	11-Feb-20	27-Feb-20
T000-10060	Start Milestone - Area 3, Stg 1	0	11-Feb-20	
T000-10040	Install MOT, Temp Barrier Wall, and Temp Signal - Area 3, Stg 1	5	28-Feb-20	06-Mar-20
T000-10030	Install E&S Control - Area 3, Stg 1	3	09-Mar-20	12-Mar-20
T000-10020	Demo Exist Rdwy (Partial) - Area 3, Stg 1	5	13-Mar-20	23-Mar-20
T000-10010	Excavate and Embank - Area 3, Stg 1	15	25-Mar-20	16-Apr-20
T000-9990	Construct Pedestrian Tunnel - Area 3, Stg 1	30	01-Apr-20	26-May-20
T000-10000	Install Drainage - Area 3, Stg 1	15	17-Apr-20	15-May-20
T000-9980	Construct Subbase + Stabilized Subgrade - Area 3, Stg 1	15	27-May-20	19-Jun-20
T000-9950	Construct Median - Area 3, Stg 1	10	22-Jun-20	09-Jul-20
T000-9960	Install Underdrain - Area 3, Stg 1	10	22-Jun-20	09-Jul-20
T000-9970	Install ITS and Elect Conduits - Area 3, Stg 1	10	22-Jun-20	09-Jul-20
T000-9940	Construct Base - Area 3, Stg 1	8	10-Jul-20	23-Jul-20
T000-9930	AC Paving - Area 3, Stg 1	5	24-Jul-20	31-Jul-20
T000-9920	Install Lighting / ITS - Area 3, Stg 1	5	03-Aug-20	10-Aug-20
T000-9910	Finish Milestone - Area 3, Stg 1	0		10-Aug-20
Stage 2		192	25-Feb-21	04-Feb-22
T000-9900	Start Milestone - Area 3, Stg 2	0	25-Feb-21	
T000-9890	Install MOT and Temp Signal - Area 3, Stg 2	10	26-Feb-21	15-Mar-21
T000-9880	Install E&S Control - Area 3, Stg 2	5	16-Mar-21	23-Mar-21
T000-5780	Install Sound Barrier Foundations, Wall G6 - Sta. 334+50 to 338+25	9	25-Mar-21	07-Apr-21
T000-9870	Demo Exist Rdwy (Partial) - Area 3, Stg 2	10	25-Mar-21	09-Apr-21
T000-5760	Install Sound Barrier Foundations, Wall G7 - Sta. 338+75 to 339+12	3	09-Apr-21	13-Apr-21
T000-9830	Construct Pedestrian Tunnel - Area 3, Stg 2	20	12-Apr-21	14-May-21
T000-9850	Construct Retaining Wall - Area 3, Stg 2	5	12-Apr-21	19-Apr-21
T000-9860	Excavate and Embank - Area 3, Stg 2	30	12-Apr-21	07-Jun-21
T000-5880	Install Sound Barrier Foundations, Wall G1 - Sta. 293+00 to 312+00	44	08-Jun-21	23-Aug-21
T000-9840	Install Drainage - Area 3, Stg 2	30	08-Jun-21	29-Jul-21
T000-9820	Construct Subbase - Area 3, Stg 2	15	30-Jul-21	24-Aug-21
T000-5860	Install Sound Barrier Foundations, Wall G2 - Sta. 313+50 to 318+00	11	24-Aug-21	10-Sep-21
T000-9790	Install Sign Foundations - Area 3, Stg 2	5	25-Aug-21	31-Aug-21
T000-9800	Install Underdrain - Area 3, Stg 2	10	25-Aug-21	10-Sep-21
T000-9810	Install ITS and Elect Conduits - Area 3, Stg 2	15	25-Aug-21	20-Sep-21
T000-5840	Install Sound Barrier Foundations, Wall G3 - Sta. 320+00 to 323+00	7	13-Sep-21	23-Sep-21
T000-9780	Construct Base - Area 3, Stg 2	6	21-Sep-21	29-Sep-21
T000-5820	Install Sound Barrier Foundations, Wall G4 - Sta. 323+75 to 328+25	11	24-Sep-21	11-Oct-21
T000-9770	Install Curb & Gutter - Area 3, Stg 2	15	30-Sep-21	25-Oct-21
T000-5800	Install Sound Barrier Foundations, Wall G5 - Sta. 328+75 to 333+50	11	12-Oct-21	29-Oct-21
T000-9760	AC Paving - Area 3, Stg 2	4	26-Oct-21	01-Nov-21
T000-9720	Install Sign Structure - Area 3, Stg 2	2	02-Nov-21	05-Nov-21
T000-9730	Install Lighting / ITS - Area 3, Stg 2	10	02-Nov-21	19-Nov-21
T000-9740	Construct SUP / Trail - Area 3, Stg 2	8	02-Nov-21	16-Nov-21
T000-9750	Mill & Overlay - Area 3, Stg 2	10	02-Nov-21	19-Nov-21
T000-5870	Install Sound Barrier Panels, Wall G1 - Sta. 293+00 to 312+00 - Area	19	18-Nov-21	21-Dec-21
T000-5850	Install Sound Barrier Panels, Wall G2 - Sta. 313+50 to 318+00 - Area	5	23-Dec-21	03-Jan-22



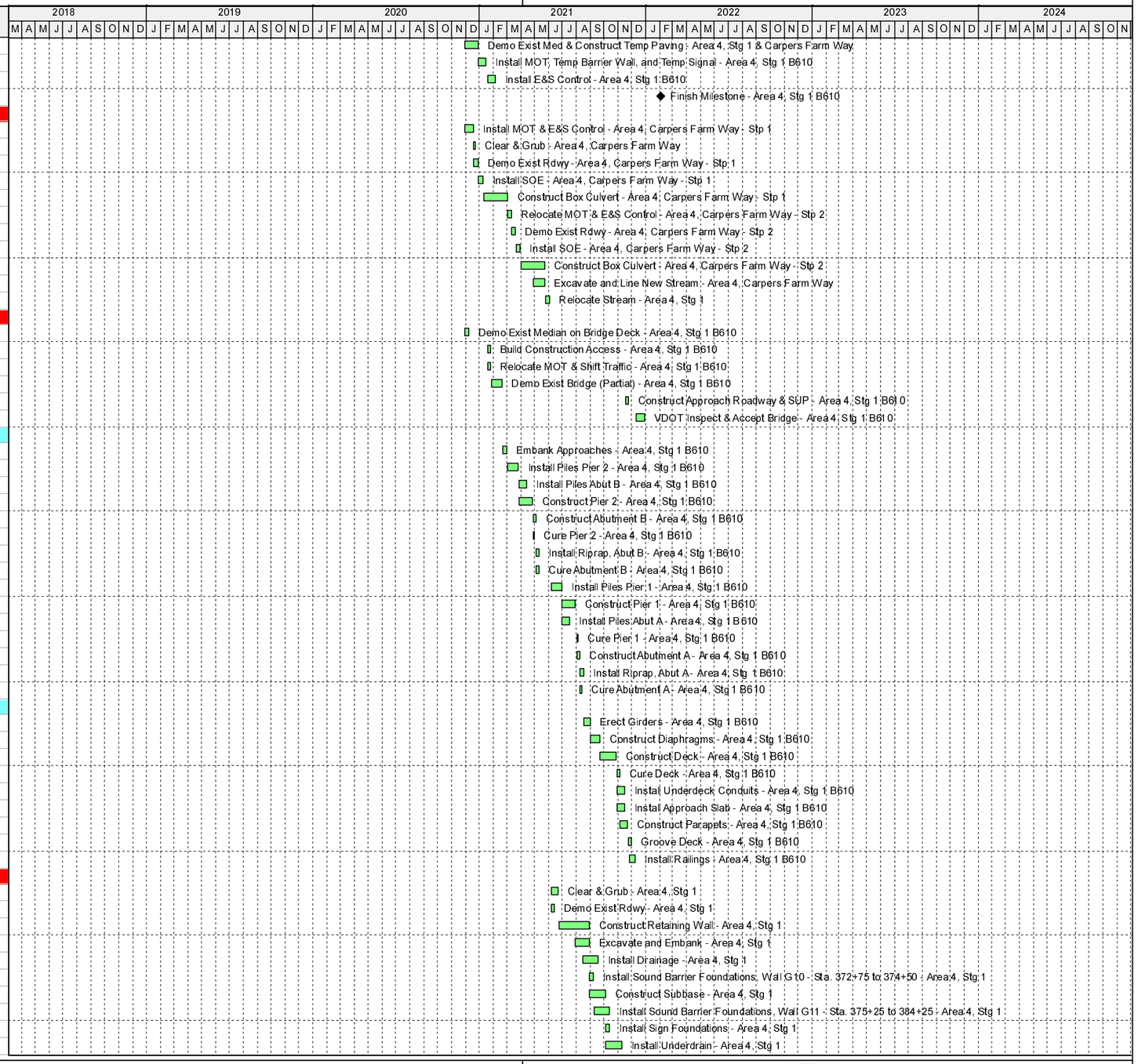
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
T000-5830	Install Sound Barrier Panels, Wall G 3 - Sta. 320+00 to 323+00 - Area	3	05-Jan-22	07-Jan-22
T000-5810	Install Sound Barrier Panels, Wall G 4 - Sta. 323+75 to 328+25 - Area	5	10-Jan-22	17-Jan-22
T000-5790	Install Sound Barrier Panels, Wall G 5 - Sta. 328+75 to 333+50 - Area	5	18-Jan-22	25-Jan-22
T000-9710	Install Guardrail - Area 3, Stg 2	8	25-Jan-22	04-Feb-22
T000-5770	Install Sound Barrier Panels, Wall G 6 - Sta. 334+50 to 338+25 - Area	4	27-Jan-22	01-Feb-22
T000-5750	Install Sound Barrier Panels, Wall G 7 - Sta. 338+75 to 340+00 - Area	3	02-Feb-22	04-Feb-22
T000-9700	Finish Milestone - Area 3, Stg 2	0		04-Feb-22
Stage 3		95	05-Feb-22	28-Jul-22
T000-9690	Start Milestone - Area 3, Stg 3	0	05-Feb-22	
T000-9680	Install MOT and Temp Signal - Area 3, Stg 3	5	07-Feb-22	14-Feb-22
T000-9670	Install E&S Control - Area 3, Stg 3	3	15-Feb-22	18-Feb-22
T000-9660	Demo Temp Pavement - Area 3, Stg 3	3	21-Feb-22	25-Feb-22
T000-9630	Construct Pedestrian Tunnel - Area 3, Stg 3	20	28-Feb-22	01-Apr-22
T000-9650	Excavate and Embank - Area 3, Stg 3	15	28-Feb-22	25-Mar-22
T000-9640	Install Drainage - Area 3, Stg 3	20	28-Mar-22	27-Apr-22
T000-9620	Construct Subbase - Area 3, Stg 3	10	29-Apr-22	17-May-22
T000-9580	Construct Median - Area 3, Stg 3	5	20-May-22	27-May-22
T000-9590	Install Sign Foundations - Area 3, Stg 3	5	20-May-22	27-May-22
T000-9600	Install Underdrain - Area 3, Stg 3	10	20-May-22	07-Jun-22
T000-9610	Install ITS and Elect Conduits - Area 3, Stg 3	15	20-May-22	16-Jun-22
T000-9570	Construct Base - Area 3, Stg 3	5	17-Jun-22	24-Jun-22
T000-9560	AC Paving - Area 3, Stg 3	5	27-Jun-22	01-Jul-22
T000-9520	Install Sign Structure - Area 3, Stg 3	5	05-Jul-22	12-Jul-22
T000-9530	Install Lighting / ITS - Area 3, Stg 3	10	05-Jul-22	20-Jul-22
T000-9540	Install Signals - Area 3, Stg 3	14	05-Jul-22	28-Jul-22
T000-9550	Mill & Overlay - Area 3, Stg 3	10	05-Jul-22	20-Jul-22
T000-9510	Finish Milestone - Area 3, Stg 3	0		28-Jul-22
Stage 4		197	29-Jul-22	18-Jul-23
T000-9490	Install MOT and Temp Signal - Area 3, Stg 4	8	29-Jul-22	09-Aug-22
T000-9500	Start Milestone - Area 3, Stg 4	0	29-Jul-22	
T000-9480	Install E&S Control - Area 3, Stg 4	3	11-Aug-22	15-Aug-22
T000-9470	Demo Temp Pavement - Area 3, Stg 4	10	16-Aug-22	31-Aug-22
T000-6810	Excavate and Embank - Area 3, Stg 4	30	01-Sep-22	21-Oct-22
T000-9450	Construct Retaining Wall - Area 3, Stg 4	20	01-Sep-22	05-Oct-22
T000-9460	Construct Pedestrian Tunnel - Area 3, Stg 4	20	01-Sep-22	05-Oct-22
T000-5740	Install Sound Barrier Foundations, Wall F 1 - Sta. 301+00 to 302+25	3	24-Oct-22	27-Oct-22
T000-9440	Install Drainage - Area 3, Stg 4	30	24-Oct-22	19-Dec-22
T000-5720	Install Sound Barrier Foundations, Wall F 2 - Sta. 303+25 to 312+00	20	28-Oct-22	05-Dec-22
T000-5700	Install Sound Barrier Foundations, Wall F 3 - Sta. 313+50 to 338+75	58	07-Dec-22	21-Mar-23
T000-9430	Construct Subbase - Area 3, Stg 4	3	20-Dec-22	23-Dec-22
T000-9420	Construct Base - Area 3, Stg 4	3	02-Mar-23	06-Mar-23
T000-9410	Install Curb & Gutter - Area 3, Stg 4	20	07-Mar-23	10-Apr-23
T000-9400	AC Paving - Area 3, Stg 4	3	11-Apr-23	14-Apr-23
T000-9350	Install Guardrail - Area 3, Stg 4	5	17-Apr-23	25-Apr-23
T000-9360	Install Bus Stop and Sign Structure - Area 3, Stg 4	10	17-Apr-23	02-May-23
T000-9370	Install Lighting / ITS - Area 3, Stg 4	10	17-Apr-23	02-May-23
T000-9380	Install Signals - Area 3, Stg 4	14	17-Apr-23	10-May-23
T000-9390	Construct SUP / Trail - Area 3, Stg 4	15	17-Apr-23	12-May-23
T000-4330	Testing and Acceptence Lighting / ITS with VDOT - Area 3, Stg 4	10	04-May-23	22-May-23
T000-4340	Testing and Acceptence Signals with VDOT - Area 3, Stg 4	15	12-May-23	08-Jun-23
T000-5730	Install Sound Barrier Panels, Wall F 1 - Sta. 301+00 to 302+25 - Area	2	15-May-23	16-May-23
T000-5710	Install Sound Barrier Panels, Wall F 2 - Sta. 303+25 to 312+00 - Area	9	18-May-23	02-Jun-23
T000-4320	30-Days Burn-In Period for Lighting / ITS - Area 3, Stg 4	30	23-May-23	21-Jun-23
T000-5690	Install Sound Barrier Panels, Wall F 3 - Sta. 313+50 to 338+75 - Area	25	05-Jun-23	18-Jul-23
T000-9340	Finish Milestone - Area 3, Stg 4	0		18-Jul-23
Area 4 - Sta 339+11.55 to 387+50 (Difficult Run Bridge)		447	27-Nov-20	15-Feb-23
C400-1000	Start Construction - Area 4	0	27-Nov-20	
C400-1010	Complete Construction - Area 4	0		15-Feb-23
Stage 1		239	27-Nov-20	03-Feb-22
C410-1020	Start Milestone - Area 4, Stg 1 B610	0	27-Nov-20	



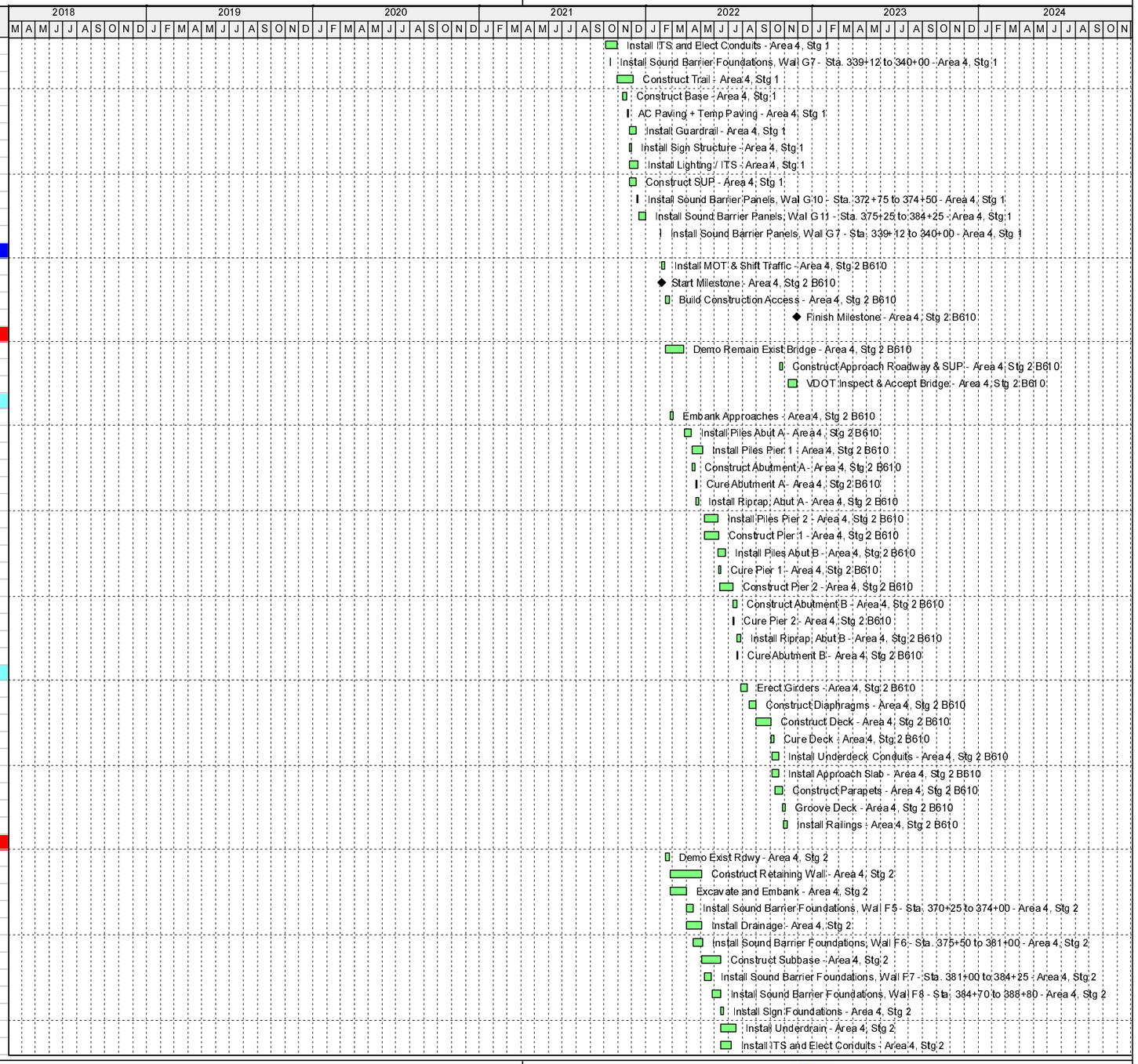
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C400-1030	Demo Exist Med & Construct Temp Paving - Area 4, Stg 1 & Carper	15	30-Nov-20	28-Dec-20
C410-1040	Install MOT, Temp Barrier Wall, and Temp Signal - Area 4, Stg 1 B61	10	29-Dec-20	15-Jan-21
C410-1050	Install E&S Control - Area 4, Stg 1 B610	10	18-Jan-21	03-Feb-21
C410-1060	Finish Milestone - Area 4, Stg 1 B610	0		03-Feb-22
Stream Relocation / Carpers Farm Way / Colvin Run Rd		102	30-Nov-20	04-Jun-21
C410-2050	Install MOT & E&S Control - Area 4, Carpers Farm Way - Stp 1	10	30-Nov-20	17-Dec-20
C410-2040	Clear & Grub - Area 4, Carpers Farm Way	3	18-Dec-20	23-Dec-20
C410-1380	Demo Exist Rdwy - Area 4, Carpers Farm Way - Stp 1	5	18-Dec-20	28-Dec-20
C410-2070	Install SOE - Area 4, Carpers Farm Way - Stp 1	6	29-Dec-20	08-Jan-21
C410-1360	Construct Box Culvert - Area 4, Carpers Farm Way - Stp 1	30	11-Jan-21	03-Mar-21
C410-2100	Relocate MOT & E&S Control - Area 4, Carpers Farm Way - Stp 2	5	04-Mar-21	11-Mar-21
C410-2110	Demo Exist Rdwy - Area 4, Carpers Farm Way - Stp 2	5	12-Mar-21	19-Mar-21
C410-2090	Install SOE - Area 4, Carpers Farm Way - Stp 2	6	22-Mar-21	31-Mar-21
C410-2080	Construct Box Culvert - Area 4, Carpers Farm Way - Stp 2	30	01-Apr-21	24-May-21
C410-1370	Excavate and Line New Stream - Area 4, Carpers Farm Way	15	28-Apr-21	24-May-21
C410-2060	Relocate Stream - Area 4, Stg 1	5	26-May-21	04-Jun-21
Bridge		218	30-Nov-20	28-Dec-21
C410-1070	Demo Exist Median on Bridge Deck - Area 4, Stg 1 B610	5	30-Nov-20	07-Dec-20
C410-1100	Build Construction Access - Area 4, Stg 1 B610	5	18-Jan-21	25-Jan-21
C410-1080	Relocate MOT & Shift Traffic - Area 4, Stg 1 B610	5	18-Jan-21	25-Jan-21
C410-1110	Demo Exist Bridge (Partial) - Area 4, Stg 1 B610	15	26-Jan-21	19-Feb-21
C410-1330	Construct Approach Roadway & SUP - Area 4, Stg 1 B610	5	18-Nov-21	24-Nov-21
C410-2140	VDOT Inspect & Accept Bridge - Area 4, Stg 1 B610	10	10-Dec-21	28-Dec-21
Substructure		99	22-Feb-21	17-Aug-21
C410-1120	Embank Approaches - Area 4, Stg 1 B610	5	22-Feb-21	01-Mar-21
C410-1190	Install Piles Pier 2 - Area 4, Stg 1 B610	15	03-Mar-21	26-Mar-21
C410-1220	Install Piles Abut B - Area 4, Stg 1 B610	10	29-Mar-21	13-Apr-21
C410-1200	Construct Pier 2 - Area 4, Stg 1 B610	17	29-Mar-21	26-Apr-21
C410-1230	Construct Abutment B - Area 4, Stg 1 B610	5	28-Apr-21	04-May-21
C410-1210	Cure Pier 2 - Area 4, Stg 1 B610	3	28-Apr-21	30-Apr-21
C410-1250	Install Riprap, Abut B - Area 4, Stg 1 B610	5	06-May-21	12-May-21
C410-1240	Cure Abutment B - Area 4, Stg 1 B610	3	06-May-21	10-May-21
C410-1160	Install Piles Pier 1 - Area 4, Stg 1 B610	15	07-Jun-21	30-Jun-21
C410-1170	Construct Pier 1 - Area 4, Stg 1 B610	17	01-Jul-21	30-Jul-21
C410-1130	Install Piles Abut A - Area 4, Stg 1 B610	10	01-Jul-21	16-Jul-21
C410-1180	Cure Pier 1 - Area 4, Stg 1 B610	3	02-Aug-21	05-Aug-21
C410-1140	Construct Abutment A - Area 4, Stg 1 B610	5	02-Aug-21	09-Aug-21
C410-2120	Install Riprap, Abut A - Area 4, Stg 1 B610	5	10-Aug-21	17-Aug-21
C410-1150	Cure Abutment A - Area 4, Stg 1 B610	3	10-Aug-21	13-Aug-21
Superstructure		64	18-Aug-21	09-Dec-21
C410-1260	Erect Girders - Area 4, Stg 1 B610	10	18-Aug-21	01-Sep-21
C410-1270	Construct Diaphragms - Area 4, Stg 1 B610	10	02-Sep-21	21-Sep-21
C410-1280	Construct Deck - Area 4, Stg 1 B610	22	23-Sep-21	28-Oct-21
C410-1285	Cure Deck - Area 4, Stg 1 B610	7	29-Oct-21	04-Nov-21
C410-1310	Install Underdeck Conduits - Area 4, Stg 1 B610	10	29-Oct-21	16-Nov-21
C410-1300	Install Approach Slab - Area 4, Stg 1 B610	10	29-Oct-21	16-Nov-21
C410-1290	Construct Parapets - Area 4, Stg 1 B610	10	05-Nov-21	22-Nov-21
C410-1320	Groove Deck - Area 4, Stg 1 B610	5	23-Nov-21	30-Nov-21
C410-1340	Install Railings - Area 4, Stg 1 B610	7	26-Nov-21	09-Dec-21
Roadway		137	07-Jun-21	03-Feb-22
C410-1390	Clear & Grub - Area 4, Stg 1	10	07-Jun-21	22-Jun-21
C410-1350	Demo Exist Rdwy - Area 4, Stg 1	5	07-Jun-21	14-Jun-21
C410-1410	Construct Retaining Wall - Area 4, Stg 1	40	24-Jun-21	30-Aug-21
C410-1400	Excavate and Embank - Area 4, Stg 1	20	29-Jul-21	30-Aug-21
C410-1420	Install Drainage - Area 4, Stg 1	20	16-Aug-21	17-Sep-21
C410-2000	Install Sound Barrier Foundations, Wall G10 - Sta. 372+75 to 374+5	4	31-Aug-21	07-Sep-21
C410-1430	Construct Subbase - Area 4, Stg 1	20	31-Aug-21	04-Oct-21
C410-2020	Install Sound Barrier Foundations, Wall G11 - Sta. 375+25 to 384+2	21	09-Sep-21	12-Oct-21
C410-1470	Install Sign Foundations - Area 4, Stg 1	5	05-Oct-21	12-Oct-21
C410-1450	Install Underdrain - Area 4, Stg 1	20	05-Oct-21	09-Nov-21



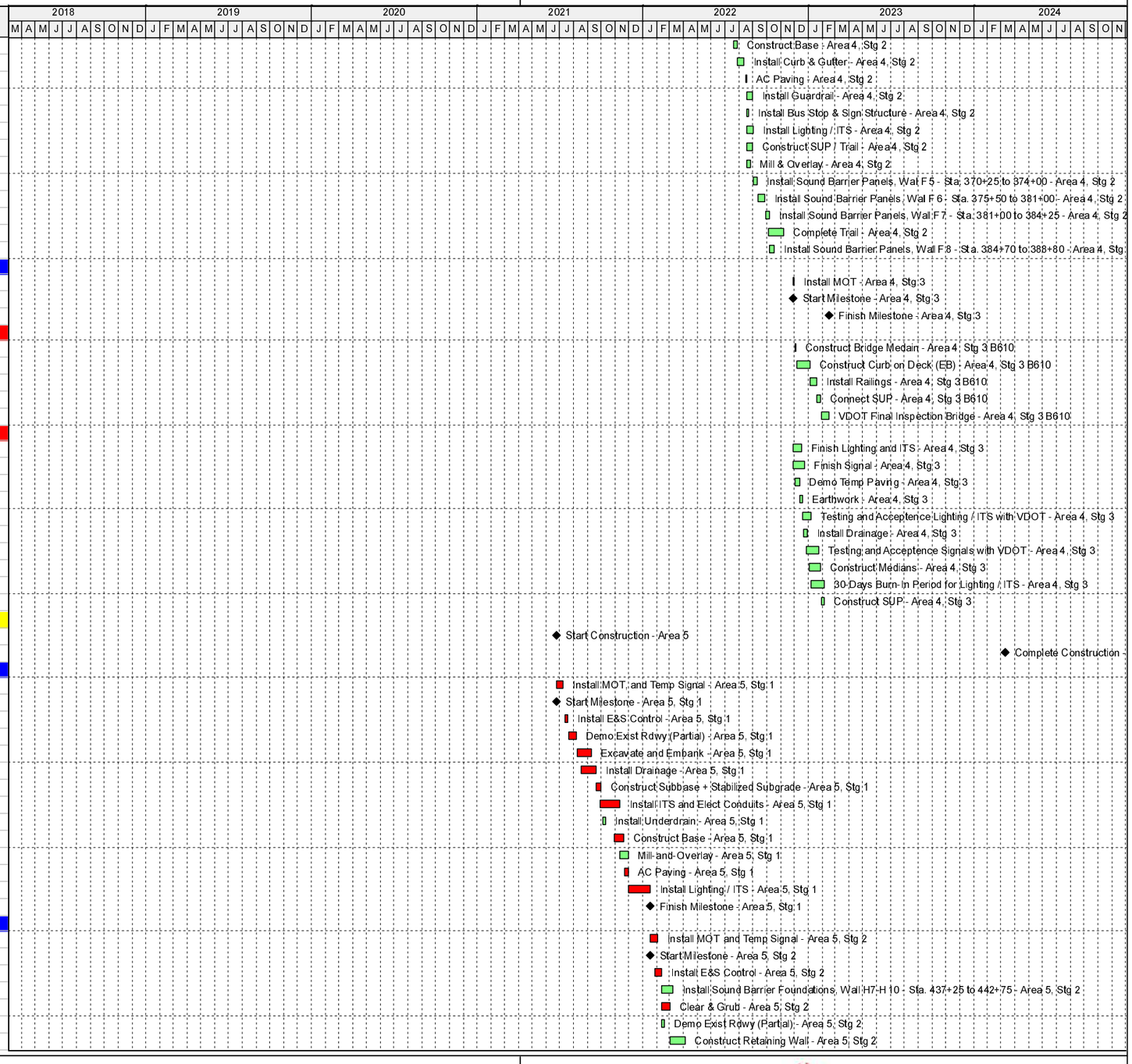
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C410-1440	Install ITS and Elect Conduits - Area 4, Stg 1	15	05-Oct-21	29-Oct-21
C410-2150	Install Sound Barrier Foundations, Wal G7 - Sta. 339+12 to 340+00	2	14-Oct-21	15-Oct-21
C410-2130	Construct Trail - Area 4, Stg 1	20	29-Oct-21	03-Dec-21
C410-1480	Construct Base - Area 4, Stg 1	6	11-Nov-21	19-Nov-21
C410-1490	AC Paving + Temp Paving - Area 4, Stg 1	3	22-Nov-21	24-Nov-21
C410-1540	Install Guardrail - Area 4, Stg 1	8	26-Nov-21	10-Dec-21
C410-1530	Install Sign Structure - Area 4, Stg 1	2	26-Nov-21	29-Nov-21
C410-1520	Install Lighting / ITS - Area 4, Stg 1	10	26-Nov-21	14-Dec-21
C410-1500	Construct SUP - Area 4, Stg 1	8	26-Nov-21	10-Dec-21
C410-2010	Install Sound Barrier Panels, Wal G10 - Sta. 372+75 to 374+50 - Ar	2	13-Dec-21	14-Dec-21
C410-2030	Install Sound Barrier Panels, Wal G11 - Sta. 375+25 to 384+25 - Are	8	16-Dec-21	30-Dec-21
C410-2160	Install Sound Barrier Panels, Wal G7 - Sta. 339+12 to 340+00 - Area	2	02-Feb-22	03-Feb-22
Stage 2		166	04-Feb-22	28-Nov-22
C420-1010	Install MOT & Shift Traffic - Area 4, Stg 2 B610	5	04-Feb-22	11-Feb-22
C420-1000	Start Milestone - Area 4, Stg 2 B610	0	04-Feb-22	
C420-1020	Build Construction Access - Area 4, Stg 2 B610	5	14-Feb-22	21-Feb-22
C420-1030	Finish Milestone - Area 4, Stg 2 B610	0		28-Nov-22
Bridge		161	14-Feb-22	28-Nov-22
C420-1040	Demo Remain Exist Bridge - Area 4, Stg 2 B610	22	14-Feb-22	25-Mar-22
C420-1270	Construct Approach Roadway & SUP - Area 4, Stg 2 B610	5	21-Oct-22	28-Oct-22
C420-2100	VDOT Inspect & Accept Bridge - Area 4, Stg 2 B610	10	09-Nov-22	28-Nov-22
Substructure		86	24-Feb-22	28-Jul-22
C420-1060	Embank Approaches - Area 4, Stg 2 B610	5	24-Feb-22	02-Mar-22
C420-1070	Install Piles Abut A - Area 4, Stg 2 B610	10	28-Mar-22	11-Apr-22
C420-1100	Install Piles Pier 1 - Area 4, Stg 2 B610	15	13-Apr-22	06-May-22
C420-1080	Construct Abutment A - Area 4, Stg 2 B610	5	13-Apr-22	19-Apr-22
C420-1090	Cure Abutment A - Area 4, Stg 2 B610	3	20-Apr-22	22-Apr-22
C420-2080	Install Riprap, Abut A - Area 4, Stg 2 B610	5	21-Apr-22	27-Apr-22
C420-1130	Install Piles Pier 2 - Area 4, Stg 2 B610	15	09-May-22	07-Jun-22
C420-1110	Construct Pier 1 - Area 4, Stg 2 B610	17	09-May-22	10-Jun-22
C420-1160	Install Piles Abut B - Area 4, Stg 2 B610	10	09-Jun-22	24-Jun-22
C420-1120	Cure Pier 1 - Area 4, Stg 2 B610	3	11-Jun-22	13-Jun-22
C420-1140	Construct Pier 2 - Area 4, Stg 2 B610	17	13-Jun-22	11-Jul-22
C420-1170	Construct Abutment B - Area 4, Stg 2 B610	5	12-Jul-22	19-Jul-22
C420-1150	Cure Pier 2 - Area 4, Stg 2 B610	3	12-Jul-22	14-Jul-22
C420-1190	Install Riprap, Abut B - Area 4, Stg 2 B610	5	20-Jul-22	28-Jul-22
C420-1180	Cure Abutment B - Area 4, Stg 2 B610	3	20-Jul-22	22-Jul-22
Superstructure		60	29-Jul-22	07-Nov-22
C420-1200	Erect Girders - Area 4, Stg 2 B610	10	29-Jul-22	12-Aug-22
C420-1210	Construct Diaphragms - Area 4, Stg 2 B610	10	15-Aug-22	30-Aug-22
C420-1220	Construct Deck - Area 4, Stg 2 B610	20	31-Aug-22	03-Oct-22
C420-1225	Cure Deck - Area 4, Stg 2 B610	7	04-Oct-22	10-Oct-22
C420-1250	Install Underdeck Conduits - Area 4, Stg 2 B610	10	05-Oct-22	19-Oct-22
C420-1240	Install Approach Slab - Area 4, Stg 2 B610	10	05-Oct-22	19-Oct-22
C420-1230	Construct Parapets - Area 4, Stg 2 B610	10	11-Oct-22	27-Oct-22
C420-1260	Groove Deck - Area 4, Stg 2 B610	5	28-Oct-22	04-Nov-22
C420-1280	Install Railings - Area 4, Stg 2 B610	5	31-Oct-22	07-Nov-22
Roadway		151	14-Feb-22	07-Nov-22
C420-1290	Demo Exist Rdwy - Area 4, Stg 2	5	14-Feb-22	21-Feb-22
C420-1310	Construct Retaining Wall - Area 4, Stg 2	40	24-Feb-22	03-May-22
C420-1300	Excavate and Embank - Area 4, Stg 2	20	24-Feb-22	30-Mar-22
C420-2000	Install Sound Barrier Foundations, Wal F5 - Sta. 370+25 to 374+00	9	31-Mar-22	14-Apr-22
C420-1320	Install Drainage - Area 4, Stg 2	20	31-Mar-22	03-May-22
C420-2020	Install Sound Barrier Foundations, Wal F6 - Sta. 375+50 to 381+00	13	15-Apr-22	06-May-22
C420-1330	Construct Subbase - Area 4, Stg 2	20	04-May-22	13-Jun-22
C420-2040	Install Sound Barrier Foundations, Wal F7 - Sta. 381+00 to 384+25	8	09-May-22	24-May-22
C420-2060	Install Sound Barrier Foundations, Wal F8 - Sta. 384+70 to 388+80	10	26-May-22	13-Jun-22
C420-1370	Install Sign Foundations - Area 4, Stg 2	5	14-Jun-22	21-Jun-22
C420-1350	Install Underdrain - Area 4, Stg 2	20	14-Jun-22	18-Jul-22
C420-1340	Install ITS and Elect Conduits - Area 4, Stg 2	15	14-Jun-22	08-Jul-22



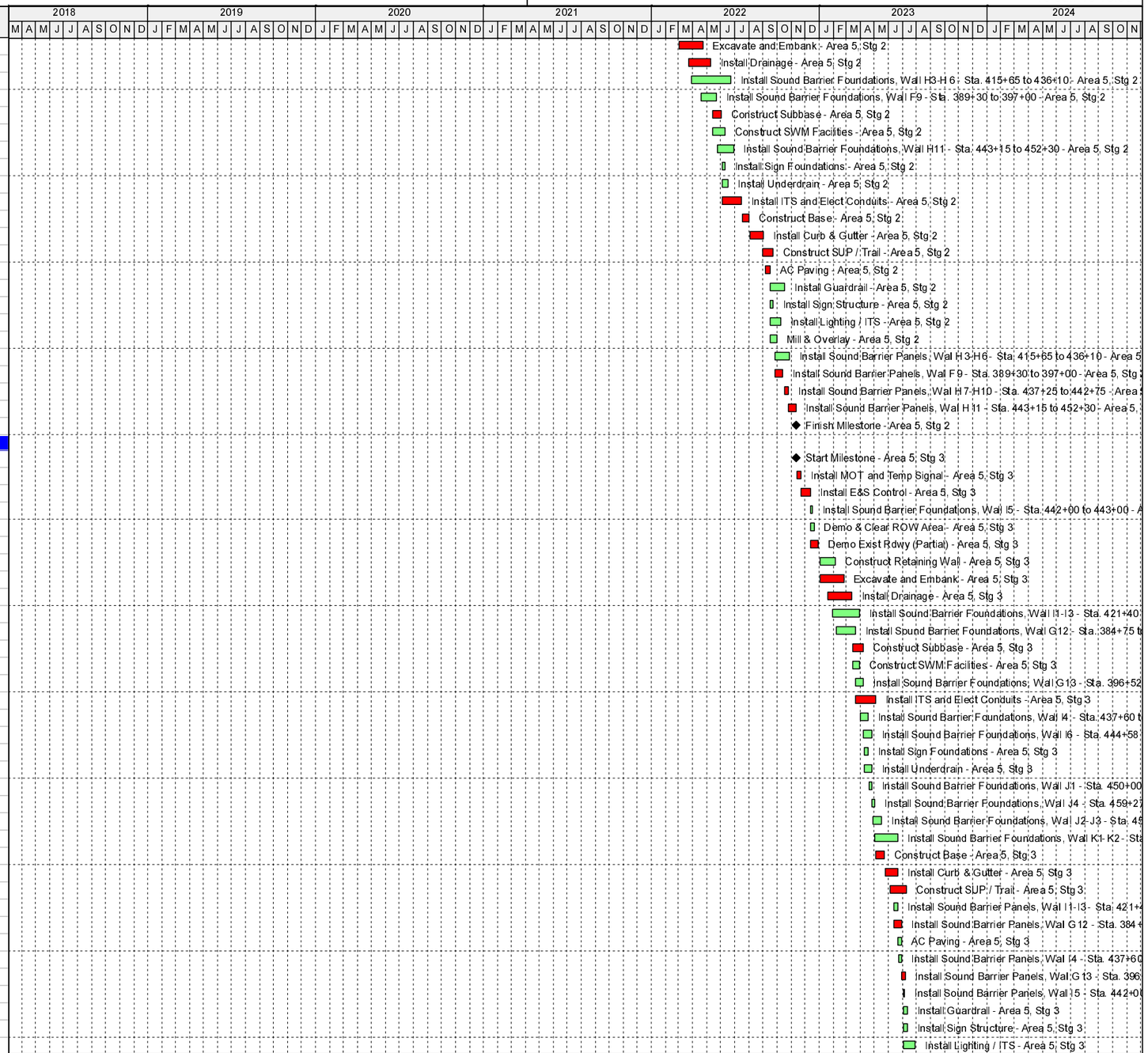
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C420-1380	Construct Base - Area 4, Stg 2	6	19-Jul-22	28-Jul-22
C420-1390	Install Curb & Gutter - Area 4, Stg 2	10	29-Jul-22	12-Aug-22
C420-1400	AC Paving - Area 4, Stg 2	3	15-Aug-22	18-Aug-22
C420-1460	Install Guardrail - Area 4, Stg 2	8	19-Aug-22	31-Aug-22
C420-1450	Install Bus Stop & Sign Structure - Area 4, Stg 2	2	19-Aug-22	22-Aug-22
C420-1440	Install Lighting / ITS - Area 4, Stg 2	10	19-Aug-22	02-Sep-22
C420-1420	Construct SUP / Trail - Area 4, Stg 2	8	19-Aug-22	31-Aug-22
C420-1410	Mill & Overlay - Area 4, Stg 2	5	19-Aug-22	26-Aug-22
C420-2010	Install Sound Barrier Panels, Wall F 5 - Sta. 370+25 to 374+00 - Area	6	01-Sep-22	09-Sep-22
C420-2030	Install Sound Barrier Panels, Wall F 6 - Sta. 375+50 to 381+00 - Area	9	12-Sep-22	27-Sep-22
C420-2050	Install Sound Barrier Panels, Wall F 7 - Sta. 381+00 to 384+25 - Area	6	28-Sep-22	06-Oct-22
C420-2090	Complete Trail - Area 4, Stg 2	20	05-Oct-22	07-Nov-22
C420-2070	Install Sound Barrier Panels, Wall F 8 - Sta. 384+70 to 388+80 - Area	7	07-Oct-22	18-Oct-22
Stage 3		42	29-Nov-22	15-Feb-23
C430-1110	Install MOT - Area 4, Stg 3	2	29-Nov-22	30-Nov-22
C430-1000	Start Milestone - Area 4, Stg 3	0	29-Nov-22	
C430-1010	Finish Milestone - Area 4, Stg 3	0		15-Feb-23
Bridge		40	02-Dec-22	15-Feb-23
C430-1020	Construct Bridge Medain - Area 4, Stg 3 B610	2	02-Dec-22	05-Dec-22
C430-1030	Construct Curb on Deck (EB) - Area 4, Stg 3 B610	15	07-Dec-22	04-Jan-23
C430-1040	Install Railings - Area 4, Stg 3 B610	8	06-Jan-23	19-Jan-23
C430-1050	Connect SUP - Area 4, Stg 3 B610	5	20-Jan-23	27-Jan-23
C430-1130	VDOT Final Inspection Bridge - Area 4, Stg 3 B610	10	30-Jan-23	15-Feb-23
Roadway		37	29-Nov-22	06-Feb-23
C430-1140	Finish Lighting and ITS - Area 4, Stg 3	10	29-Nov-22	16-Dec-22
C430-1120	Finish Signal - Area 4, Stg 3	14	29-Nov-22	23-Dec-22
C430-1060	Demo Temp Paving - Area 4, Stg 3	5	02-Dec-22	12-Dec-22
C430-1070	Earthwork - Area 4, Stg 3	5	13-Dec-22	20-Dec-22
C430-1160	Testing and Acceptence Lighting / ITS with VDOT - Area 4, Stg 3	10	19-Dec-22	06-Jan-23
C430-1080	Install Drainage - Area 4, Stg 3	5	22-Dec-22	30-Dec-22
C430-1150	Testing and Acceptence Signals with VDOT - Area 4, Stg 3	15	28-Dec-22	23-Jan-23
C430-1090	Construct Medians - Area 4, Stg 3	15	03-Jan-23	27-Jan-23
C430-1170	30-Days Burn-In Period for Lighting / ITS - Area 4, Stg 3	30	07-Jan-23	05-Feb-23
C430-1100	Construct SUP - Area 4, Stg 3	5	30-Jan-23	06-Feb-23
Area 5 - Sta 387+50 to 474+75		551	25-Jun-21	10-Mar-24
C500-1000	Start Construction - Area 5	0	25-Jun-21	
C500-1010	Complete Construction - Area 5	0		10-Mar-24
Stage 1		115	25-Jun-21	17-Jan-22
C510-1010	Install MOT, and Temp Signal - Area 5, Stg 1	10	25-Jun-21	09-Jul-21
C510-1000	Start Milestone - Area 5, Stg 1	0	25-Jun-21	
C510-1020	Install E&S Control - Area 5, Stg 1	5	12-Jul-21	19-Jul-21
C510-1030	Demo Exist Rdwy (Partial) - Area 5, Stg 1	10	22-Jul-21	06-Aug-21
C510-1040	Excavate and Embank - Area 5, Stg 1	20	09-Aug-21	10-Sep-21
C510-1050	Install Drainage - Area 5, Stg 1	20	17-Aug-21	20-Sep-21
C510-1060	Construct Subbase + Stabilized Subgrade - Area 5, Stg 1	8	21-Sep-21	01-Oct-21
C510-1070	Install ITS and Elect Conduits - Area 5, Stg 1	25	29-Sep-21	11-Nov-21
C510-1080	Install Underdrain - Area 5, Stg 1	5	04-Oct-21	11-Oct-21
C510-1090	Construct Base - Area 5, Stg 1	12	29-Oct-21	19-Nov-21
C510-1140	Mill-and-Overlay - Area 5, Stg 1	10	12-Nov-21	29-Nov-21
C510-1100	AC Paving - Area 5, Stg 1	5	22-Nov-21	29-Nov-21
C510-1120	Install Lighting / ITS - Area 5, Stg 1	25	30-Nov-21	17-Jan-22
C510-1130	Finish Milestone - Area 5, Stg 1	0		17-Jan-22
Stage 2		169	18-Jan-22	11-Nov-22
C520-1010	Install MOT and Temp Signal - Area 5, Stg 2	10	18-Jan-22	02-Feb-22
C520-1000	Start Milestone - Area 5, Stg 2	0	18-Jan-22	
C520-1020	Install E&S Control - Area 5, Stg 2	10	27-Jan-22	10-Feb-22
C520-2040	Install Sound Barrier Foundations, Wall H7-H10 - Sta. 437+25 to 44;	13	11-Feb-22	07-Mar-22
C520-1040	Clear & Grub - Area 5, Stg 2	10	11-Feb-22	01-Mar-22
C520-1030	Demo Exist Rdwy (Partial) - Area 5, Stg 2	5	11-Feb-22	18-Feb-22
C520-1060	Construct Retaining Wall - Area 5, Stg 2	20	02-Mar-22	05-Apr-22



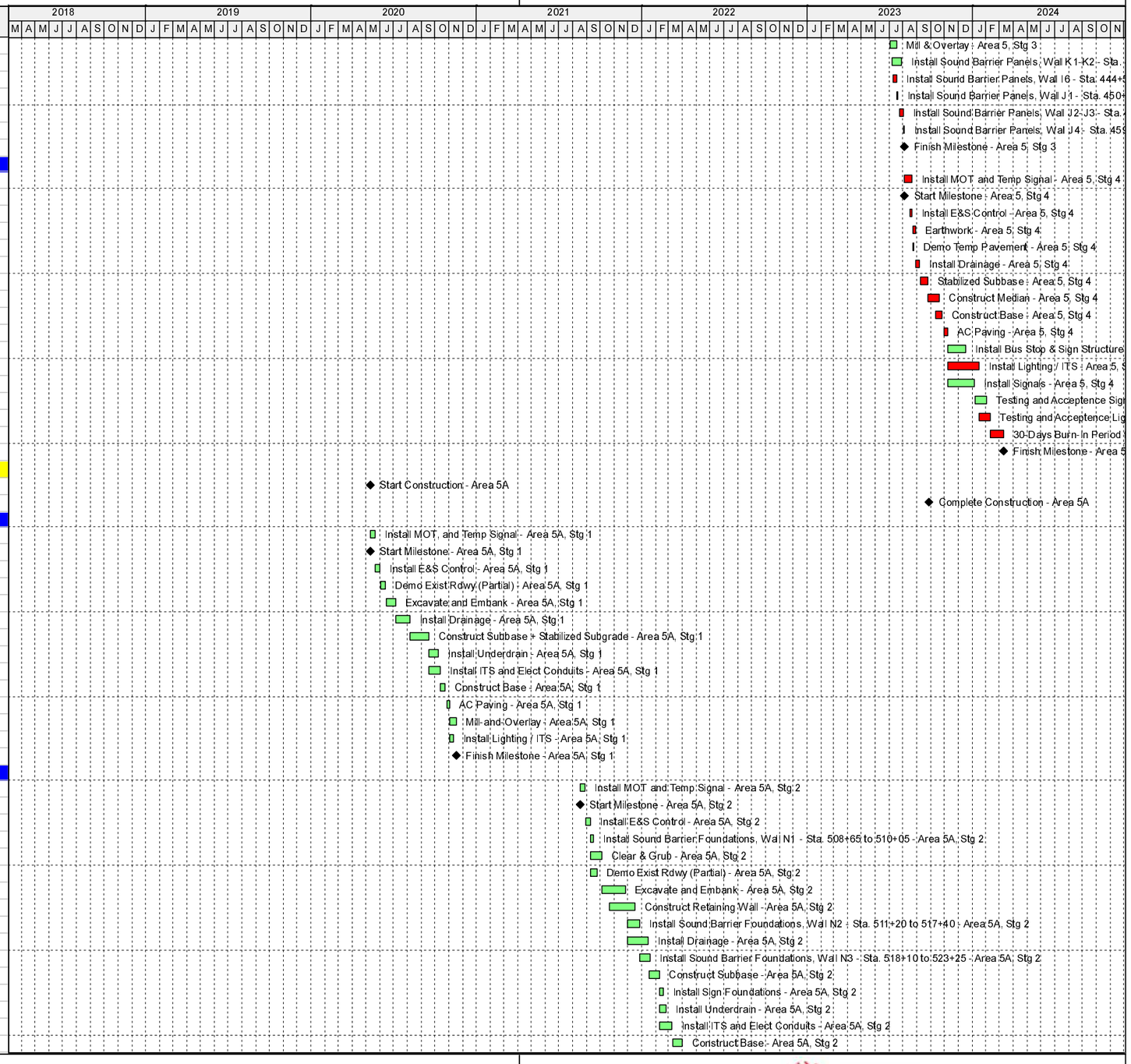
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C520-1050	Excavate and Embank - Area 5, Stg 2	30	02-Mar-22	22-Apr-22
C520-1070	Install Drainage - Area 5, Stg 2	30	23-Mar-22	10-May-22
C520-2020	Install Sound Barrier Foundations, Wall H3-H6 - Sta. 415+65 to 436	47	30-Mar-22	23-Jun-22
0520-2000	Install Sound Barrier Foundations, Wall F9 - Sta. 389+30 to 397+00	18	19-Apr-22	23-May-22
C520-1090	Construct Subbase - Area 5, Stg 2	10	13-May-22	02-Jun-22
C520-1080	Construct SWM Facilities - Area 5, Stg 2	15	13-May-22	10-Jun-22
C520-2060	Install Sound Barrier Foundations, Wall H11 - Sta. 443+15 to 452+3	21	24-May-22	29-Jun-22
C520-1130	Install Sign Foundations - Area 5, Stg 2	5	03-Jun-22	10-Jun-22
C520-1110	Install Underdrain - Area 5, Stg 2	8	03-Jun-22	16-Jun-22
C520-1100	Install ITS and Elect Conduits - Area 5, Stg 2	25	03-Jun-22	15-Jul-22
C520-1140	Construct Base - Area 5, Stg 2	10	18-Jul-22	02-Aug-22
C520-1150	Install Curb & Gutter - Area 5, Stg 2	20	03-Aug-22	02-Sep-22
C520-1180	Construct SUP / Trail - Area 5, Stg 2	15	30-Aug-22	23-Sep-22
C520-1160	AC Paving - Area 5, Stg 2	6	06-Sep-22	15-Sep-22
C520-1220	Install Guardrail - Area 5, Stg 2	20	16-Sep-22	18-Oct-22
C520-1210	Install Sign Structure - Area 5, Stg 2	5	16-Sep-22	23-Sep-22
C520-1200	Install Lighting / ITS - Area 5, Stg 2	15	16-Sep-22	10-Oct-22
C520-1170	Mill & Overlay - Area 5, Stg 2	10	16-Sep-22	30-Sep-22
C520-2030	Install Sound Barrier Panels, Wall H3-H6 - Sta. 415+65 to 436+10 - A	20	26-Sep-22	27-Oct-22
C520-2010	Install Sound Barrier Panels, Wall F9 - Sta. 389+30 to 397+00 - Area	13	26-Sep-22	14-Oct-22
C520-2050	Install Sound Barrier Panels, Wall H7-H10 - Sta. 437+25 to 442+75 -	6	17-Oct-22	25-Oct-22
C520-2070	Install Sound Barrier Panels, Wall H11 - Sta. 443+15 to 452+30 - Are	9	27-Oct-22	11-Nov-22
C520-1230	Finish Milestone - Area 5, Stg 2	0		11-Nov-22
Stage 3		145	12-Nov-22	03-Aug-23
C530-1000	Start Milestone - Area 5, Stg 3	0	12-Nov-22	
C530-1010	Install MOT and Temp Signal - Area 5, Stg 3	5	14-Nov-22	21-Nov-22
C530-1020	Install E&S Control - Area 5, Stg 3	10	22-Nov-22	12-Dec-22
C530-2080	Install Sound Barrier Foundations, Wall I5 - Sta. 442+00 to 443+00 -	3	13-Dec-22	16-Dec-22
C530-1040	Demo & Clear ROW Area - Area 5, Stg 3	6	13-Dec-22	22-Dec-22
C530-1030	Demo Exist Rdwy (Partial) - Area 5, Stg 3	10	13-Dec-22	30-Dec-22
C530-1060	Construct Retaining Wall - Area 5, Stg 3	20	03-Jan-23	06-Feb-23
C530-1050	Excavate and Embank - Area 5, Stg 3	30	03-Jan-23	23-Feb-23
C530-1080	Install Drainage - Area 5, Stg 3	30	20-Jan-23	13-Mar-23
C530-2040	Install Sound Barrier Foundations, Wall I1-I3 - Sta. 421+40 to 436+4	35	30-Jan-23	30-Mar-23
C530-2000	Install Sound Barrier Foundations, Wall G12 - Sta. 384+75 to 395+7	25	07-Feb-23	21-Mar-23
C530-1100	Construct Subbase - Area 5, Stg 3	15	14-Mar-23	07-Apr-23
C530-1090	Construct SWM Facilities - Area 5, Stg 3	10	14-Mar-23	30-Mar-23
C530-2020	Install Sound Barrier Foundations, Wall G13 - Sta. 396+52 to 400+4	9	22-Mar-23	06-Apr-23
C530-1110	Install ITS and Elect Conduits - Area 5, Stg 3	25	22-Mar-23	04-May-23
C530-2060	Install Sound Barrier Foundations, Wall I4 - Sta. 437+60 to 441+60 -	10	31-Mar-23	17-Apr-23
C530-2100	Install Sound Barrier Foundations, Wall I6 - Sta. 444+58 to 448+60 -	10	07-Apr-23	25-Apr-23
C530-1140	Install Sign Foundations - Area 5, Stg 3	5	10-Apr-23	17-Apr-23
C530-1120	Install Underdrain - Area 5, Stg 3	10	10-Apr-23	26-Apr-23
C530-2120	Install Sound Barrier Foundations, Wall J1 - Sta. 450+00 to 452+20-	5	20-Apr-23	26-Apr-23
C530-2160	Install Sound Barrier Foundations, Wall J4 - Sta. 459+27 to 460+95-	4	26-Apr-23	01-May-23
C530-2140	Install Sound Barrier Foundations, Wall J2-J3 - Sta. 454+00 to 458+	11	27-Apr-23	16-May-23
C530-2180	Install Sound Barrier Foundations, Wall K1-K2 - Sta. 461+67 to 473+	27	02-May-23	20-Jun-23
C530-1150	Construct Base - Area 5, Stg 3	10	05-May-23	23-May-23
C530-1160	Install Curb & Gutter - Area 5, Stg 3	15	26-May-23	20-Jun-23
C530-1190	Construct SUP / Trail - Area 5, Stg 3	20	05-Jun-23	10-Jul-23
C530-2050	Install Sound Barrier Panels, Wall I1-I3 - Sta. 421+40 to 436+42 - Ar	6	13-Jun-23	21-Jun-23
C530-2010	Install Sound Barrier Panels, Wall G12 - Sta. 384+75 to 395+75 - Ar	10	13-Jun-23	29-Jun-23
C530-1170	AC Paving - Area 5, Stg 3	6	21-Jun-23	30-Jun-23
C530-2070	Install Sound Barrier Panels, Wall I4 - Sta. 437+60 to 441+60 - Area	5	23-Jun-23	30-Jun-23
C530-2030	Install Sound Barrier Panels, Wall G13 - Sta. 396+52 to 400+40 - Ar	4	30-Jun-23	07-Jul-23
C530-2090	Install Sound Barrier Panels, Wall I5 - Sta. 442+00 to 443+00 - Area	2	03-Jul-23	05-Jul-23
C530-1230	Install Guardrail - Area 5, Stg 3	5	03-Jul-23	11-Jul-23
C530-1220	Install Sign Structure - Area 5, Stg 3	5	03-Jul-23	11-Jul-23
C530-1210	Install Lighting / ITS - Area 5, Stg 3	15	03-Jul-23	28-Jul-23



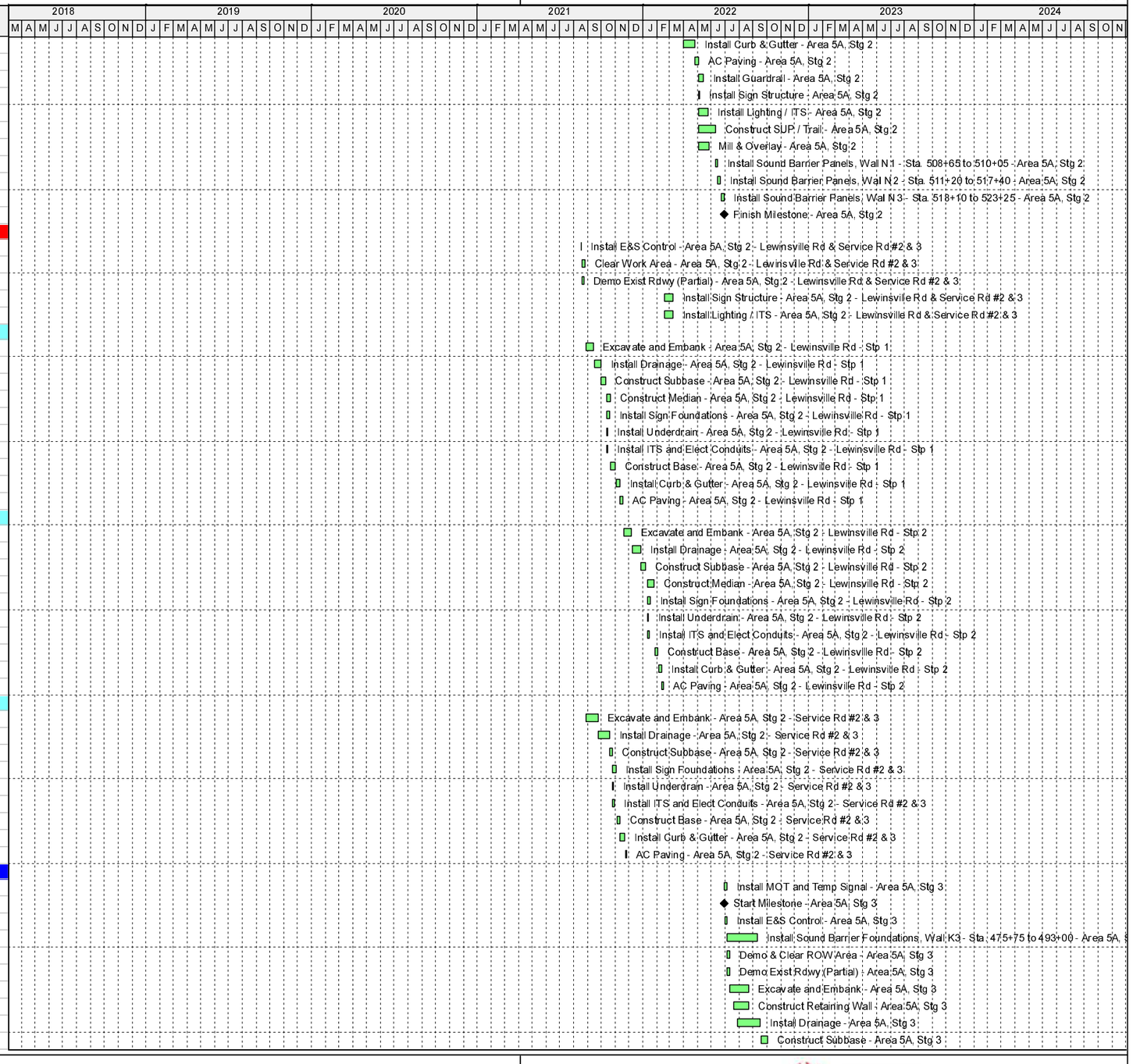
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C530-1180	Mill & Overlay - Area 5, Stg 3	10	03-Jul-23	19-Jul-23
C530-2190	Install Sound Barrier Panels, Wall K1-K2 - Sta. 461+67 to 473+21 - A	13	07-Jul-23	28-Jul-23
C530-2110	Install Sound Barrier Panels, Wall I6 - Sta. 444+58 to 448+60 - Area	5	10-Jul-23	17-Jul-23
C530-2130	Install Sound Barrier Panels, Wall J1 - Sta. 450+00 to 452+20 - Area	3	18-Jul-23	21-Jul-23
C530-2150	Install Sound Barrier Panels, Wall J2-J3 - Sta. 454+00 to 458+60 - A	6	24-Jul-23	01-Aug-23
C530-2170	Install Sound Barrier Panels, Wall J4 - Sta. 459+27 to 460+95 - Area	2	02-Aug-23	03-Aug-23
C530-1240	Finish Milestone - Area 5, Stg 3	0		03-Aug-23
Stage 4		122	04-Aug-23	10-Mar-24
C540-1010	Install MOT and Temp Signal - Area 5, Stg 4	10	04-Aug-23	21-Aug-23
C540-1000	Start Milestone - Area 5, Stg 4	0	04-Aug-23	
C540-1020	Install E&S Control - Area 5, Stg 4	3	17-Aug-23	21-Aug-23
C540-1050	Earthwork - Area 5, Stg 4	5	22-Aug-23	29-Aug-23
C540-1030	Demo Temp Pavement - Area 5, Stg 4	3	22-Aug-23	25-Aug-23
C540-1040	Install Drainage - Area 5, Stg 4	5	30-Aug-23	07-Sep-23
C540-1055	Stabilized Subbase - Area 5, Stg 4	10	08-Sep-23	25-Sep-23
C540-1070	Construct Median - Area 5, Stg 4	15	26-Sep-23	19-Oct-23
C540-1060	Construct Base - Area 5, Stg 4	10	12-Oct-23	27-Oct-23
C540-1080	AC Paving - Area 5, Stg 4	6	30-Oct-23	08-Nov-23
C540-1110	Install Bus Stop & Sign Structure - Area 5, Stg 4	20	09-Nov-23	18-Dec-23
C540-1100	Install Lighting / ITS - Area 5, Stg 4	35	09-Nov-23	15-Jan-24
C540-1090	Install Signals - Area 5, Stg 4	30	09-Nov-23	05-Jan-24
C540-1130	Testing and Acceptence Signals with VDOT - Area 5, Stg 4	15	08-Jan-24	01-Feb-24
C540-1140	Testing and Acceptence Lighting / ITS with VDOT - Area 5, Stg 4	15	16-Jan-24	09-Feb-24
C540-1150	30-Days Burn-In Period for Lighting / ITS - Area 5, Stg 4	30	10-Feb-24	10-Mar-24
C540-1120	Finish Milestone - Area 5, Stg 4	0		10-Mar-24
Area 5A - Sta 474+50 to 526+50		688	11-May-20	28-Sep-23
C500A1000	Start Construction - Area 5A	0	11-May-20	
C500A1010	Complete Construction - Area 5A	0		28-Sep-23
Stage 1		108	11-May-20	16-Nov-20
C510A1010	Install MOT, and Temp Signal - Area 5A, Stg 1	5	11-May-20	21-May-20
C510A1000	Start Milestone - Area 5A, Stg 1	0	11-May-20	
C510A1020	Install E&S Control - Area 5A, Stg 1	5	22-May-20	01-Jun-20
C510A1030	Demo Exist Rdwy (Partial) - Area 5A, Stg 1	8	02-Jun-20	12-Jun-20
C510A1040	Excavate and Embank - Area 5A, Stg 1	12	15-Jun-20	06-Jul-20
C510A1050	Install Drainage - Area 5A, Stg 1	18	07-Jul-20	06-Aug-20
C510A1060	Construct Subbase + Stabilized Subgrade - Area 5A, Stg 1	25	07-Aug-20	17-Sep-20
C510A1080	Install Underdrain - Area 5A, Stg 1	12	18-Sep-20	07-Oct-20
C510A1070	Install ITS and Elect Conduits - Area 5A, Stg 1	15	18-Sep-20	12-Oct-20
C510A1090	Construct Base - Area 5A, Stg 1	7	13-Oct-20	23-Oct-20
C510A1100	AC Paving - Area 5A, Stg 1	5	26-Oct-20	02-Nov-20
C510A1140	Mill-and-Overlay - Area 5A, Stg 1	8	03-Nov-20	16-Nov-20
C510A1120	Install Lighting / ITS - Area 5A, Stg 1	5	03-Nov-20	11-Nov-20
C510A1130	Finish Milestone - Area 5A, Stg 1	0		16-Nov-20
Stage 2		176	17-Aug-21	29-Jun-22
C520A1010	Install MOT and Temp Signal - Area 5A, Stg 2	8	17-Aug-21	27-Aug-21
C520A1000	Start Milestone - Area 5A, Stg 2	0	17-Aug-21	
C520A1020	Install E&S Control - Area 5A, Stg 2	6	30-Aug-21	09-Sep-21
C520A3000	Install Sound Barrier Foundations, Wall N1 - Sta. 508+65 to 510+05	4	10-Sep-21	15-Sep-21
C520A1040	Clear & Grub - Area 5A, Stg 2	15	10-Sep-21	04-Oct-21
C520A1030	Demo Exist Rdwy (Partial) - Area 5A, Stg 2	8	10-Sep-21	23-Sep-21
C520A1050	Excavate and Embank - Area 5A, Stg 2	30	05-Oct-21	26-Nov-21
C520A1060	Construct Retaining Wall - Area 5A, Stg 2	30	22-Oct-21	16-Dec-21
C520A3020	Install Sound Barrier Foundations, Wall N2 - Sta. 511+20 to 517+40	15	29-Nov-21	27-Dec-21
C520A1070	Install Drainage - Area 5A, Stg 2	25	29-Nov-21	14-Jan-22
C520A3040	Install Sound Barrier Foundations, Wall N3 - Sta. 518+10 to 523+25	12	28-Dec-21	18-Jan-22
C520A1080	Construct Subbase - Area 5A, Stg 2	15	17-Jan-22	08-Feb-22
C520A1120	Install Sign Foundations - Area 5A, Stg 2	5	10-Feb-22	17-Feb-22
C520A1100	Install Underdrain - Area 5A, Stg 2	8	10-Feb-22	24-Feb-22
C520A1090	Install ITS and Elect Conduits - Area 5A, Stg 2	15	10-Feb-22	08-Mar-22
C520A1130	Construct Base - Area 5A, Stg 2	12	10-Mar-22	30-Mar-22



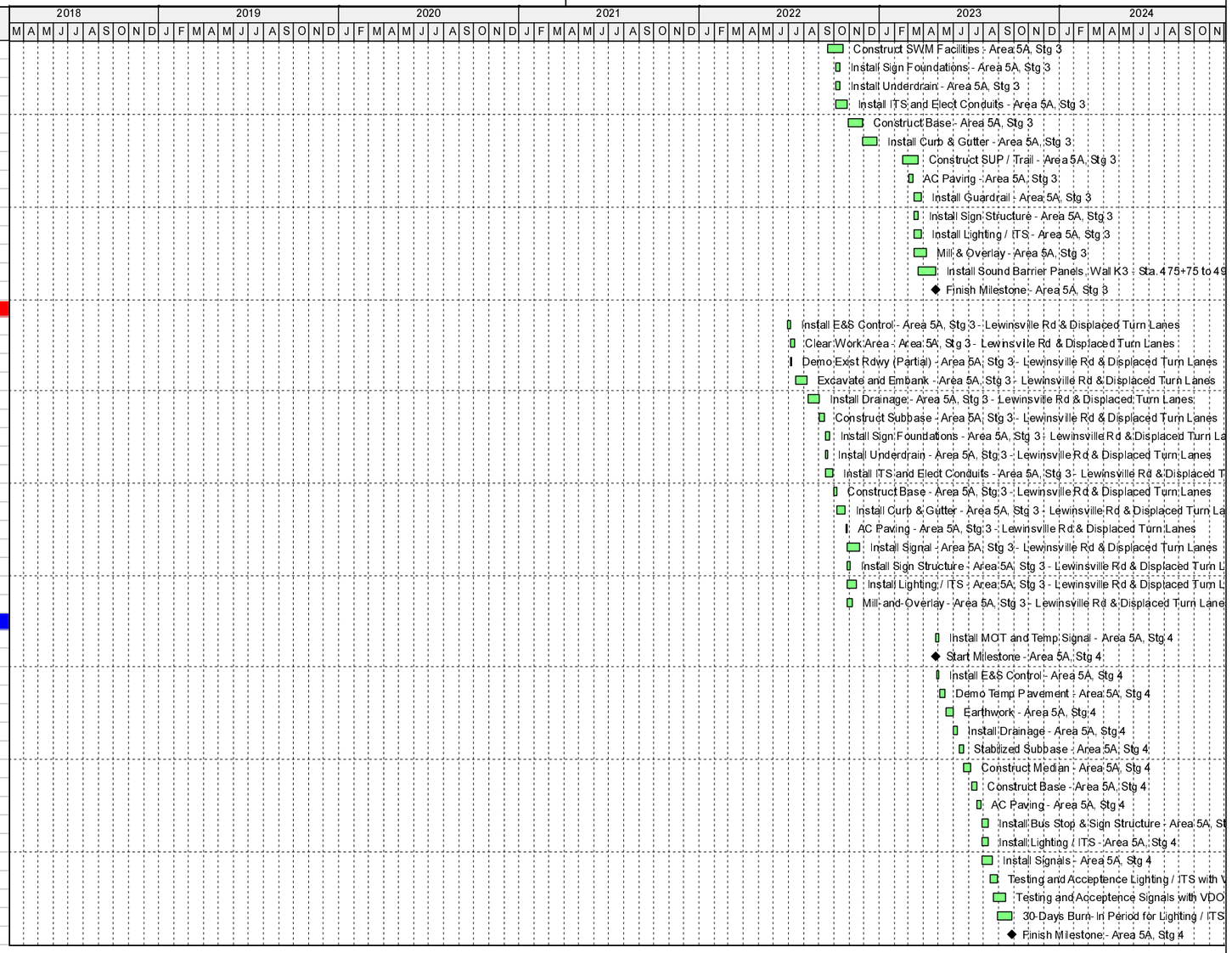
Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C520A1140	Install Curb & Gutter - Area 5A, Stg 2	15	31-Mar-22	25-Apr-22
C520A1150	AC Paving - Area 5A, Stg 2	5	26-Apr-22	03-May-22
C520A1210	Install Guardrail - Area 5A, Stg 2	5	04-May-22	13-May-22
C520A1200	Install Sign Structure - Area 5A, Stg 2	2	04-May-22	06-May-22
C520A1190	Install Lighting / ITS - Area 5A, Stg 2	10	04-May-22	24-May-22
C520A1170	Construct SUP / Trail - Area 5A, Stg 2	18	04-May-22	09-Jun-22
C520A1160	Mill & Overlay - Area 5A, Stg 2	12	04-May-22	27-May-22
C520A3010	Install Sound Barrier Panels, Wall N1 - Sta. 508+65 to 510+05 - Area	2	10-Jun-22	13-Jun-22
C520A3030	Install Sound Barrier Panels, Wall N2 - Sta. 511+20 to 517+40 - Area	5	14-Jun-22	21-Jun-22
C520A3050	Install Sound Barrier Panels, Wall N3 - Sta. 518+10 to 523+25 - Area	5	23-Jun-22	29-Jun-22
C520A1220	Finish Milestone - Area 5A, Stg 2	0		29-Jun-22
Lewinsville Rd & Service Rd #2 & 3		113	17-Aug-21	07-Mar-22
C520A2000	Install E&S Control - Area 5A, Stg 2 - Lewinsville Rd & Service Rd #2	2	17-Aug-21	18-Aug-21
C520A2020	Clear Work Area - Area 5A, Stg 2 - Lewinsville Rd & Service Rd #2 &	5	20-Aug-21	26-Aug-21
C520A2010	Demo Exist Rdwy (Partial) - Area 5A, Stg 2 - Lewinsville Rd & Servic	3	20-Aug-21	24-Aug-21
C520A2330	Install Sign Structure - Area 5A, Stg 2 - Lewinsville Rd & Service Rd	10	17-Feb-22	07-Mar-22
C520A2320	Install Lighting / ITS - Area 5A, Stg 2 - Lewinsville Rd & Service Rd #	10	17-Feb-22	07-Mar-22
Lewinsville Rd Step 1		47	27-Aug-21	18-Nov-21
C520A2030	Excavate and Embank - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	10	27-Aug-21	14-Sep-21
C520A2040	Install Drainage - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	10	15-Sep-21	30-Sep-21
C520A2050	Construct Subbase - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	6	01-Oct-21	11-Oct-21
C520A2090	Construct Median - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	6	12-Oct-21	21-Oct-21
C520A2080	Install Sign Foundations - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	5	12-Oct-21	19-Oct-21
C520A2070	Install Underdrain - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	2	12-Oct-21	14-Oct-21
C520A2060	Install ITS and Elect Conduits - Area 5A, Stg 2 - Lewinsville Rd - Stp	3	12-Oct-21	15-Oct-21
C520A2100	Construct Base - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	6	22-Oct-21	01-Nov-21
C520A2110	Install Curb & Gutter - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	5	02-Nov-21	11-Nov-21
C520A2120	AC Paving - Area 5A, Stg 2 - Lewinsville Rd - Stp 1	4	12-Nov-21	18-Nov-21
Lewinsville Rd Step 2		49	19-Nov-21	15-Feb-22
C520A2130	Excavate and Embank - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	10	19-Nov-21	06-Dec-21
C520A2140	Install Drainage - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	10	09-Dec-21	27-Dec-21
C520A2150	Construct Subbase - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	6	28-Dec-21	07-Jan-22
C520A2190	Construct Median - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	10	10-Jan-22	25-Jan-22
C520A2180	Install Sign Foundations - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	5	10-Jan-22	17-Jan-22
C520A2170	Install Underdrain - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	3	10-Jan-22	13-Jan-22
C520A2160	Install ITS and Elect Conduits - Area 5A, Stg 2 - Lewinsville Rd - Stp	4	10-Jan-22	14-Jan-22
C520A2200	Construct Base - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	6	27-Jan-22	03-Feb-22
C520A2210	Install Curb & Gutter - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	4	04-Feb-22	10-Feb-22
C520A2220	AC Paving - Area 5A, Stg 2 - Lewinsville Rd - Stp 2	3	11-Feb-22	15-Feb-22
Service Rd #2 & 3		52	27-Aug-21	26-Nov-21
C520A2230	Excavate and Embank - Area 5A, Stg 2 - Service Rd #2 & 3	15	27-Aug-21	23-Sep-21
C520A2240	Install Drainage - Area 5A, Stg 2 - Service Rd #2 & 3	15	24-Sep-21	18-Oct-21
C520A2250	Construct Subbase - Area 5A, Stg 2 - Service Rd #2 & 3	4	19-Oct-21	25-Oct-21
C520A2280	Install Sign Foundations - Area 5A, Stg 2 - Service Rd #2 & 3	5	26-Oct-21	02-Nov-21
C520A2270	Install Underdrain - Area 5A, Stg 2 - Service Rd #2 & 3	2	26-Oct-21	28-Oct-21
C520A2260	Install ITS and Elect Conduits - Area 5A, Stg 2 - Service Rd #2 & 3	3	26-Oct-21	29-Oct-21
C520A2290	Construct Base - Area 5A, Stg 2 - Service Rd #2 & 3	4	05-Nov-21	11-Nov-21
C520A2300	Install Curb & Gutter - Area 5A, Stg 2 - Service Rd #2 & 3	6	12-Nov-21	22-Nov-21
C520A2310	AC Paving - Area 5A, Stg 2 - Service Rd #2 & 3	3	23-Nov-21	26-Nov-21
Stage 3		167	30-Jun-22	25-Apr-23
C530A1010	Install MOT and Temp Signal - Area 5A, Stg 3	3	30-Jun-22	05-Jul-22
C530A1000	Start Milestone - Area 5A, Stg 3	0	30-Jun-22	
C530A1020	Install E&S Control - Area 5A, Stg 3	2	01-Jul-22	05-Jul-22
C530A2000	Install Sound Barrier Foundations, Wall K3 - Sta. 475+75 to 493+00	40	06-Jul-22	09-Sep-22
C530A1040	Demo & Clear ROW Area - Area 5A, Stg 3	3	06-Jul-22	11-Jul-22
C530A1030	Demo Exist Rdwy (Partial) - Area 5A, Stg 3	3	06-Jul-22	11-Jul-22
C530A1050	Excavate and Embank - Area 5A, Stg 3	25	12-Jul-22	22-Aug-22
C530A1060	Construct Retaining Wall - Area 5A, Stg 3	20	20-Jul-22	22-Aug-22
C530A1070	Install Drainage - Area 5A, Stg 3	30	29-Jul-22	16-Sep-22
C530A1090	Construct Subbase - Area 5A, Stg 3	10	19-Sep-22	03-Oct-22



Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

Activity ID	Activity Name	Original Duration	Start	Finish
C530A1080	Construct SWM Facilities - Area 5A, Stg 3	20	19-Sep-22	19-Oct-22
C530A1120	Install Sign Foundations - Area 5A, Stg 3	6	05-Oct-22	13-Oct-22
C530A1110	Install Underdrain - Area 5A, Stg 3	6	05-Oct-22	13-Oct-22
C530A1100	Install ITS and Elect Conduits - Area 5A, Stg 3	15	05-Oct-22	28-Oct-22
C530A1130	Construct Base - Area 5A, Stg 3	15	31-Oct-22	28-Nov-22
C530A1140	Install Curb & Gutter - Area 5A, Stg 3	15	29-Nov-22	28-Dec-22
C530A1170	Construct SUP / Trail - Area 5A, Stg 3	18	17-Feb-23	20-Mar-23
C530A1150	AC Paving - Area 5A, Stg 3	6	02-Mar-23	10-Mar-23
C530A1200	Install Guardrail - Area 5A, Stg 3	10	13-Mar-23	28-Mar-23
C530A1190	Install Sign Structure - Area 5A, Stg 3	5	13-Mar-23	20-Mar-23
C530A1180	Install Lighting / ITS - Area 5A, Stg 3	10	13-Mar-23	28-Mar-23
C530A1160	Mill & Overlay - Area 5A, Stg 3	15	13-Mar-23	06-Apr-23
C530A2010	Install Sound Barrier Panels, Wall K3 - Sta.475+75 to 493+00 - Area	20	21-Mar-23	25-Apr-23
C530A1210	Finish Milestone - Area 5A, Stg 3	0		25-Apr-23
Lewinsville Rd & Displaced Turn Lanes		**84**	**30-Jun-22**	**22-Nov-22**
C530A2020	Install E&S Control - Area 5A, Stg 3 - Lewinsville Rd & Displaced Tur	3	30-Jun-22	05-Jul-22
C530A2040	Clear Work Area - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn	5	06-Jul-22	14-Jul-22
C530A2030	Demo Exist Rdwy (Partial) - Area 5A, Stg 3 - Lewinsville Rd & Displa	2	06-Jul-22	08-Jul-22
C530A2050	Excavate and Embank - Area 5A, Stg 3 - Lewinsville Rd & Displaced	15	15-Jul-22	08-Aug-22
C530A2060	Install Drainage - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn L	15	09-Aug-22	01-Sep-22
C530A2070	Construct Subbase - Area 5A, Stg 3 - Lewinsville Rd & Displaced Tu	6	02-Sep-22	12-Sep-22
C530A2100	Install Sign Foundations - Area 5A, Stg 3 - Lewinsville Rd & Displace	5	15-Sep-22	22-Sep-22
C530A2090	Install Underdrain - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn	3	15-Sep-22	19-Sep-22
C530A2080	Install ITS and Elect Conduits - Area 5A, Stg 3 - Lewinsville Rd & Dis	10	15-Sep-22	29-Sep-22
C530A2110	Construct Base - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn L	4	30-Sep-22	06-Oct-22
C530A2120	Install Curb & Gutter - Area 5A, Stg 3 - Lewinsville Rd & Displaced T	10	07-Oct-22	24-Oct-22
C530A2130	AC Paving - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn Lanes	2	25-Oct-22	27-Oct-22
C530A2170	Install Signal - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn Lan	14	28-Oct-22	22-Nov-22
C530A2160	Install Sign Structure - Area 5A, Stg 3 - Lewinsville Rd & Displaced T	5	28-Oct-22	04-Nov-22
C530A2150	Install Lighting / ITS - Area 5A, Stg 3 - Lewinsville Rd & Displaced Tu	10	28-Oct-22	15-Nov-22
C530A2140	Mill-and-Overlay - Area 5A, Stg 3 - Lewinsville Rd & Displaced Turn	6	28-Oct-22	07-Nov-22
Stage 4		**89**	**26-Apr-23**	**28-Sep-23**
C540A1010	Install MOT and Temp Signal - Area 5A, Stg 4	5	26-Apr-23	02-May-23
C540A1000	Start Milestone - Area 5A, Stg 4	0	26-Apr-23	
C540A1020	Install E&S Control - Area 5A, Stg 4	4	27-Apr-23	02-May-23
C540A1030	Demo Temp Pavement - Area 5A, Stg 4	6	04-May-23	15-May-23
C540A1050	Earthwork - Area 5A, Stg 4	8	16-May-23	31-May-23
C540A1040	Install Drainage - Area 5A, Stg 4	6	01-Jun-23	09-Jun-23
C540A1055	Stabilized Subbase - Area 5A, Stg 4	6	12-Jun-23	20-Jun-23
C540A1070	Construct Median - Area 5A, Stg 4	8	21-Jun-23	05-Jul-23
C540A1060	Construct Base - Area 5A, Stg 4	6	07-Jul-23	17-Jul-23
C540A1080	AC Paving - Area 5A, Stg 4	6	18-Jul-23	27-Jul-23
C540A1110	Install Bus Stop & Sign Structure - Area 5A, Stg 4	10	28-Jul-23	11-Aug-23
C540A1100	Install Lighting / ITS - Area 5A, Stg 4	10	28-Jul-23	11-Aug-23
C540A1090	Install Signals - Area 5A, Stg 4	14	28-Jul-23	18-Aug-23
C540A1140	Testing and Acceptence Lighting / ITS with VDOT - Area 5A, Stg 4	10	14-Aug-23	29-Aug-23
C540A1130	Testing and Acceptence Signals with VDOT - Area 5A, Stg 4	15	21-Aug-23	14-Sep-23
C540A1150	30-Days Burn-In Period for Lighting / ITS - Area 5A, Stg 4	30	30-Aug-23	28-Sep-23
C540A1120	Finish Milestone - Area 5A, Stg 4	0		28-Sep-23



Remaining Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

APPENDIX

ATTACHMENT 4.0.1.1
TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

ATTACHMENT 4.0.1.1

Route 7 Corridor Improvements – Request for Revised Proposals

REVISED TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

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

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Revised 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		Pages 1 & 2
Letter of Submittal on Offeror's letterhead	NA	Section 4.1.1	yes	Pages 1
Identify the full legal name and address of Offeror	NA	Section 4.1.1	yes	Page 1
Authorized representative's original signature	NA	Section 4.1.1	yes	Page 2
Declaration of intent	NA	Section 4.1.2	yes	Page 1
120 day declaration	NA	Section 4.1.3	yes	Page 1
Point of Contact information	NA	Section 4.1.4	yes	Page 1
Principal Officer information	NA	Section 4.1.5	yes	Page 2
Final Completion Date	NA	Section 4.1.6	yes	Page 2
Unique Milestone Date (if applicable)	NA	Section 4.1.7	yes	Page 2
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

ATTACHMENT 4.0.1.1

Route 7 Corridor Improvements – Request for Revised Proposals

REVISED TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Written statement of percent DBE participation	NA	Section 4.1.10	yes	Page 2
Offeror's Qualifications	NA	Section 4.2		Pages 3-4
Confirmation that the information provided in the SOQ submittal remains true and accurate or indicates that any requested changes were previously approved by VDOT	NA	Section 4.2.1	yes	Page 3
Organizational chart with any updates since the SOQ submittal clearly identified	NA	Section 4.2.2	yes	Page 4
Revised narrative when organizational chart includes updates since the SOQ submittal	NA	Section 4.2.2	yes	Page 3
Design Concept	NA	Section 4.3		Pages 5-20
Conceptual Roadway Plans and description	NA	Section 4.3.1	yes	Pages 6-16 Vol II – Pages 1-38
Conceptual Structural Plans and description – Route 7 Bridge over Difficult Run	NA	Section 4.3.2	yes	Pages 16-18 Vol II - Pages 39-43
Conceptual ~~Structural~~ Intersection Plans and description – Route 7 & Baron Cameron Ave/Springvale Road ~~GSI~~At-Grade Intersection	NA	Section 4.3.3	yes	Pages 18-20 Vol II - Page 44
Project Approach	NA	Section 4.4		Pages 21-45
Environmental Management	NA	Section 4.4.1	yes	Pages 21-29
Utilities	NA	Section 4.4.2	yes	Pages 29-36

ATTACHMENT 4.0.1.1

Route 7 Corridor Improvements – Request for Revised Proposals

REVISED TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Washington Gas Transmission Line	NA	Section 4.4.3	yes	Pages 36-37
Stakeholders Communications	NA	Section 4.4.4	yes	Pages 37-41
Right-of-Way Management	NA	Section 4.4.5	yes	Pages 41-45
Construction of Project	NA	Section 4.5		Pages 46-70
Sequence of Construction	NA	Section 4.5.1	yes	Pages 46-52
Transportation Management Plan	NA	Section 4.5.2	yes	Pages 52-70
Proposal Schedule	NA	Section 4.6		S1-34
Proposal Schedule	NA	Section 4.6	no	S15-34
Proposal Schedule Narrative	NA	Section 4.6	no	S1-S14
Proposal Schedule in electronic format (CD-ROM)	NA	Section 4.6	no	CD ROM

ATTACHMENT 3.6
FORM C-78-RFP

ATTACHMENT 3.6

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFP NO. C00099478DB98

PROJECT NO.: 0007-029-942 and 0007-029-225

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 3.6, 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:

Note: Offeror previously acknowledged receipt of original RFP dated November 21, 2017 through RFP Addendum No. 5 dated March 19, 2018.

7. Cover letter of Request for Revised Proposal – June 1, 2018
(Date)

SIGNATURE

June 19, 2018
DATE

Richard A. McDonough
PRINTED NAME

Senior District Manager
TITLE

ATTACHMENT 9.3.1.
PROPOSAL PAYMENT AGREEMENT

ATTACHMENT 9.3.1
PROPOSAL PAYMENT AGREEMENT

THIS PROPOSAL PAYMENT AGREEMENT (this "Agreement") is made and entered into as of this 19th day of June, 2018, by and between the Virginia Department of Transportation ("VDOT"), and LANE-Wagman, A Joint Venture ("Offeror").

WITNESSETH:

WHEREAS, Offeror is one of the entities who submitted Statements of Qualifications ("SOQs") pursuant to VDOT's August 15, 2017 Request for Qualifications ("RFQ") and was invited to submit proposals in response to a Request for Proposals ("RFP") for the Route 7 Corridor Improvements, **Project Nos. 0007-029-942 and 0007-029-225** ("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 ~~Ninety~~ One Hundred Thirty Five **Thousand and 00/100 Dollars ($~~90~~135,000.00)** ("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: _____

LANE-Wagman, A Joint Venture

By: _____

Name: Richard A. McDonough

Title: Senior District Manager

ATTACHMENT 11.8.6(A)
CERTIFICATION OF DEBARMENT FORMS

ATTACHMENT 11.8.6(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project Nos.: 0007-029-942 and 0007-029-225

1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and

d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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

Signature	March 12, 2018 Date	Senior District Manager Title

The Lane Construction Corporation
Name of Firm

ATTACHMENT 11.8.6(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project Nos.: 0007-029-942 and 0007-029-225

1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and

d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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

Signature	March 12, 2018	Vice President
	Date	Title

Wagman Heavy Civil, Inc.
Name of Firm

ATTACHMENT 11.8.6(B)
CERTIFICATION OF DEBARMENT FORMS

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

Project Nos.: 0007-029-942 and 0007-029-225

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.

March 9, 2018 — DIRECTOR, TRANSPORTATION

Signature — Date — Title

Rummel, Klepper & Kahl, LLP

Name of Firm

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

Project Nos.: 0007-029-942 and 0007-029-225

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.

February 26, 2018 — Date

President / COO — Title

Rinker Design Associates, P.C.
Name of Firm

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

Project Nos.: 0007-029-942 and 0007-029-225

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	February 26, 2018 Date	VP of Business Development Title

DIW Group, Inc. t/a Specialized Engineering
Name of Firm

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

Project Nos.: 0007-029-942 and 0007-029-225

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.

February 26, 2018 — Vice President

Signature — Date — Title

DMY Engineering Consultants Inc.

Name of Firm

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

Project Nos.: 0007-029-942 and 0007-029-225

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.

Elizabeth W. Quinn February 26, 2018 President
Signature Date Title

Quinn Consulting Services, Inc.
Name of Firm

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

Project Nos.: 0007-029-942 and 0007-029-225

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.

Deana D. Rhodeside February 26, 2018 Director
Signature Date Title

Rhodeside & Harwell
Name of Firm

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

Project Nos.: 0007-029-942 and 0007-029-225

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.

Alexandra Boos Undeland — February 26, 2018 — President

Signature Date Title

Undeland Associates

Name of Firm

LANE WAGMAN

General Construction | Heavy Civil | Geotechnical

14500 AVION PARKWAY
SUITE 200
CHANTILLY, VA 20151
703.222.5670

ORIGINAL

REVISED TECHNICAL PROPOSAL - VOLUME II

ROUTE 7 CORRIDOR IMPROVEMENTS

FROM: RESTON AVENUE
TO: JARRET VALLEY DRIVE

FAIRFAX COUNTY, VIRGINIA

STATE PROJECT NOS.: 0007-029-942 AND 0007-029-225
FEDERAL PROJECT NOS.: STP-5A01(745) AND STP-5A01(790)
CONTRACT ID NUMBER: C00099478DB98

JUNE 19, 2018

PREPARED FOR:

VDOT

SUBMITTED BY:

LANE WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE-Wagman, A Joint Venture

4.3.1 CONCEPTUAL ROADWAY PLANS

CONCEPTUAL ROADWAY PLANS

THE LANE-WAGMAN TEAM'S TECHNICAL PROPOSAL MEETS OR EXCEEDS ALL REQUIREMENTS LISTED IN THE DESIGN CRITERIA ATTACHMENT 2.2(A) AND PRESCRIPTIVE DESIGN ELEMENTS ATTACHMENT 2.2(B). THE LIMITS OF CONSTRUCTION TO INCLUDE ALL STORMWATER MANAGEMENT FACILITIES ARE WITHIN THE EXISTING/PROPOSED RIGHT-OF-WAY LIMITS SHOWN IN THE RFP CONCEPTUAL PLANS. THE PROPOSED DESIGN CONCEPT DOES NOT INCLUDE DESIGN ELEMENTS THAT REQUIRE DESIGN EXCEPTIONS AND/OR DESIGN WAIVERS EXCEPT THOSE IDENTIFIED IN THE RFP OR ADDENDUM.

THE CONCEPTUAL ROAD PLANS MEET ALL THE REQUIREMENTS ESTABLISHED IN THE RFP.

AS REQUESTED IN SECTION 4.3.1, THE CONCEPTUAL ROAD PLANS IDENTIFY:

A. GENERAL GEOMETRY INCLUDING HORIZONTAL CURVE DATA AND ASSOCIATED DESIGN SPEEDS, THE NUMBER AND WIDTHS OF LANES, SHOULDERS AND SHARED USE PATHS. (SEE TYPICAL SECTIONS 2(1) - 2(9) AND PLAN SHEETS 3 - 30)
B. HORIZONTAL ALIGNMENTS (SEE PLAN SHEETS 3 - 30)
C. MAXIMUM GRADES FOR ALL SEGMENTS AND CONNECTORS (SEE TABLE THIS SHEET)
D. TYPICAL SECTIONS OF THE ROADWAY SEGMENTS TO INCLUDE SHARED USE PATHS, RETAINING WALLS AND BRIDGE STRUCTURES, PEDESTRIAN UNDERPASS, STREAM RELOCATION DIVERSION CHANNEL (SEE TYPICAL SECTIONS 2(1) - 2(9))
E. CONCEPTUAL HYDRAULIC AND STORMWATER MANAGEMENT DESIGN (SEE PLAN SHEETS 3 - 30)
F. PROPOSED RIGHT OF WAY LIMITS (TO INCLUDE ALL EASEMENTS, EXCEPT UTILITY EASEMENTS) AND VDOT'S RFP CONCEPTUAL RIGHT OF WAY LIMITS (TO INCLUDE ALL EASEMENTS, EXCEPT UTILITY EASEMENTS), HIGHLIGHTING THE DIFFERENCES BETWEEN THE TWO, AND CLEARLY IDENTIFYING ALL FEE SIMPLE RIGHT OF WAY, PERMANENT EASEMENTS, AND TEMPORARY EASEMENTS (SEE PLAN SHEETS 3 - 30)
G. PROPOSED UTILITY IMPACTS (SEE PLAN SHEETS 3 - 30)
H. NOISE BARRIER LOCATIONS (SEE PLAN SHEETS 3 - 30)
I. ANY OTHER KEY PROJECT FEATURES (SEE PLAN SHEETS 3 - 31)

THE CONCEPTUAL STRUCTURAL PLANS MEET ALL THE REQUIREMENTS ESTABLISHED IN THE RFP.

AS REQUESTED IN SECTION 4.3.2, THE CONCEPTUAL STRUCTURAL PLAN - ROUTE 7 BRIDGE OVER DIFFICULT RUN IDENTIFIES:

A. DESCRIPTION AND STRUCTURAL CONCEPT FOR THE BRIDGE STRUCTURES
B. RETAINING WALLS
C. MAJOR DRAINAGE STRUCTURES PROPOSED
D. RENDERINGS OF AN ELEVATION VIEW, TRANSVERSE SECTION, AND ABUTMENT SUBSTRUCTURE CONFIGURATIONS OF THE PROPOSED STRUCTURE

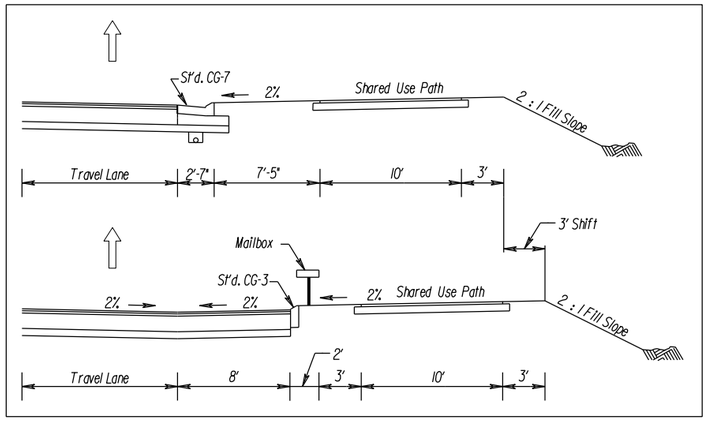
AS REQUESTED IN SECTION 4.3.3, THE CONCEPTUAL STRUCTURAL PLAN - ROUTE 7 & BARON CAMERON AVENUE/SPRINGVALE ROAD GRADE SEPARATED INTERCHANGE IDENTIFIES:

A. DESCRIPTION AND STRUCTURAL PLANS FOR THE BRIDGE
B. RETAINING WALLS
C. PERMANENT AND/OR TEMPORARY SHORING
D. MAJOR DRAINAGE STRUCTURES PROPOSED
E. RENDERINGS OF AN ELEVATION VIEW, TRANSVERSE SECTION, AND SUBSTRUCTURE CONFIGURATIONS OF THE PROPOSED STRUCTURE

Vertical Alignment Grade Data

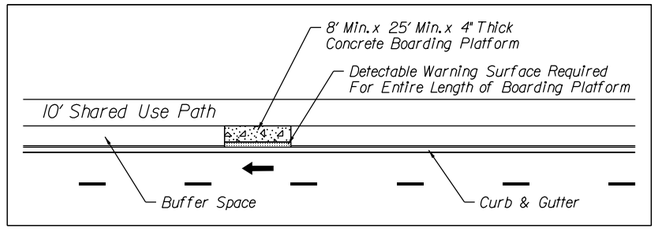
ALIGNMENT	MAX. GRADE %	ALLOWABLE GRADE %
RTE. 7 (WBR) FROM STA. 166+75 TO 478+00	6.0%	6%
RTE. 7 (EBR) FROM STA. 166+75 TO 478+00	4.4%	6%
RTE. 7 EB LANES AT BARON CAMERON UNDERPASS	3.5%	6%
RTE. 7 FROM STA. 478+00 TO 526+61	5.5%	7%
RESTON PARKWAY	3.8%	8%
UTTERBACK STORE ROAD	4.3%	10%
BISHOPSGATE WAY	4.8%	15%
GREAT PASSAGE BOULEVARD	6.5%	15%
MARKELL COURT	4.0%	15%
AMANDA DRIVE	1.6%	15%
RIVA RIDGE DRIVE	2.6%	15%
CRIPPEN VALE COURT	4.0%	15%
SPRINGVALE ROAD	4.3%	10%
BARON CAMERON AVENUE	3.0%	7%
BARON CAMERON (EXIT/ENTRANCE RAMP)	1.6%	5%
DOWNEY DRIVE	2.2%	15%
COLVIN RUN ROAD (W. INT.)	2.5%	10%
DELTA GLEN COURT	4.4%	15%
COLVIN FOREST DRIVE	8.7%	15%
COLVIN RUN ROAD (E. INT.)	2.7%	10%
CARPERS FARM WAY	2.7%	15%
FAULKNER DRIVE	1.7%	15%
MIDDLETON RIDGE ROAD	4.3%	15%
NEWCOMBS FARM ROAD	3.4%	15%
TROTTING HORSE LANE	4.0%	15%
BEULAH ROAD NE	2.6%	8%
FORESTVILLE DRIVE	4.3%	15%
ATWOOD ROAD	5.8%	15%
LYONS STREET	2.0%	15%
STOKLEY WAY	6.2%	15%
TOWLSTON ROAD (N. OF RTE. 7)	2.9%	10%
TOWLSTON ROAD (S. OF RTE. 7)	9.0%	9%
TRAP ROAD	6.9%	15%
LUCKY ESTATES DRIVE	2.2%	15%
ROYAL ESTATES DRIVE	3.3%	15%
WOLFTRAP RUN ROAD	3.7%	15%
BROOK ROAD	4.0%	11%
LEWINSVILLE ROAD	8.0%	8%
LAUREL HILL ROAD	4.0%	15%
OLD ASH GROVE ROAD	6.1%	15%
SERVICE ROADS #1	6.5%	15%
SERVICE ROADS #2	1.1%	15%
SERVICE ROADS #3	4.7%	15%
SERVICE ROADS #4	3.2%	15%
LEWINSVILLE ROAD/RTE. 7WB MERGE	2.8%	3%-5%
ROUTE 7 DISPLACED LEFT TURN LANE	2.9%	8%
SHARED USE PATH	5.0%	5%
SHAIN COURT	3.1%	NOT SPECIFIED
SHAIN COURT SERVICE ROAD	6.5%	NOT SPECIFIED
MCLEAN DRIVE #1	4.0%	NOT SPECIFIED
MCLEAN DRIVE #2	6.4%	NOT SPECIFIED

Typical Mailbox Turnout Detail



Where Required

Typical Bus Stop Boarding Platform Detail



BUS STOPS REQUIRING BOARDING PLATFORMS:

- BARON CAMERON AVENUE @ HUNTER GATE WAY
- LEESBURG PIKE @ DOWNEY DRIVE
- LEESBURG PIKE @ COLVIN RUN ROAD WEST
- LEESBURG PIKE @ COLVIN RUN ROAD EAST
- LEESBURG PIKE @ FAULKNER DRIVE
- LEESBURG PIKE @ MIDDLETON RIDGE ROAD
- LEESBURG PIKE @ FORESTVILLE DRIVE
- LEESBURG PIKE @ ATWOOD ROAD
- LEESBURG PIKE @ STOKLEY WAY
- LEESBURG PIKE @ TOWLSTON ROAD
- LEESBURG PIKE @ WOLFTRAP RUN ROAD
- LEESBURG PIKE @ LEWINSVILLE ROAD

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM

RK&K
rda

STATE PROJECT NUMBERS

0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER
1

PAGE NUMBER
Page 1

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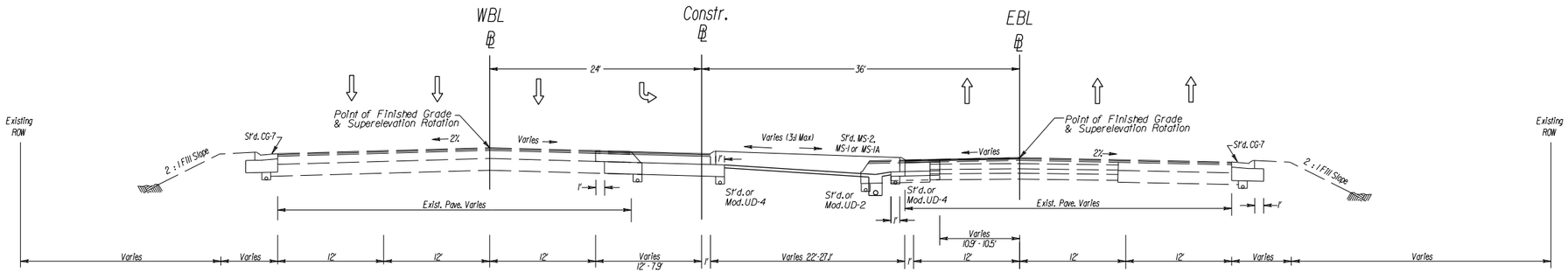
3/7/2018

CONCEPTUAL ROADWAY PLANS

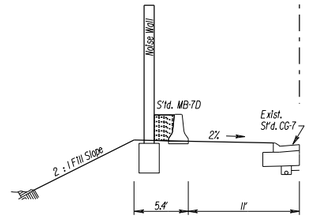
TYPICAL SECTIONS ROUTE 7

Note: Unless Otherwise Shown, All Stations Are Referenced Off Of Route 7 Construction Baseline.

Route 7
(GS-5, Other Principal Arterial, 60 MPH Design Speed)

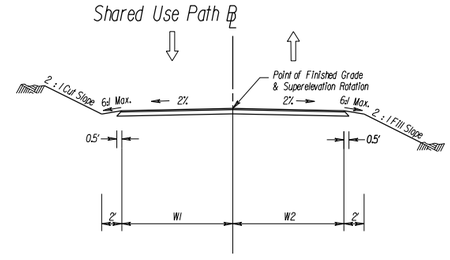


STATION	TO	STATION	STATION	TO	STATION
166+75.00		173+60.00	166+75.00		173+54.06



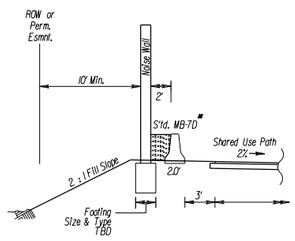
Note: Refer to Shoulder Widening Detail for Noise Walls for additional notes and dimensions.

STATION	TO	STATION
174+00.00		174+75.00



	W1	W2	STATION	TO	STATION
Shared Use Path *1	Varies 4' - 5'	Varies 3' - 5'	10+60.00		15+85.99
Shared Use Path *2	Varies 4.5' - 13.2'	Varies 3.8' - 5'	20+00.00		20+81.40
Shared Use Path *2	5'	5'	20+81.40		21+94.88
Shared Use Path *2A	3'	5'	30+83.24		32+81.50
Shared Use Path *3	5'	5'	30+00.00		32+61.16

Shoulder Widening Detail for Noise Walls



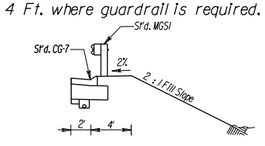
Reduced Option

See Plans For Locations

* Note: MB-7D and the two foot offset to the noise wall is not required where the wall is 18' or more from the face of curb.

Shoulder Widening Detail for Guardrail

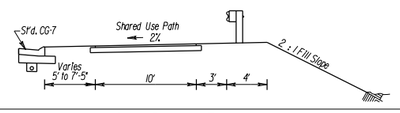
Shoulder in Fill Section shall be widened 4 Ft. where guardrail is required.



See Plans For Locations

Shoulder Widening Detail for Guardrail with Shared Use Path

Shoulder in Fill Section shall be widened 4 Ft. where guardrail is required.



See Plans For Locations

Notes:
1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

NOT TO SCALE

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

DESIGN-BUILD PROJECT

SHEET NUMBER
2(1)

PAGE NUMBER
Page 2

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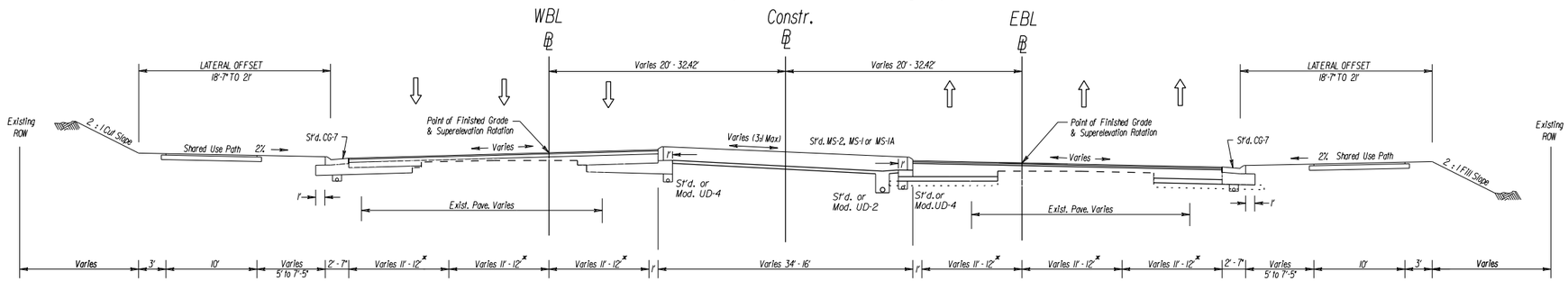
6/18/2018

CONCEPTUAL ROADWAY PLANS

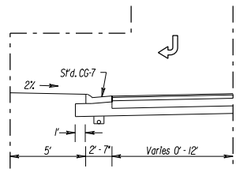
TYPICAL SECTIONS ROUTE 7

Note: Unless Otherwise Shown, All Stations Are Referenced Off Of Route 7 Construction Baseline.

Route 7
(GS-5, Other Principal Arterial, 60 MPH Design Speed)

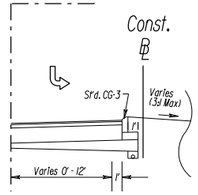


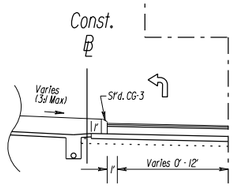
STATION TO STATION
173+54.06 EBL/173+60.00 WBL TO 465+48.97



STATION	TO	STATION
182+78.82		185+78.82
191+20.66		195+20.66
216+54.09		222+33.98
238+38.69		242+42.96
246+95.51		250+95.24
255+02.33		259+18.36
278+65.03		282+76.30
313+46.73		317+56.00

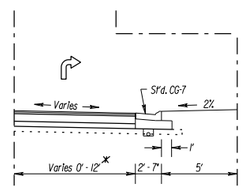
STATION	TO	STATION
356+35.68		361+56.63
375+87.81		379+85.21
406+91.89		410+22.79
415+92.25		420+12.63
437+56.91		446+06.99
453+45.64		457+73.64

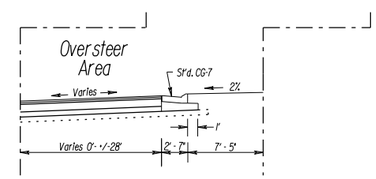




STATION	TO	STATION
173+60.00 (Partial)		174+74.85
191+58.51		198+48.51
216+46.61		223+58.36
228+25.05		235+49.75
313+75.24		320+99.10
356+29.07		363+44.07
396+26.32		402+17.61
415+44.88		422+50.99
434+72.84		441+92.70
453+62.43		460+72.46

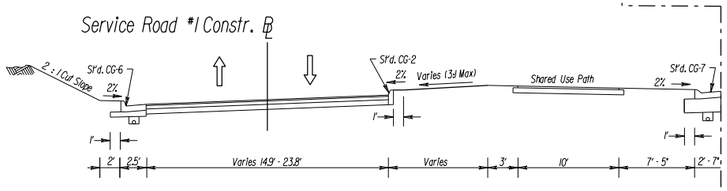
STATION	TO	STATION
182+79.34		189+90.40
207+05.84		215+13.95
269+58.36		276+63.85
238+63.99		245+78.19
304+85.02		312+06.04
347+90.18		355+03.38
369+91.71		374+72.52
400+17.76		406+09.58
406+86.22		414+12.33
426+78.53		433+83.17
439+93.17		452+07.18



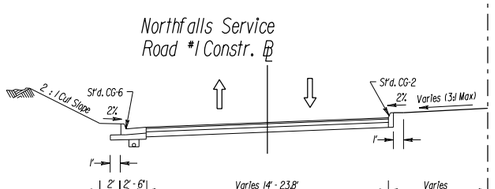


STATION	TO	STATION
215+75.98		217+16.83

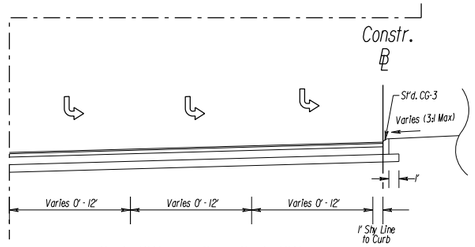
STATION	TO	STATION
177+30.53		189+85.23
223+18.92		227+28.24
241+44.68		245+61.42
268+49.92		276+41.96
278+77.95		312+50.18
315+18.03		322+90.03
329+25.86		333+35.76
350+78.66		355+00.82
371+26.84		374+30.78
391+32.65		395+32.79
397+19.97		400+26.28
406+03.61		413+59.04
430+77.47		433+88.19
438+90.80		442+99.54
447+60.75		452+12.71
456+45.63		460+54.68



SERVICE ROAD #1
STATION TO STATION
10+85.00 19+31.69



NORTHFALLS SERVICE ROAD #1
STATION TO STATION
21+65.00 23+34.40



STATION TO STATION
278+46.52 298+47.50

* Lane Widths Vary, See Plans for Locations of Lane Width Transitions

Notes:
1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

NOT TO SCALE

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER
2(2)

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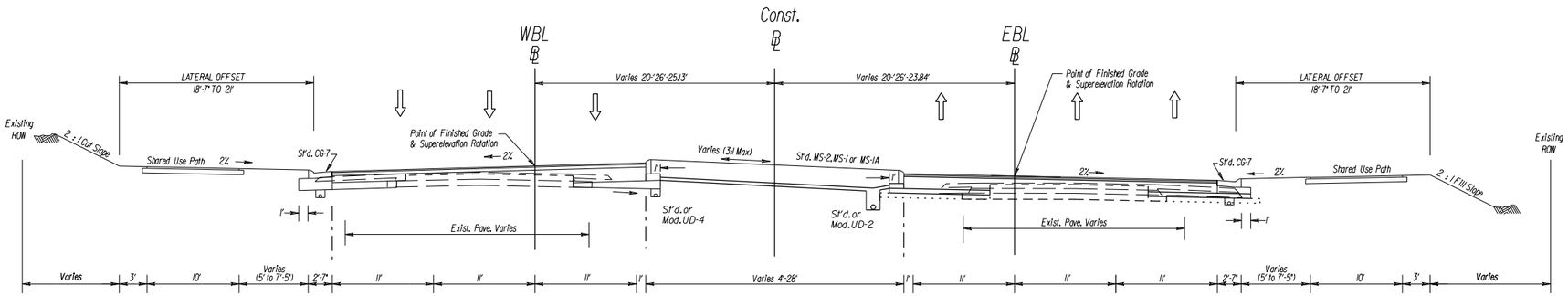
6/18/2018

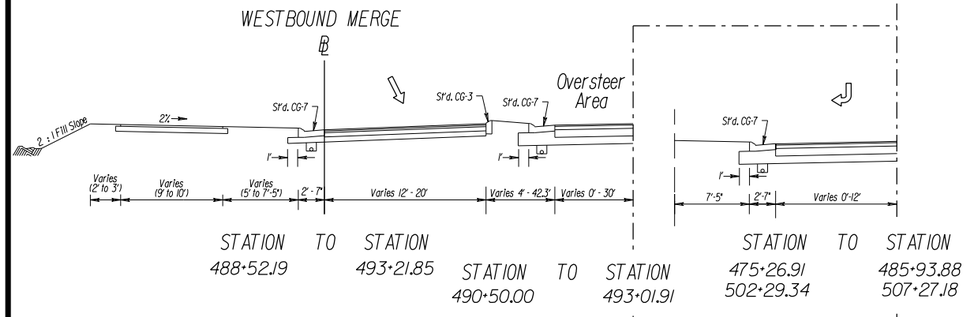
CONCEPTUAL ROADWAY PLANS

TYPICAL SECTIONS ROUTE 7

Note: Unless Otherwise Shown, All Stations Are Referenced Off Of Route 7 Construction Baseline.

Route 7
(GS-5, Other Principal Arterial, Varies
60-45 MPH Design Speed)



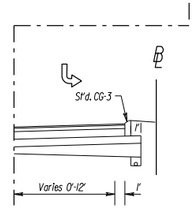


STATION 488+52.19 TO STATION 493+21.85

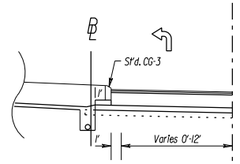
STATION 490+50.00 TO STATION 493+01.91

STATION 475+26.91 TO STATION 485+93.88
STATION 502+29.34 TO STATION 507+27.18

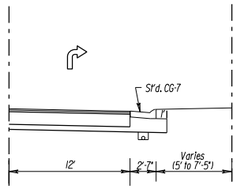
STATION 465+48.97 TO STATION 526+61.00



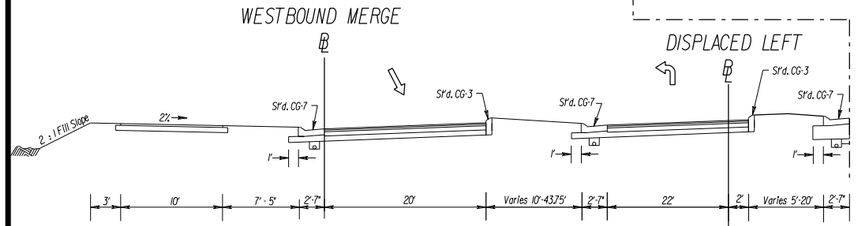
STATION 474+62.41 TO STATION 481+82.41
STATION 502+23.06 TO STATION 510+62.72



STATION 479+68.84 TO STATION 492+03.84

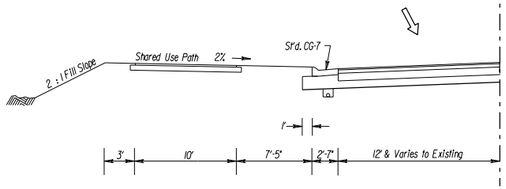


STATION 468+89.27 TO STATION 473+59.39
STATION 488+55.64 TO STATION 492+80.64
STATION 505+92.70 TO STATION 510+02.17
STATION 515+18.19 TO STATION 517+18.18
STATION 518+91.13 TO Tie to Existing

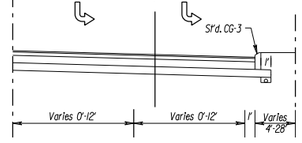


STATION 493+21.85 TO STATION 500+23.65

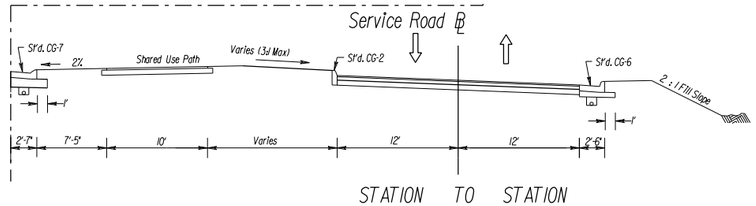
STATION 493+86.03 TO STATION 501+16.49



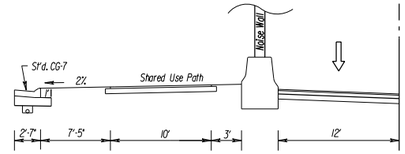
STATION 474+25.00 TO STATION 488+52.19
517+25.26 Tie to Existing



STATION 494+17.04 TO STATION 500+64.56



	STATION	TO	STATION	
Service Rd. #2	35+90.00		38+15.40	
Service Rd. #3	10+65.03		17+74.21	
Service Rd. #4	20+35.00		23+90.11	(Existing Service Road)



STATION 20+45.01 TO STATION 35+90.00

Notes:
1. *See plan sheets for locations of mill & overlay, widening and full depth pavement sections.*
2. *See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2(5) For Typical Shoulder Details.*
3. *Refer to plan sheets for super elevation information.*
4. *3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.*

NOT TO SCALE

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225, C501, B636
R201, C501, B610
&
0007-029-942, C501, B610
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

DESIGN-BUILD PROJECT

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2(3)

PAGE NUMBER
Page 4

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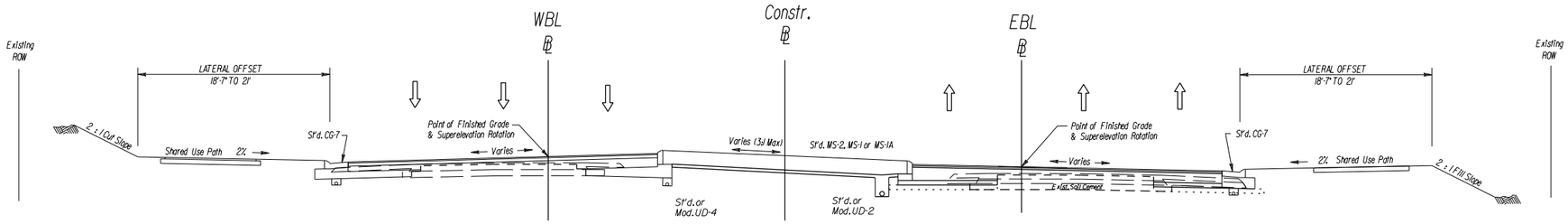
6/18/2018

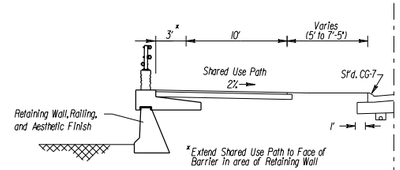
CONCEPTUAL ROADWAY PLANS

TYPICAL SECTIONS ROUTE 7

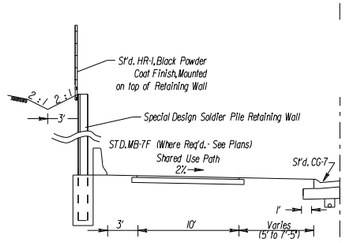
Shoulder and Miscellaneous Details



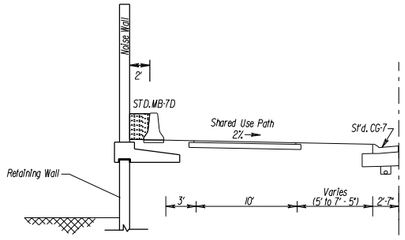
Use MS-1/MS-1A when width of median is equal to 6' or less
Use MS-2 when width of median is greater than 6'



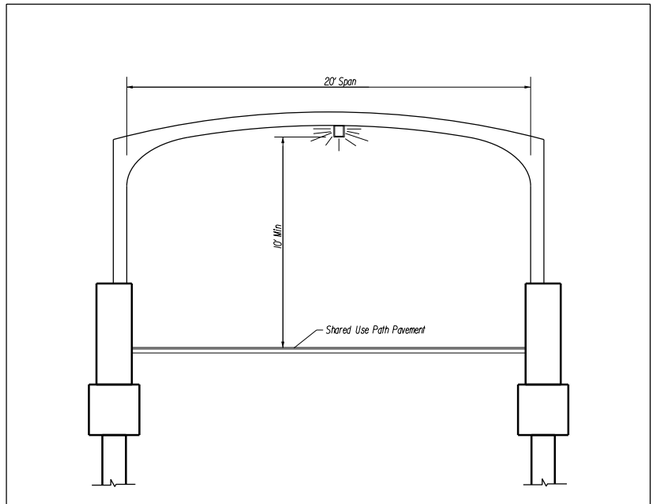
See Plans For Locations



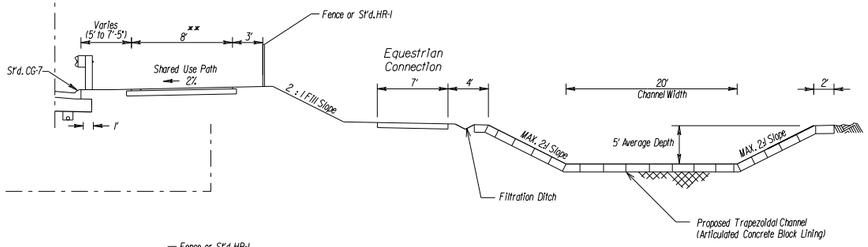
See Plans For Locations

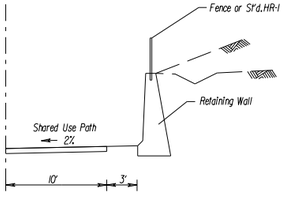


See Plans For Locations

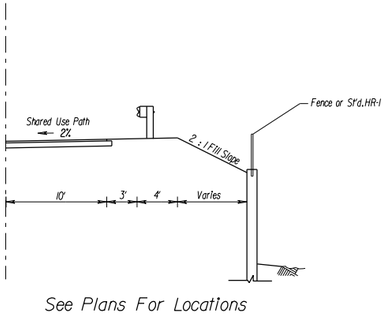


Pedestrian Tunnel
Sta. 346+11 Rte. 7 Constr. ℄





See Plans For Locations



See Plans For Locations

** 8' Shared Use Path Width
Sta. 356+00+/- to 374+00+/-

Notes:
1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

NOT TO SCALE

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT
VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

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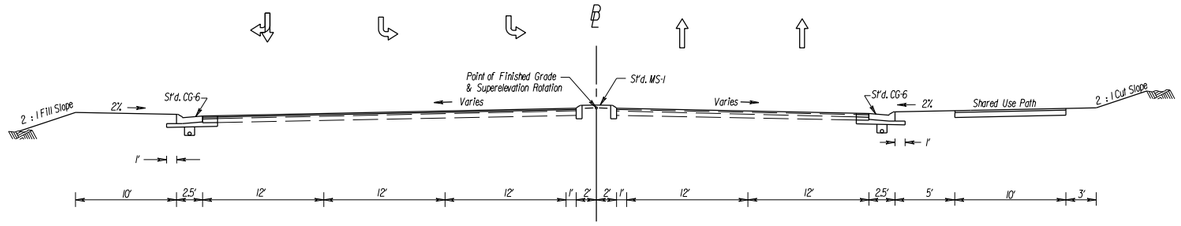
6/18/2018

CONCEPTUAL ROADWAY PLANS

TYPICAL SECTIONS ROUTE 7

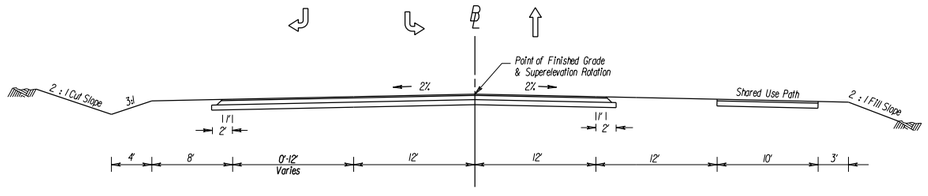


ROADWAY — FUNCTIONAL CLASSIFICATION

Reston Parkway — GS-6, Urban Minor Arterial, 40 MPH Design Speed

STATION TO STATION

10+54.00 12+44.70

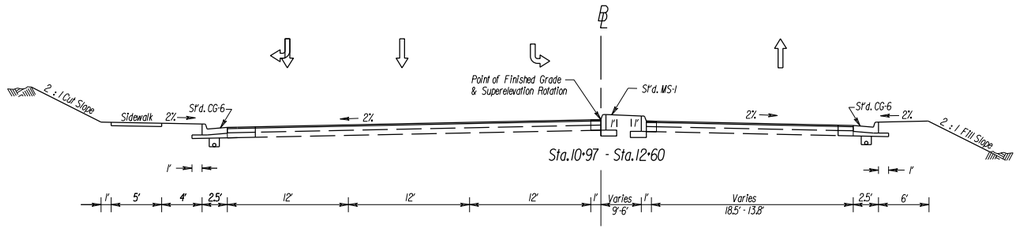


ROADWAY — FUNCTIONAL CLASSIFICATION

Utterback Store Rd — GS-7, Urban Collector, 35 MPH Design Speed

STATION TO STATION

10+58.00 15+00.00

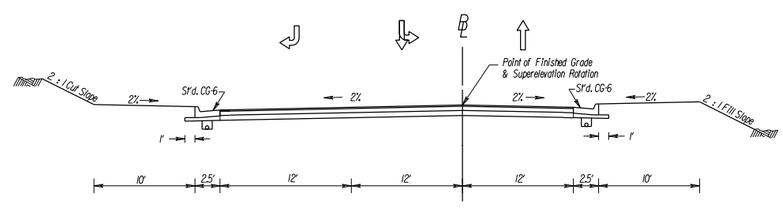


ROADWAY — FUNCTIONAL CLASSIFICATION

Springvale Road — GS-7, Urban Collector, 35 MPH Design Speed

STATION TO STATION

10+68.41 14+25.00

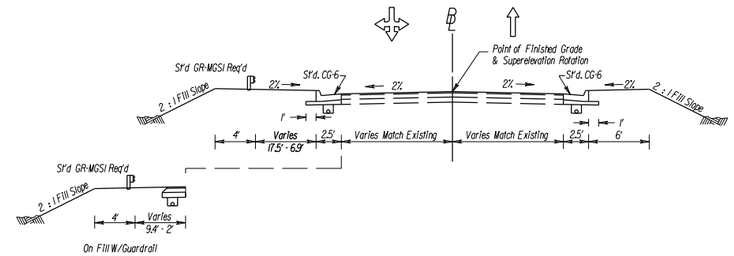


ROADWAY — FUNCTIONAL CLASSIFICATION

Colvin Run Road (W) — GS-7, Urban Collector Street, 35 MPH Design Speed

STATION TO STATION

10+54.00 13+29.85



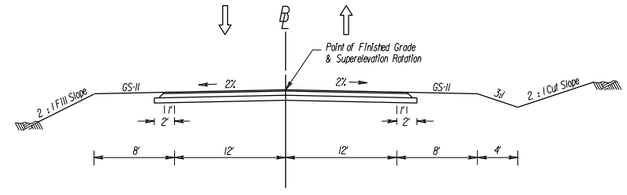
10+54.00 11+00.00

ROADWAY — FUNCTIONAL CLASSIFICATION

Colvin Run Road (E) — GS-7, Urban Collector Street, 35 MPH Design Speed

STATION TO STATION

10+54.00 11+21.80



ROADWAY — FUNCTIONAL CLASSIFICATION

Brook Road — GS-7, Urban Collector Street, 30 MPH Design Speed

STATION TO STATION

20+38.00 31+00.00

NOT TO SCALE

Notes:

1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

DESIGN - BUILD TEAM

WAGMAN — General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225 R201, C501, B636
&
0007-029-942 R201, C501, B610

VDOT

VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

DESIGN-BUILD PROJECT

SHEET NUMBER

2(5)

PAGE NUMBER

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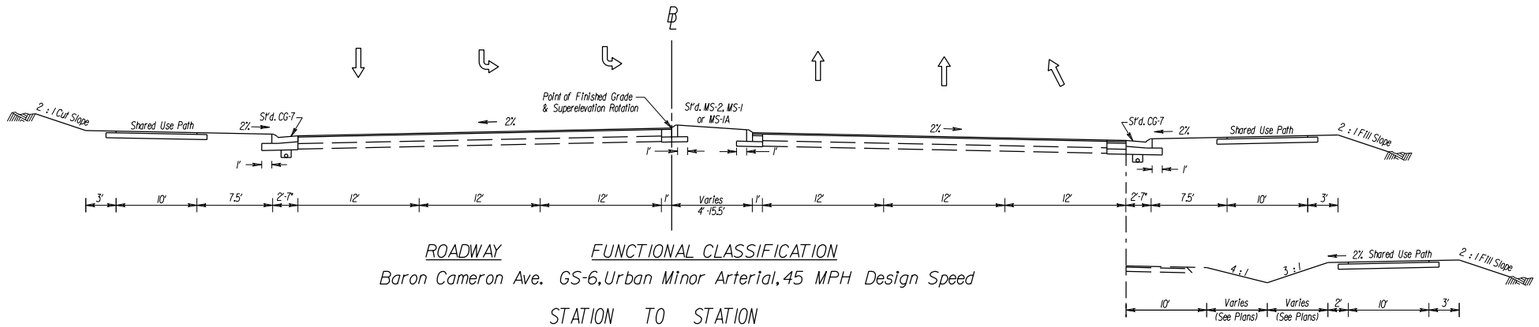
6/18/2018

CONCEPTUAL ROADWAY PLANS

TYPICAL SECTIONS ROUTE 7

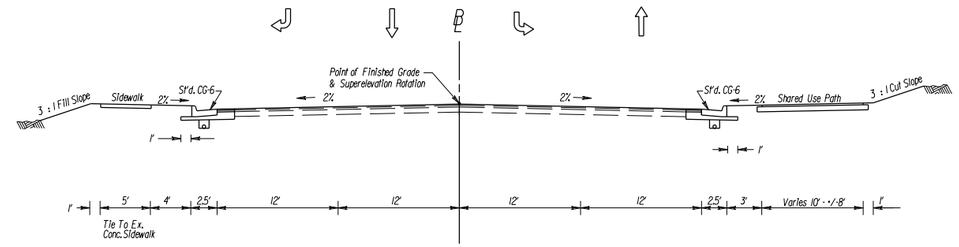


ROADWAY — FUNCTIONAL CLASSIFICATION

Baron Cameron Ave. GS-6, Urban Minor Arterial, 45 MPH Design Speed

STATION	TO	STATION
10+76.42		14+24.00

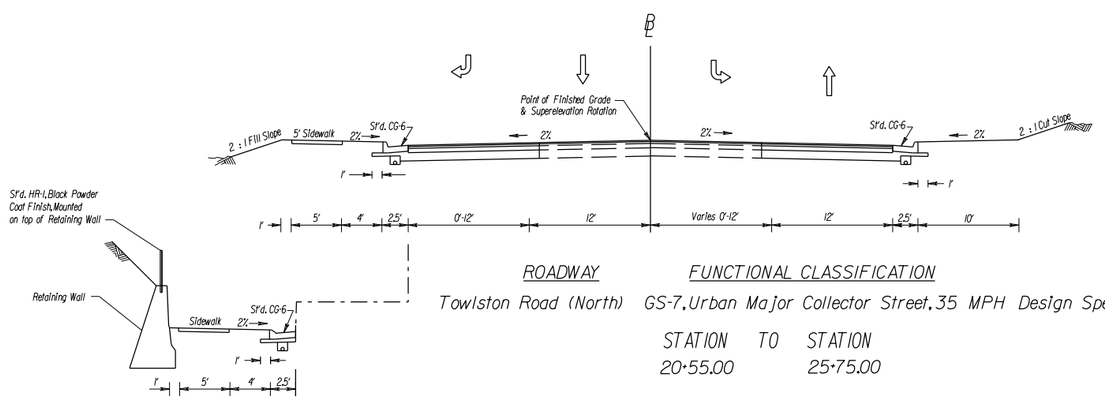
STATION	TO	STATION
14+24.00		15+43.00



ROADWAY — FUNCTIONAL CLASSIFICATION

Beulah Road GS-6, Urban Minor Arterial, 35 MPH Design Speed

STATION	TO	STATION
20+46.00		21+60.00



ROADWAY — FUNCTIONAL CLASSIFICATION

Towlston Road (North) GS-7, Urban Major Collector Street, 35 MPH Design Speed

STATION	TO	STATION
20+55.00		25+75.00

Sta. 20+55 - Sta. 23+65

Notes:
1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

NOT TO SCALE

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

DESIGN-BUILD PROJECT

SHEET NUMBER
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PAGE NUMBER
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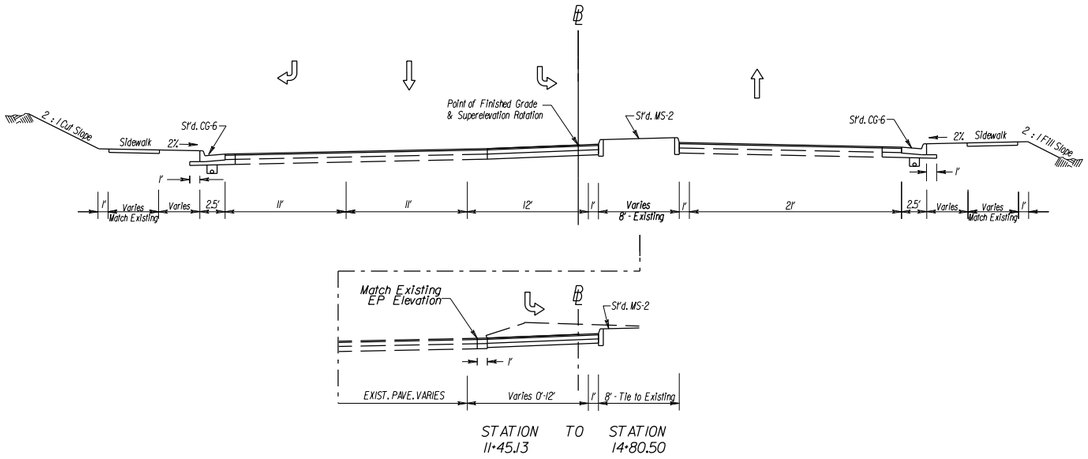
6/18/2018

CONCEPTUAL ROADWAY PLANS

TYPICAL SECTIONS ROUTE 7

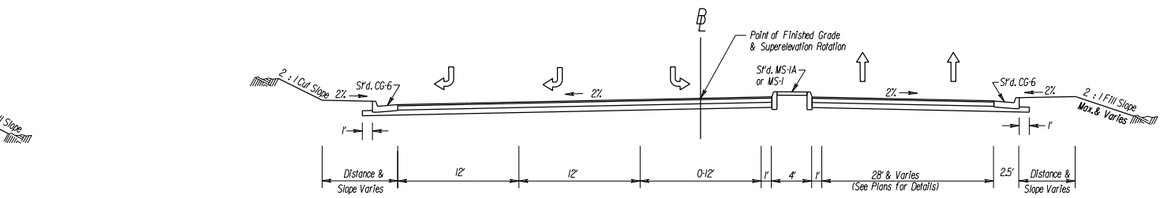


STATION 11+45.13 TO STATION 14+80.50

ROADWAY: Towlston Road (South)

FUNCTIONAL CLASSIFICATION: GS-6, Urban Minor Arterial, 30 MPH Design Speed

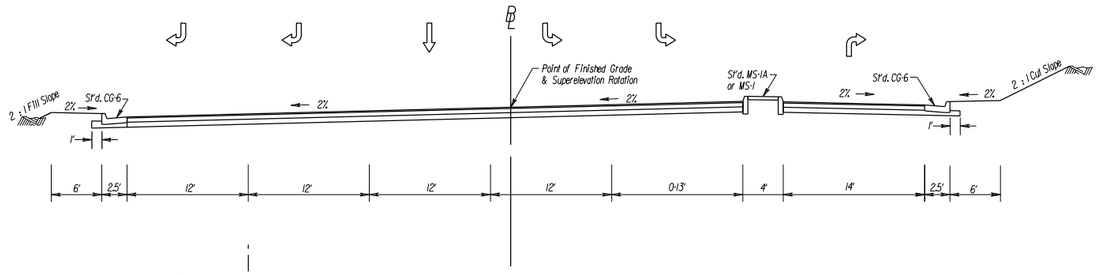
STATION 10+54.00 TO STATION 11+45.13

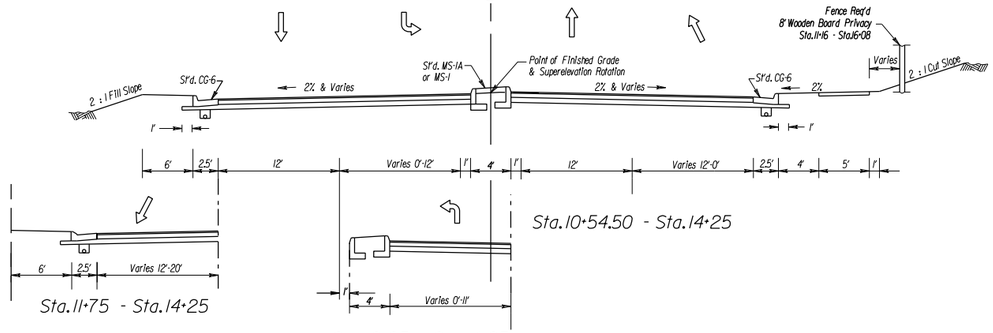


ROADWAY: Mclean Dr. #1

FUNCTIONAL CLASSIFICATION: Commercial Entrance

STATION 10+60.00 TO STATION 11+68.00

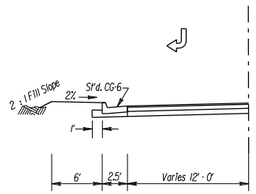




Sta. 10+54.50 - Sta. 14+25

Sta. 11+75 - Sta. 14+25

Sta. 12+25 - Sta. 14+25

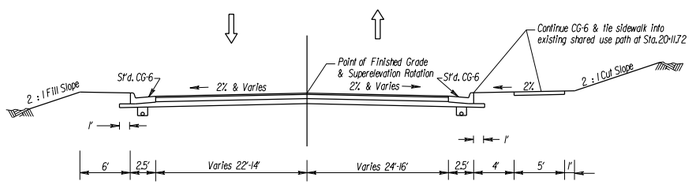


Sta. 22+75 - Sta. 25+00

ROADWAY: Mclean Dr. #2

FUNCTIONAL CLASSIFICATION: Commercial Entrance

STATION 20+48.50 TO STATION 22+75.00



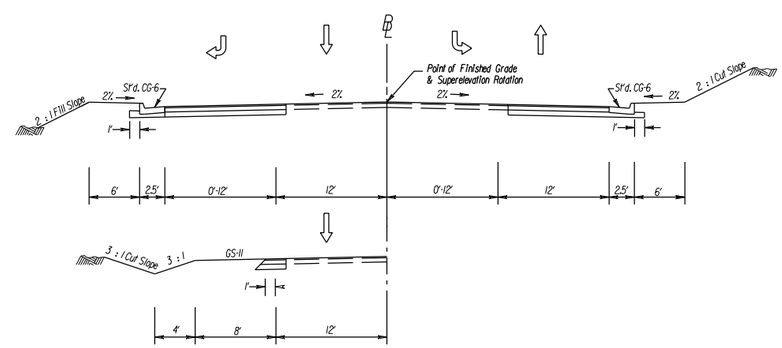
Full Depth Sta. 14+25 - Sta. 16+07

Mill & Overlay Sta. 16+07 - Sta. 18+57

ROADWAY: Lewinsville Road

FUNCTIONAL CLASSIFICATION: GS-6, Urban Minor Arterial, 35 MPH Design Speed

STATION 10+54.50 TO STATION 20+11.72



Sta. 13+50 - Sta. 14+12

ROADWAY: Forestville Drive

FUNCTIONAL CLASSIFICATION: GS-8, Urban Local Street, 25 MPH Design Speed

STATION 10+59.00 TO STATION 14+12.00

Notes:
1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No. 2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

NOT TO SCALE

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM

RK&K
rda

STATE PROJECT NUMBERS

0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

DESIGN-BUILD PROJECT

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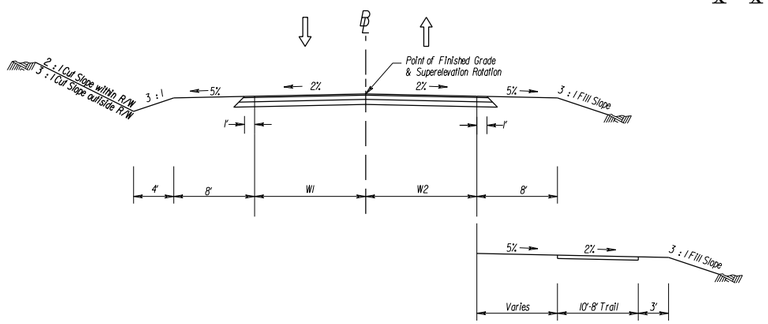
6/18/2018

CONCEPTUAL ROADWAY PLANS

TYPICAL SECTIONS ROUTE 7

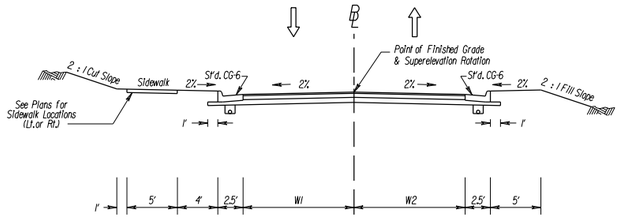


Bishopsgate Way Sta.10+54.00 - Sta.12+85.00

FUNCTIONAL CLASSIFICATION
GS-8,URBAN LOCAL STREET,25 MPH DESIGN SPEED

ROADWAY	W1	W2	Station	To	Station
Service Road Conn.	Match Exist.Pave.Width (Varies)		10+44.00		11+58.83
Shain Ct.	Match Exist.Pave.Width (Varies)		10+12.00		10+65.00
Bishopsgate Way	11'	11'	10+54.00		11+75.00
Delta Glen Ct.	12'	12'	10+42.00		11+60.00
Colvin Forest Dr.	12'	12'	10+54.00		11+81.00
Faulkner Dr.	12'	12'	10+54.00		12+33.00
Lyons St.	11.5'	11.5'	10+54.00		11+25.00
Trap Rd.	12'	12'	10+54.00		12+00.00
Newcombs Farm Rd.	11'	11'	10+54.00		12+38.00
Royal Estates Dr.	Match Exist.Pave.Width (Varies)		10+60.00		11+15.00
Lucky Estates Dr.	11'	11'	10+60.00		11+75.00
Trotting Horse Ln.	12'	12'	10+54.00		12+29.00
**Old Ash Grove Rd.	Match Exist.Pave.Width (Varies)		10+58.00		11+36.00

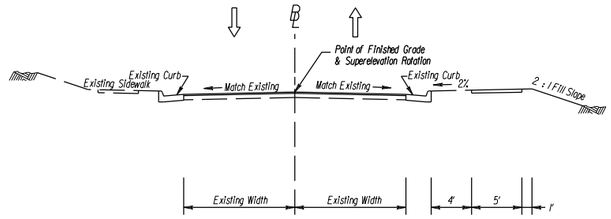
**Design Speed is 30 MPH



FUNCTIONAL CLASSIFICATION
GS-8,URBAN LOCAL STREET,25 MPH DESIGN SPEED

ROADWAY	W1	W2	Station	To	Station
Great Passage Blvd.	11"	11'	10+54.00		12+86.70
Amanda Drive	17'	17'	10+54.00		11+50.00
Riva Ridge Dr.	19'	19'	10+56.00		11+50.00
Downey Dr.	Match Exist.Pave.Width (Varies)		10+52.00		11+23.17
Middleton Ridge Rd.	17'	17'	10+54.00		11+40.00
Stokley Way	16'	16'	10+42.00		11+75.00
Wolftrap Run Rd.	20'	20'	30+12.00		30+75.00
Atwood Road	12'	12'	10+54.00		14+33.53
**Laurel Hill Road	20'	20'	10+56.00		11+82.00

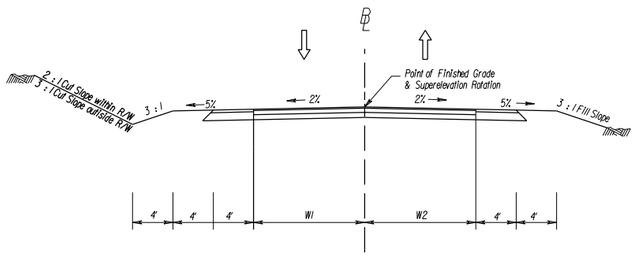
**Design Speed is 30 MPH



ROADWAY: Stokley Way

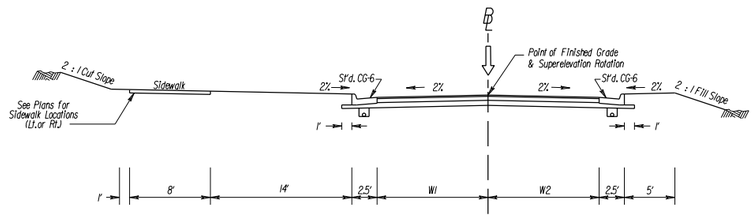
FUNCTIONAL CLASSIFICATION: GS-8,Urban Local Street,25 MPH Design Speed

STATION TO STATION: 11+06.75 TO 11+75.00



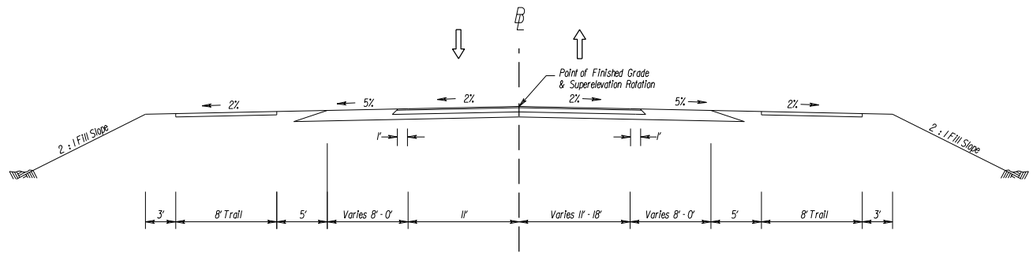
FUNCTIONAL CLASSIFICATION
GS-8,URBAN LOCAL STREET,25 MPH DESIGN SPEED

ROADWAY	W1	W2	Station	To	Station
Markell Court	11'	11'	10+60.00		11+75.00



FUNCTIONAL CLASSIFICATION
GS-8,URBAN LOCAL STREET,25 MPH DESIGN SPEED

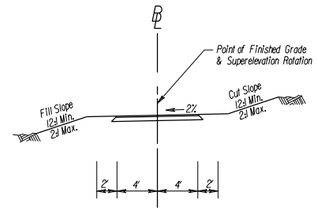
ROADWAY	W1	W2	Station	To	Station
Crippen Vale Ct.	7'-12'	8'-12'	10+00.00		10+75.00



ROADWAY: Carpers Farm Way

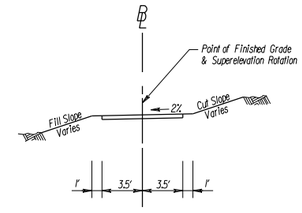
FUNCTIONAL CLASSIFICATION: GS-8,Urban Local Street,25 MPH Design Speed

STATION TO STATION: 10+54.00 TO 12+55.00



Cross County Trail

(Pavement Section in Flood Plain shall be Anchored Concrete)



Equestrian Trail

Equestrian and Cross Country Trails shall be designed using all appropriate criteria and standards.

Notes:
1. See plan sheets for locations of mill & overlay, widening and full depth pavement sections.
2. See plan sheets for locations of retaining walls, guardrail, and noise walls. See Sheet No.2A(5) For Typical Shoulder Details.
3. Refer to plan sheets for superelevation information.
4. 3:1 and flatter slopes shall be used when the right of way is behind the sidewalk (or sidewalk space) in residential areas or other areas where slopes will be maintained by the property owner.

NOT TO SCALE

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS: 0007-029-225 R201, C501, B636 & 0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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CONCEPTUAL ROADWAY PLANS

Prescriptive Design Element
Unsignalized access points shall be as shown in the RFP Conceptual Plans; specifically, right-in/right-out or right-in/right-out/left-in allowing U-turns as depicted in the RFP Conceptual Plans.

Prescriptive Design Element
Design and construct the locations, tapers and storage lengths of all right- and left-turn lanes as shown in the RFP Conceptual Plans.

Design Enhancement
Shifted noise wall to avoid 12" water line impacts and eliminate need for barrier at wall.

Design Enhancement
Shifted SUP, added retaining wall and adjusted TCE to avoid impacting 12" water line and reduce wetland impacts.

BEGIN PROJECT 0007-029-225,P101,R201,C501
STA. 166+75.00 RTE.7 CONSTR. ℄

BEGIN CONSTRUCTION
STA. 166+78.00
RTE. 7 WBL CONSTR. ℄

BEGIN CONSTRUCTION
STA. 166+71.00
RTE. 7 EBL CONSTR. ℄

Potential Noise Wall B1

Potential Noise Wall B2

WBL CONSTR. ℄

RTE.7 CONSTR. ℄

EBL CONSTR. ℄

SHARED USE PATH #1 CONSTR. ℄

SHARED USE PATH #2 CONSTR. ℄

SHARED USE PATH #2A CONSTR. ℄

SHAIN CT CONSTR. ℄

Proposed Guardrail

Proposed Impact Attenuator

Retaining Wall Req'd w/ St'd. HR-1 Req'd.

Restricted Wetland Area

Match Line Station 179+00 Rte 7 Constr. ℄ (See Sheet 4)

Curve PATH11
PI = 10+60.09
DELTA = 16° 18' 30.45" (LT)
D = 34° 30' 56"
T = 23.79'
L = 47.25'
R = 166.00'
PC = 10+36.31
PT = 10+83.56
E = 2.0%
V = 18 MPH

Curve PATH12
PI = 11+13.32
DELTA = 13° 07' 20.60" (RT)
D = 38° 11' 50"
T = 17.25'
L = 34.35'
R = 150.00'
PC = 10+96.07
PT = 11+30.42
E = 2.0%
V = 18 MPH

Curve PATH13
PI = 14+55.92
DELTA = 7° 54' 38.27" (LT)
D = 34° 30' 56"
T = 11.48'
L = 22.92'
R = 166.00'
PC = 14+44.44
PT = 14+67.36
E = 2.0%
V = 18 MPH

Curve PATH14
PI = 15+20.89
DELTA = 7° 44' 09.66" (RT)
D = 34° 30' 56"
T = 11.22'
L = 22.41'
R = 166.00'
PC = 15+09.67
PT = 15+32.08
E = 2.0%
V = 18 MPH

SHARED USE PATH #1

SHARED USE PATH #2

Curve PATH21
PI = 20+73.23
DELTA = 52° 11' 36.15" (RT)
D = 49° 49' 21"
T = 56.33'
L = 104.76'
R = 115.00'
PC = 20+16.90
PT = 21+21.66
E = 2.0%
V = 18 MPH

Curve PATH22
PI = 21+69.46
DELTA = 32° 55' 40.69" (LT)
D = 76° 23' 40"
T = 22.16'
L = 43.10'
R = 75.00'
PC = 21+47.30
PT = 21+90.40
E = 2.0%
V = 18 MPH

SHARED USE PATH #2A

Curve PATH2A-1
PI = 30+54.09
DELTA = 16° 56' 08.90" (RT)
D = 49° 49' 21"
T = 17.12'
L = 33.99'
R = 115.00'
PC = 30+36.97
PT = 30+70.96
E = 2.0%
V = 18 MPH

Curve PATH2A-2
PI = 31+78.27
DELTA = 1° 52' 28.10" (RT)
D = 4° 03' 49"
T = 23.07'
L = 46.13'
R = 1,410.00'
PC = 31+55.21
PT = 32+01.34
E = 2.0%
V = 18 MPH

CONSTRUCTION LIMITS
CUT
FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

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6/18/2018

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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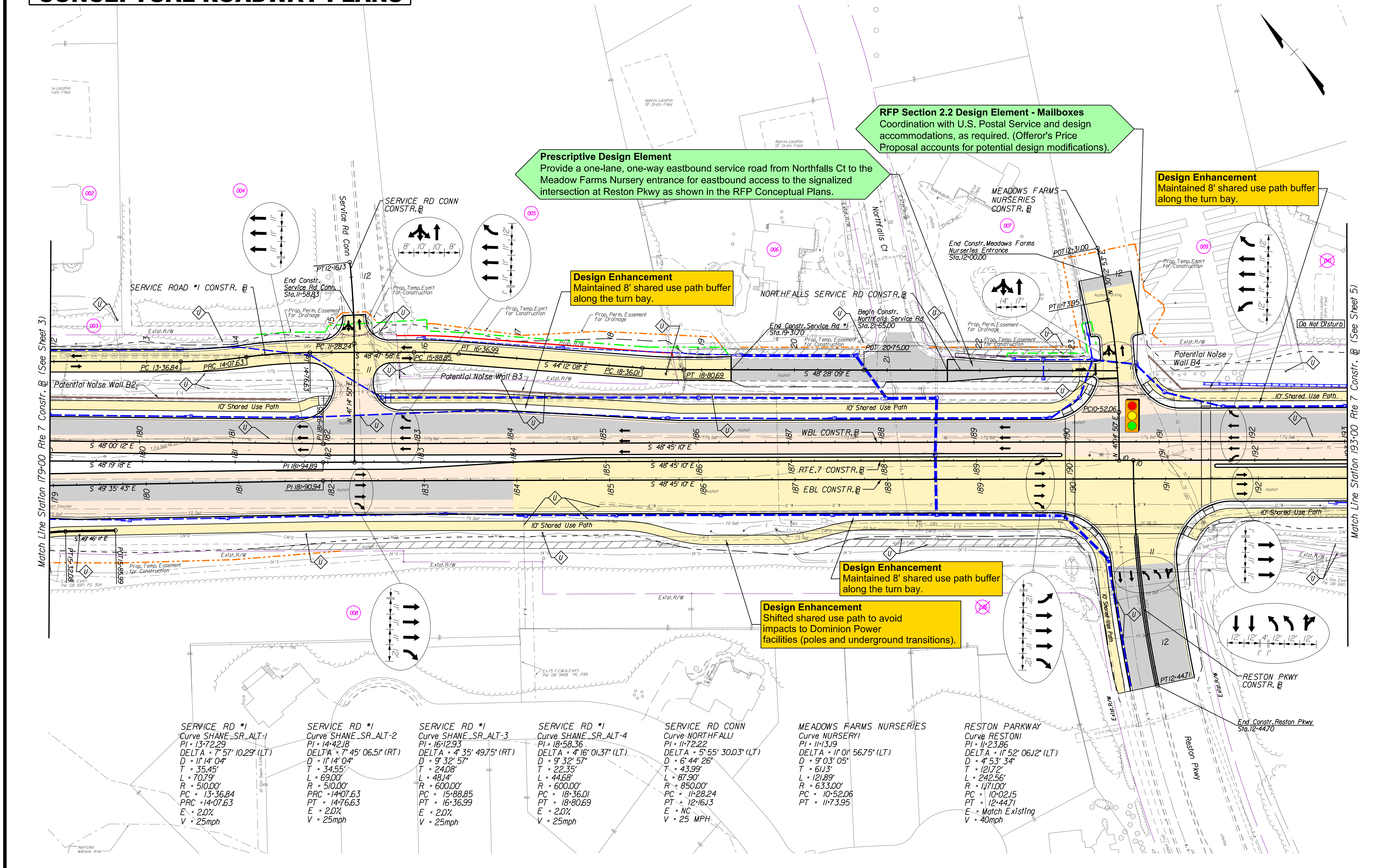
CONCEPTUAL ROADWAY PLANS



CONSTRUCTION LIMITS	PROP. NEW PAVEMENT	PROP. MILL & OVERLAY	WETLAND & STREAM IMPACTS	UTILITY IMPACT
CUT	PROPOSED BRIDGE	PROP. PAVEMENT WIDENING	OBSCURE PAVEMENT	
FILL				

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS: 0007-029-225 R201, C501, B636 & 0007-029-942 R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION — VDOT

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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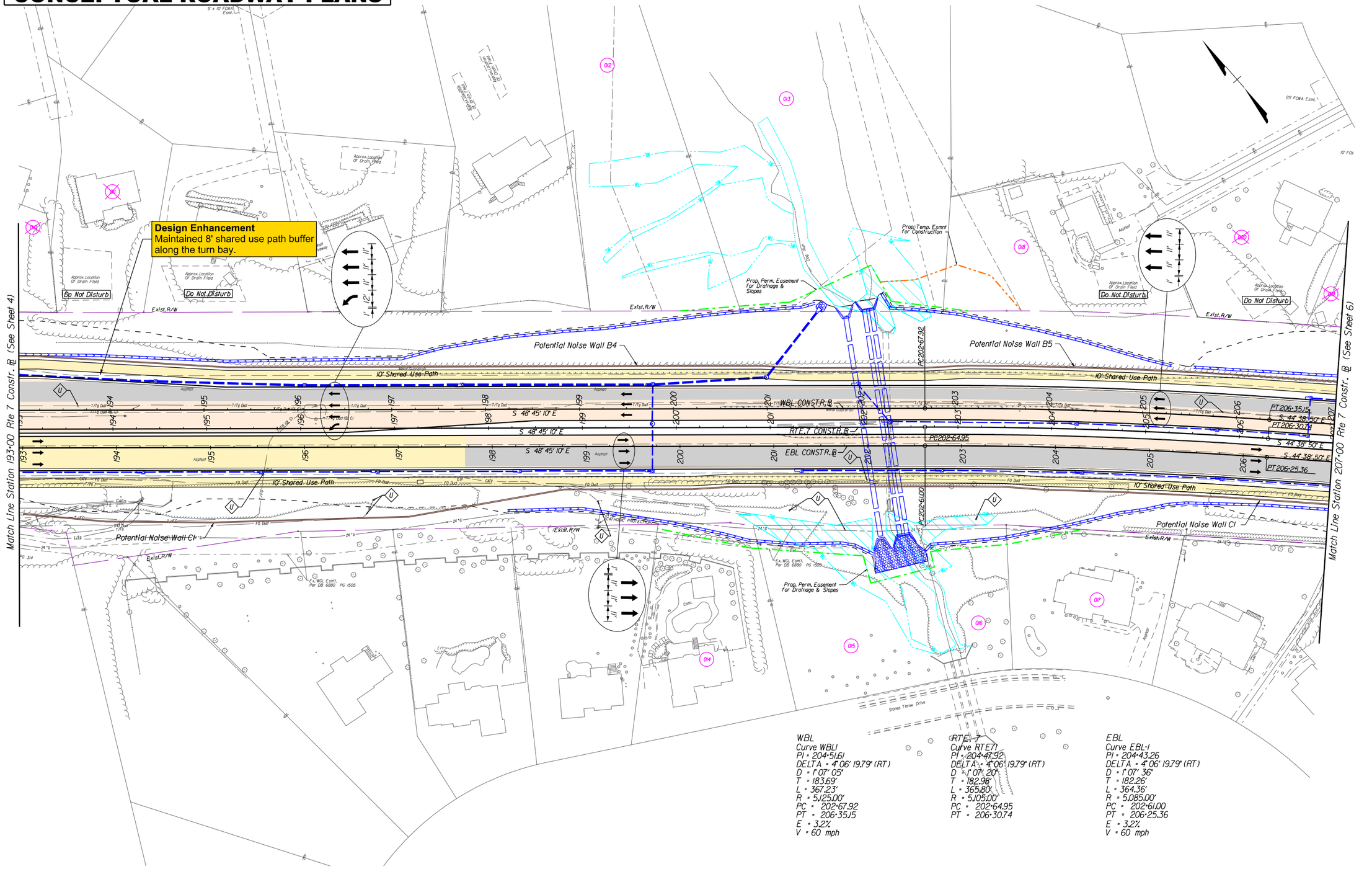
6/18/2018

CONCEPTUAL ROADWAY PLANS



CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

d9947B005.dgn

6/18/2018

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY

DESIGN-BUILD PROJECT

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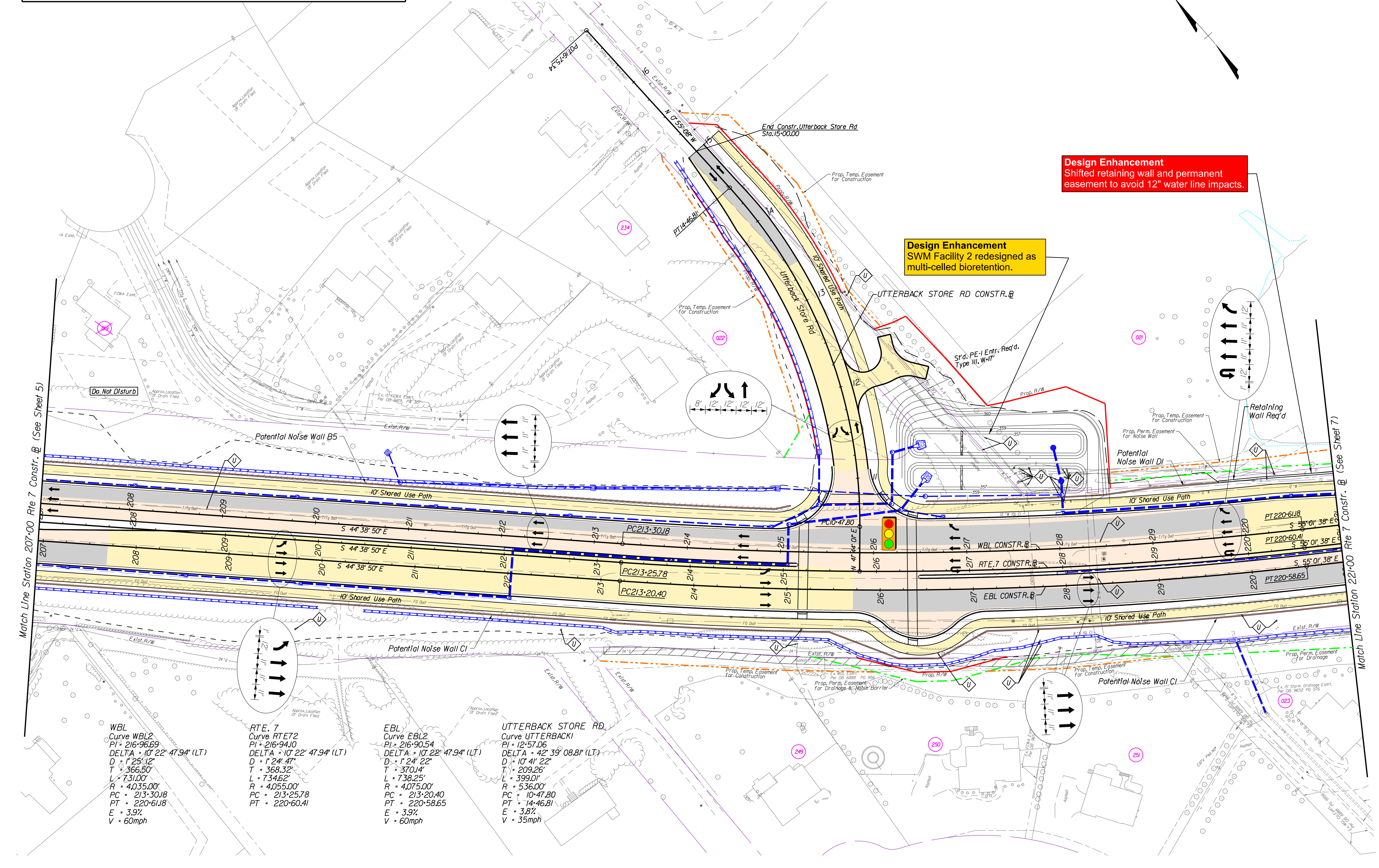
CONCEPTUAL ROADWAY PLANS



Design Enhancement
Shifted retaining wall and permanent easement to avoid 12" water line impacts.
Design Enhancement
SWM Facility 2 redesigned as multi-celled bioretention.
End Constr. Utterback Store Rd Sta. 15+00.00
UTTERBACK STORE RD CONSTR. ℄
Utterback Store Rd
10' Shared Use Path
Prop. Temp. Easement for Construction
Do Not Disturb
Potential Noise Wall B5
Potential Noise Wall C1
Potential Noise Wall D1
Retaining Wall Req'd
Prop. Temp. Easement for Noise Wall
Prop. Perm. Easement for Drainage
Match Line Station 207+00 Rte 7 Constr. ℄ (See Sheet 5)
Match Line Station 221+00 Rte 7 Constr. ℄ (See Sheet 7)
WBL CONSTR. ℄
RTE. 7 CONSTR. ℄
EBL CONSTR. ℄
S 44° 38' 50" E
S 55° 01' 38" E
N 0° 55' 08" W
PC 213+30.18
PC 213+25.78
PC 213+20.40
PT 220+61.18
PT 220+60.41
PT 220+58.65
PT 14+46.81
PC 10+47.80
Std. PE-1 Entr. Req'd. Type III, W=17'
WBL
Curve WBL2
PI = 216+96.69
DELTA = 10° 22' 47.94" (LT)
D = 1° 25' 12"
T = 366.50'
L = 731.00'
R = 4,035.00'
PC = 213+30.18
PT = 220+61.18
E = 3.9%
V = 60mph
RTE. 7
Curve RTE72
PI = 216+94.10
DELTA = 10° 22' 47.94" (LT)
D = 1° 24' 47"
T = 368.32'
L = 734.62'
R = 4,055.00'
PC = 213+25.78
PT = 220+60.41
EBL
Curve EBL2
PI = 216+90.54
DELTA = 10° 22' 47.94" (LT)
D = 1° 24' 22"
T = 370.14'
L = 738.25'
R = 4,075.00'
PC = 213+20.40
PT = 220+58.65
E = 3.9%
V = 60mph
UTTERBACK STORE RD.
Curve UTTERBACK1
PI = 12+57.06
DELTA = 42° 39' 08.81" (LT)
D = 10° 41' 22"
T = 209.26'
L = 399.01'
R = 536.00'
PC = 10+47.80
PT = 14+46.81
E = 3.8%
V = 35mph

CONSTRUCTION LIMITS
- - - - - - CUT
— — — — FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE
DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636 & 0007-029-942 R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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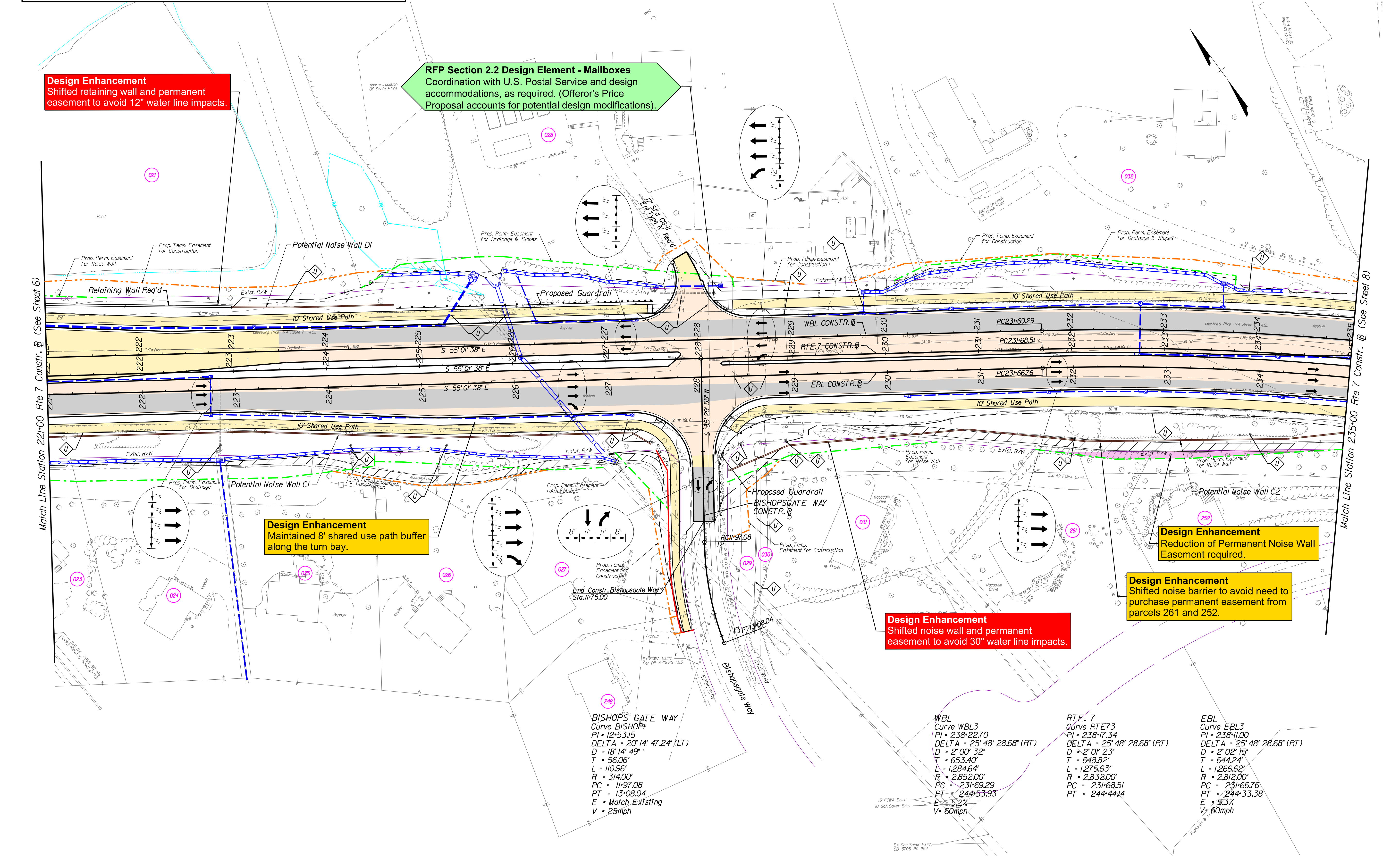
CONCEPTUAL ROADWAY PLANS



Design Enhancement
Shifted retaining wall and permanent easement to avoid 12" water line impacts.
RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).
Design Enhancement
Maintained 8' shared use path buffer along the turn bay.
Design Enhancement
Reduction of Permanent Noise Wall Easement required.
Design Enhancement
Shifted noise barrier to avoid need to purchase permanent easement from parcels 261 and 252.
Design Enhancement
Shifted noise wall and permanent easement to avoid 30" water line impacts.
Match Line Station 221+00 Rte 7 Constr. ℄ (See Sheet 6)
Match Line Station 235+00 Rte 7 Constr. ℄ (See Sheet 8)
Retaining Wall Req'd
Potential Noise Wall D1
Potential Noise Wall C1
Potential Noise Wall C2
Proposed Guardrail
10' Shared Use Path
WBL CONSTR.℄
RTE.7 CONSTR.℄
EBL CONSTR.℄
BISHOPSGATE WAY CONSTR.℄
S 55°01' 38" E
End Constr. Bishopsgate Way Sta.11+75.00
Bishopsgate Way
BISHOPS GATE WAY
Curve BISHOP1
PI = 12+53.15
DELTA = 20°14' 47.24" (LT)
D = 18°14' 49"
T = 56.06'
L = 110.96'
R = 314.00'
PC = 11+97.08
PT = 13+08.04
E = Match Existing
V = 25mph
WBL
Curve WBL3
PI = 238+22.70
DELTA = 25°48' 28.68" (RT)
D = 2°00' 32"
T = 653.40'
L = 1,284.64'
R = 2,852.00'
PC = 231+69.29
PT = 244+53.93
E = 5.2%
V= 60mph
RTE. 7
Curve RTE73
PI = 238+17.34
DELTA = 25°48' 28.68" (RT)
D = 2°01' 23"
T = 648.82'
L = 1,275.63'
R = 2,832.00'
PC = 231+68.51
PT = 244+44.14
EBL
Curve EBL3
PI = 238+11.00
DELTA = 25°48' 28.68" (RT)
D = 2°02' 15"
T = 644.24'
L = 1,266.62'
R = 2,812.00'
PC = 231+66.76
PT = 244+33.38
E = 5.3%
V= 60mph

CONSTRUCTION LIMITS
- - - - - - - CUT
— — — — FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rdа

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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6/18/2018

CONCEPTUAL ROADWAY PLANS

Design Enhancement
Extended retaining wall to contain limits of construction in perm. easement and existing right-of-way.

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.

Design Enhancement
Reduction of Permanent Noise Wall Easement required.

Design Enhancement
Shifted noise barrier to avoid need to purchase permanent easement from parcel 33.

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.

Design Enhancement
Shifted noise wall and added permanent easement to avoid 30" water line impacts.

GREAT PASSAGE BLVD
Curve GREATPASS
PI = 12+15.43
DELTA = 38° 21' 32.46" (LT)
D = 15° 41' 51"
T = 126.96'
L = 244.36'
R = 365.00'
PC = 10+88.47
PT = 13+32.84
E = 3.3%
V = 25mph

WBL
Curve WBL3
PI = 238+22.70
DELTA = 25° 48' 28.68" (RT)
D = 2° 00' 32"
T = 653.40'
L = 1,284.64'
R = 2,852.00'
PC = 231+69.29
PT = 244+53.93
E = 5.2%
V = 60mph

RTE. 7
Curve RTE73
PI = 238+17.34
DELTA = 25° 48' 28.68" (RT)
D = 2°01' 23"
T = 648.82'
L = 1,275.63'
R = 2,832.00'
PC = 231+68.51
PT = 244+44.14

EBL
Curve EBL3
PI = 238+11.00
DELTA = 25° 48' 28.68" (RT)
D = 2° 02' 15"
T = 644.24'
L = 1,266.62'
R = 2,812.00'
PC = 231+66.76
PT = 244+33.38
E = 5.3%
V = 60mph

AMANDA DR
Curve AMANDA1
PI = 11+43.11
DELTA = 20° 44' 48.00" (LT)
D = 13° 38' 31"
T = 76.88'
L = 152.08'
R = 420.00'
PC = 10+66.23
PT = 12+18.31
E = 3.1%
V = 25mph

MARKELL CT
Curve MARKELL1
PI = 12+10.88
DELTA = 31° 10' 36.02" (RT)
D = 31° 49' 52"
T = 50.22'
L = 97.94'
R = 180.00'
PC = 11+60.66
PT = 12+58.61
E = Match Existing
V = 25mph

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE
DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
&
0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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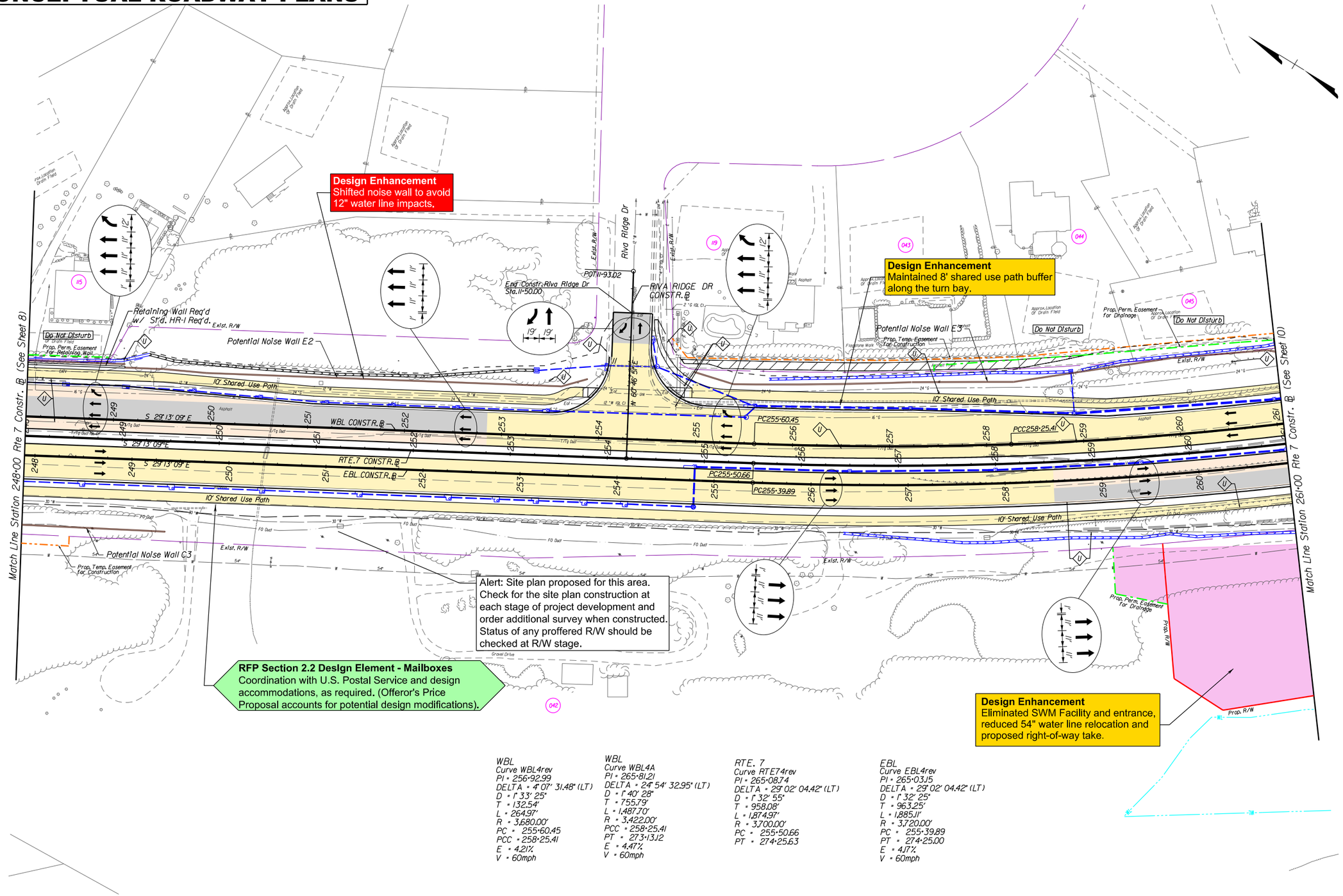
CONCEPTUAL ROADWAY PLANS



WBL
Curve WBL4rev
PI = 256+92.99
DELTA = 4° 07' 31.48" (LT)
D = 1° 33' 25"
T = 132.54'
L = 264.97'
R = 3,680.00'
PC = 255+60.45
PCC = 258+25.41
E = 4.21'
V = 60mph

WBL
Curve WBL4A
PI = 265+81.21
DELTA = 24° 54' 32.95" (LT)
D = 1° 40' 28"
T = 755.79'
L = 1,487.70'
R = 3,422.00'
PCC = 258+25.41
PT = 273+13.12
E = 4.47'
V = 60mph

RTE. 7
Curve RTE7rev
PI = 265+08.74
DELTA = 29° 02' 04.42" (LT)
D = 1° 32' 55"
T = 958.08'
L = 1,874.97'
R = 3,700.00'
PC = 255+50.66
PT = 274+25.63

EBL
Curve EBL4rev
PI = 265+03.15
DELTA = 29° 02' 04.42" (LT)
D = 1° 32' 25"
T = 963.25'
L = 1,885.11'
R = 3,720.00'
PC = 255+39.89
PT = 274+25.00
E = 4.17'
V = 60mph

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
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CONCEPTUAL ROADWAY PLANS

Design Enhancement
Revised typical section avoids wetland impacts.

Design Enhancement
In addition to revising the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements, the alignment has been shifted to avoid water line impacts.

Design Enhancement
Eliminated SWM Facility and entrance, reduced 54" water line relocation and proposed right-of-way take.

Design Enhancement
SWM Facility 3B designed as multi-celled bioretention facility to generate greater nutrient removal.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Prescriptive Design Element
A single access/entrance from Eastbound Route 7 to the frontage road shall be maintained.

WBL
Curve WBL4A
PI = 265+81.21
DELTA = 24° 54' 32.95" (LT)
D = 1° 40' 28"
T = 755.79'
L = 1,487.70'
R = 3,422.00'
PCC = 258+25.41
PT = 273+13.12
E = 4.47%
V = 60mph

RTE. 7
Curve RTE74rev
PI = 265+08.74
DELTA = 29° 02' 04.42" (LT)
D = 1° 32' 55"
T = 958.08'
L = 1,874.97'
R = 3,700.00'
PC = 255+50.66
PT = 274+25.63

EBL
Curve EBL4rev
PI = 265+03.15
DELTA = 29° 02' 04.42" (LT)
D = 1° 32' 25"
T = 963.25'
L = 1,885.11'
R = 3,720.00'
PC = 255+39.89
PT = 274+25.00
E = 4.17%
V = 60mph

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
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STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
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0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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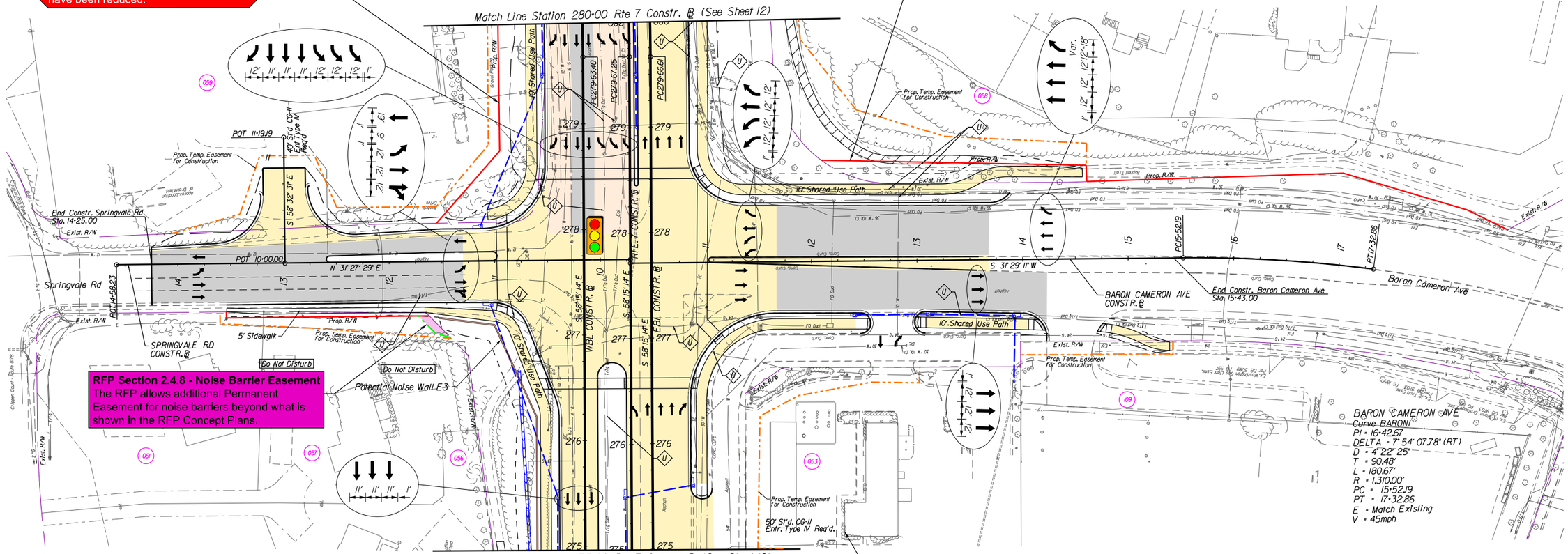
CONCEPTUAL ROADWAY PLANS

Design Enhancement
With the revision to the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements the proposed right-of-way take and easements have been reduced.

Design Enhancement
With the revision to the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements the proposed right-of-way take has been reduced.



RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.

Prescriptive Design Element
A single access/entrance from Eastbound Route 7 to the frontage road shall be maintained.

WBL
Curve WBL5rev
PI = 282+30.48
DELTA = 12° 25' 03.14" (LT)
D = 2° 20' 02"
T = 267.08'
L = 532.06'
R = 2,455.00'
PC = 279+63.40
PT = 284+95.46
E = 5.8%
V = 60mph

RTE. 7
Curve RTE7Srev
PI = 282+39.11
DELTA = 12° 25' 03.14" (LT)
D = 2° 17' 34"
T = 271.87'
L = 541.60'
R = 2,499.00'
PC = 279+67.25
PT = 285+08.85

EBL
Curve EBL5rev
PI = 282+40.66
DELTA = 12° 25' 03.14" (LT)
D = 2° 16' 28"
T = 274.04'
L = 545.94'
R = 2,519.00'
PC = 279+66.61
PT = 285+12.55
E = 5.7%
V = 60mph

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
SCALE 0 50' 100'

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DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE
DESIGN TEAM
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STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
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0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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CONCEPTUAL ROADWAY PLANS

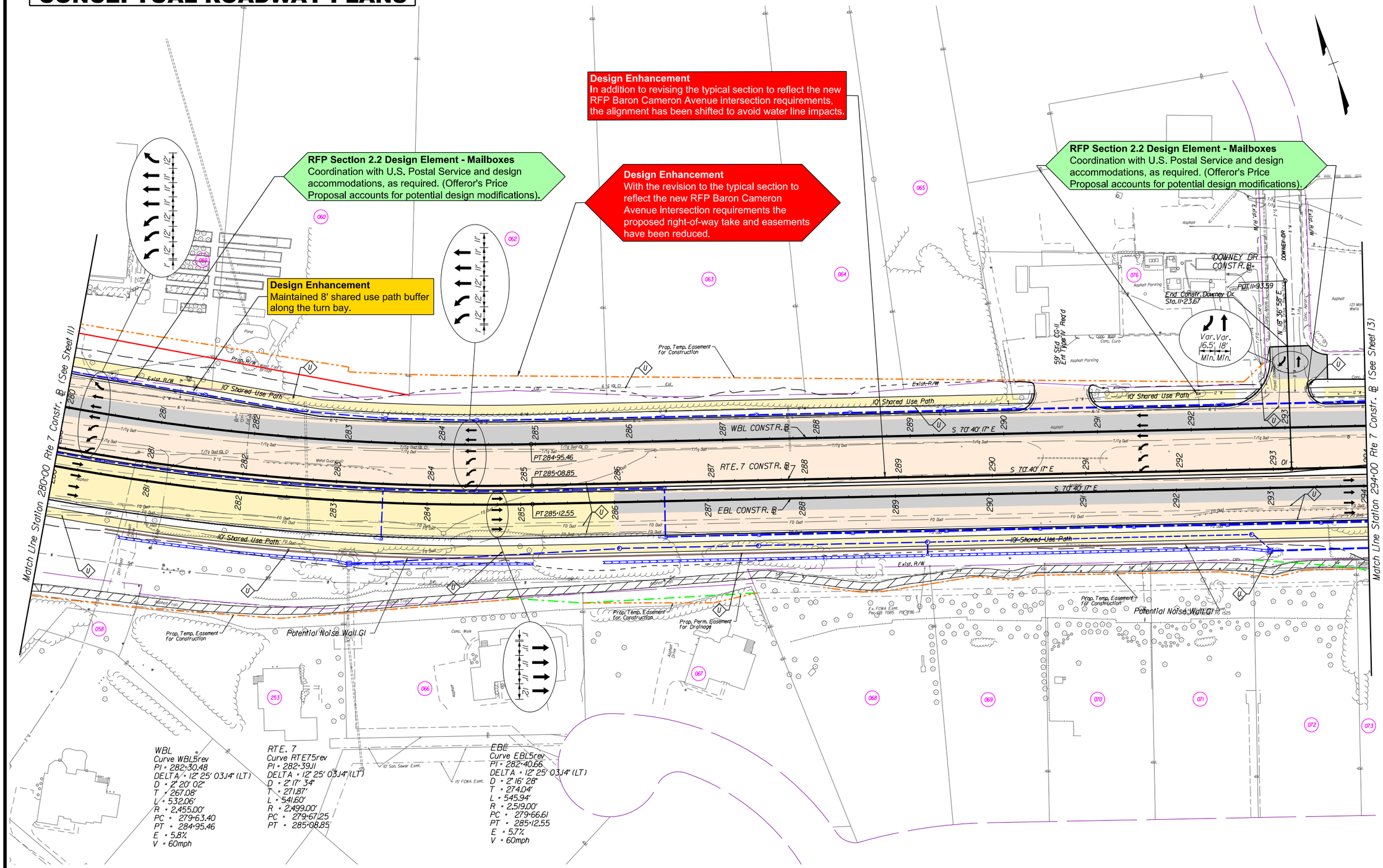
Design Enhancement
In addition to revising the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements, the alignment has been shifted to avoid water line impacts.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Design Enhancement
With the revision to the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements the proposed right-of-way take and easements have been reduced.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.



CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

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6/18/2018

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
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0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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CONCEPTUAL ROADWAY PLANS

Design Enhancement
SWM Facility 4 designed as multi-celled bioretention facility to generate greater nutrient removal.

Design Enhancement
Shifted noise wall to avoid 12" water line impacts.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Design Enhancement
Shifted noise wall to avoid 12" water line impacts.

Design Enhancement
Shifted alignment and added a wall to avoid 54" water line impacts.

Design Enhancement
Shifted SUP and noise wall to avoid 54" water line impacts.

Match Line Station 294+00 Rte 7 Constr. ℄ (See Sheet 12)

Match Line Station 308+00 Rte 7 Constr. ℄ (See Sheet 14)

Potential Noise Wall F1

Potential Noise Wall F2

Potential Noise Wall G1

Potential Noise Wall G1

Retaining Wall w/ 54"d. HR-1 Req'd.

WBL
Curve WBL6rev
PI = 295+46.33
DELTA = 0° 56' 44.75" (LT)
D = 0° 29' 48"
T = 95.24'
L = 190.47'
R = 11,539.00'
PC = 294+51.09
PRC = 296+41.56
E = N.C.
V = 60mph

WBL
Curve WBL6A
PI = 297+88.41
DELTA = 3° 04' 50.07" (RT)
D = 1° 02' 57"
T = 146.84'
L = 293.62'
R = 5,461.00'
PRC = 296+41.56
PT = 299+35.18
E = 3.0%
V = 60mph

WBL
Curve WBL6B
PI = 302+56.56
DELTA = 2° 50' 31.11" (LT)
D = 1° 02' 38"
T = 136.16'
L = 272.26'
R = 5,489.00'
PC = 301+20.40
PT = 303+92.66
E = 3.0%
V = 60mph

RTE. 7
Curve RTE76rev
PI = 298+48.37
DELTA = 1° 45' 52.19" (LT)
D = 0° 29' 31"
T = 179.31'
L = 358.59'
R = 11,644.00'
PC = 296+69.06
PRC = 300+27.65

EBL
Curve RTE7EBL6rev
PI = 298+52.38
DELTA = 1° 45' 52.19" (LT)
D = 0° 29' 28"
T = 179.62'
L = 359.21'
R = 11,664.00'
PC = 296+72.76
PRC = 300+31.97
E = NC
V = 60mph

WBL
Curve WBL7rev
PI = 309+28.89
DELTA = 16° 44' 04.93" (RT)
D = 2° 59' 03"
T = 282.40'
L = 560.79'
R = 1,920.00'
PC = 306+46.48
PT = 312+07.27
E = 6.8%
V = 60mph

RTE. 7
Curve RTE77rev
PI = 309+39.69
DELTA = 16° 43' 14.79" (RT)
D = 3° 00' 56"
T = 279.23'
L = 554.48'
R = 1,900.00'
PC = 306+60.47
PT = 312+14.95

EBL
Curve EBL7rev
PI = 309+40.70
DELTA = 16° 43' 14.79" (RT)
D = 3° 02' 52"
T = 276.29'
L = 548.65'
R = 1,880.00'
PC = 306+64.42
PT = 312+13.06
E = 6.9%
V = 60mph

CONSTRUCTION LIMITS
CUT
FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

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6/18/2018

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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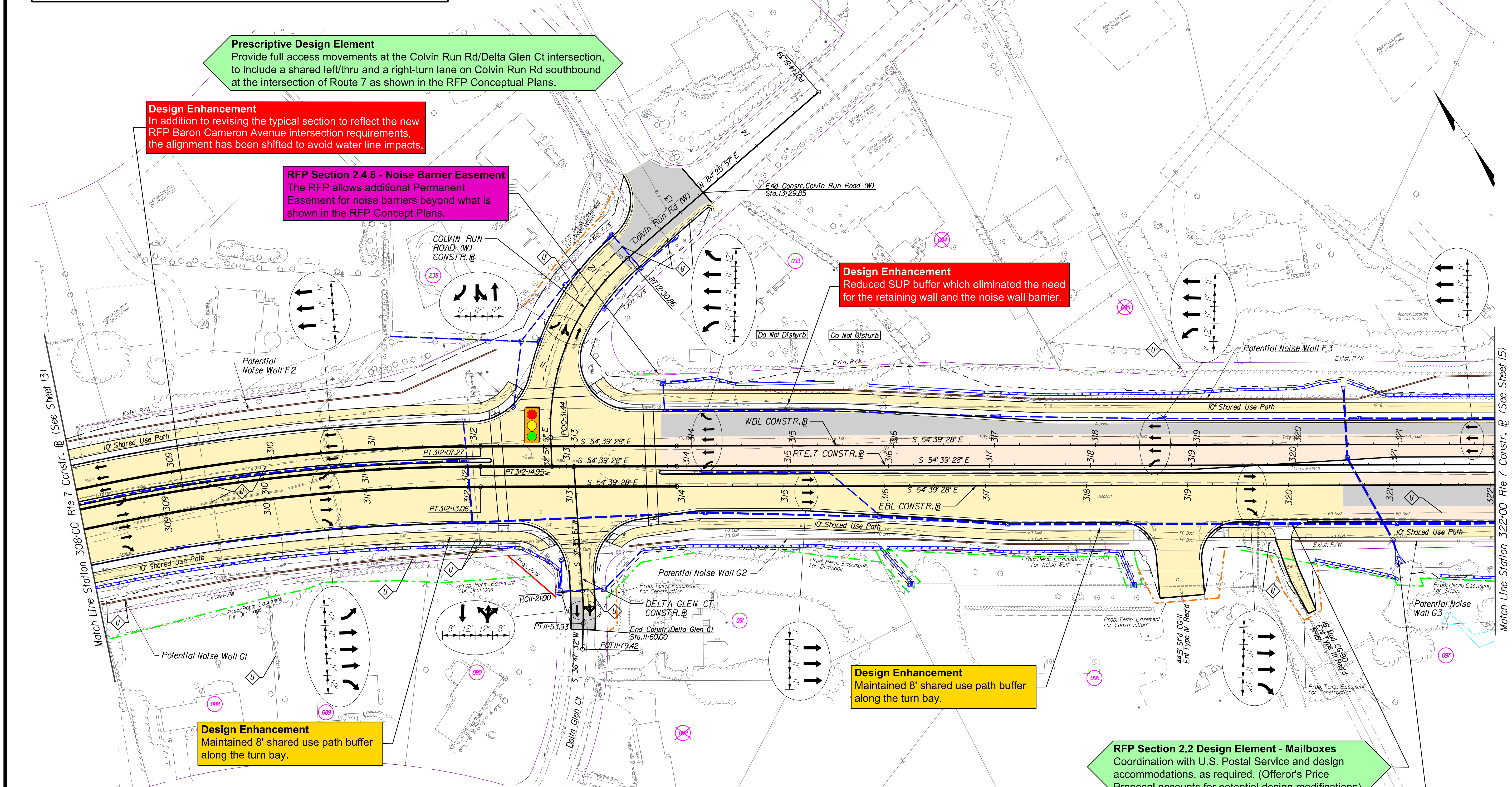
CONCEPTUAL ROADWAY PLANS



Prescriptive Design Element
Provide full access movements at the Colvin Run Rd/Delta Glen Ct intersection, to include a shared left/thru and a right-turn lane on Colvin Run Rd southbound at the intersection of Route 7 as shown in the RFP Conceptual Plans.
Design Enhancement
In addition to revising the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements, the alignment has been shifted to avoid water line impacts.
RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.
Design Enhancement
Reduced SUP buffer which eliminated the need for the retaining wall and the noise wall barrier.
Design Enhancement
Maintained 8' shared use path buffer along the turn bay.
Design Enhancement
Maintained 8' shared use path buffer along the turn bay.
RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).
Design Enhancement
Proposed headwall will include a small retaining wall to reduce impacts to the 54" water line.
COLVIN RUN ROAD (W) CONSTR. ℄
End Constr. Colvin Run Road (W) Sta. 13+29.85
WBL CONSTR. ℄
RTE. 7 CONSTR. ℄
EBL CONSTR. ℄
DELTA GLEN CT CONSTR. ℄
End Constr. Delta Glen Ct Sta. 11+60.00
10' Shared Use Path
Potential Noise Wall F2
Potential Noise Wall F3
Potential Noise Wall G1
Potential Noise Wall G2
Potential Noise Wall G3
Do Not Disturb
Match Line Station 308+00 Rte 7 Constr. ℄ (See Sheet 13)
Match Line Station 322+00 Rte 7 Constr. ℄ (See Sheet 15)

WBL	RTE. 7	EBL	COLVIN RUN ROAD	DELTA GLEN COURT
Curve WBL7rev	Curve RTE77rev	Curve EBL7rev	Curve COLVINRUNI	Curve DELTAI
PI = 309+28.89	PI = 309+39.69	PI = 309+40.70	PI = 11+38.44	PI = 11+37.93
DELTA = 16° 44' 04.93" (RT)	DELTA = 16° 43' 14.79" (RT)	DELTA = 16° 43' 14.79" (RT)	DELTA = 51° 28' 05.64" (RT)	DELTA = 5° 13' 41.94" (RT)
D = 2° 59' 03"	D = 3° 00' 56"	D = 3° 02' 52"	D = 25° 48' 32"	D = 16° 19' 25"
T = 282.40'	T = 279.23'	T = 276.29'	T = 107.00'	T = 16.03'
L = 560.79'	L = 554.48'	L = 548.65'	L = 199.42'	L = 32.03'
R = 1,920.00'	R = 1,900.00'	R = 1,880.00'	R = 222.00'	R = 351.00'
PC = 306+46.48	PC = 306+60.47	PC = 306+64.42	PC = 10+31.44	PC = 11+21.90
PT = 312+07.27	PT = 312+14.95	PT = 312+13.06	PT = 12+30.86	PT = 11+53.93
E = 6.8%		E = 6.9%	E = Match Existing	E = 3.3%
V = 60mph		V = 60mph	V = 35mph	V = 25mph

CONSTRUCTION LIMITS
- - - - - - - CUT
— — — — FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE
DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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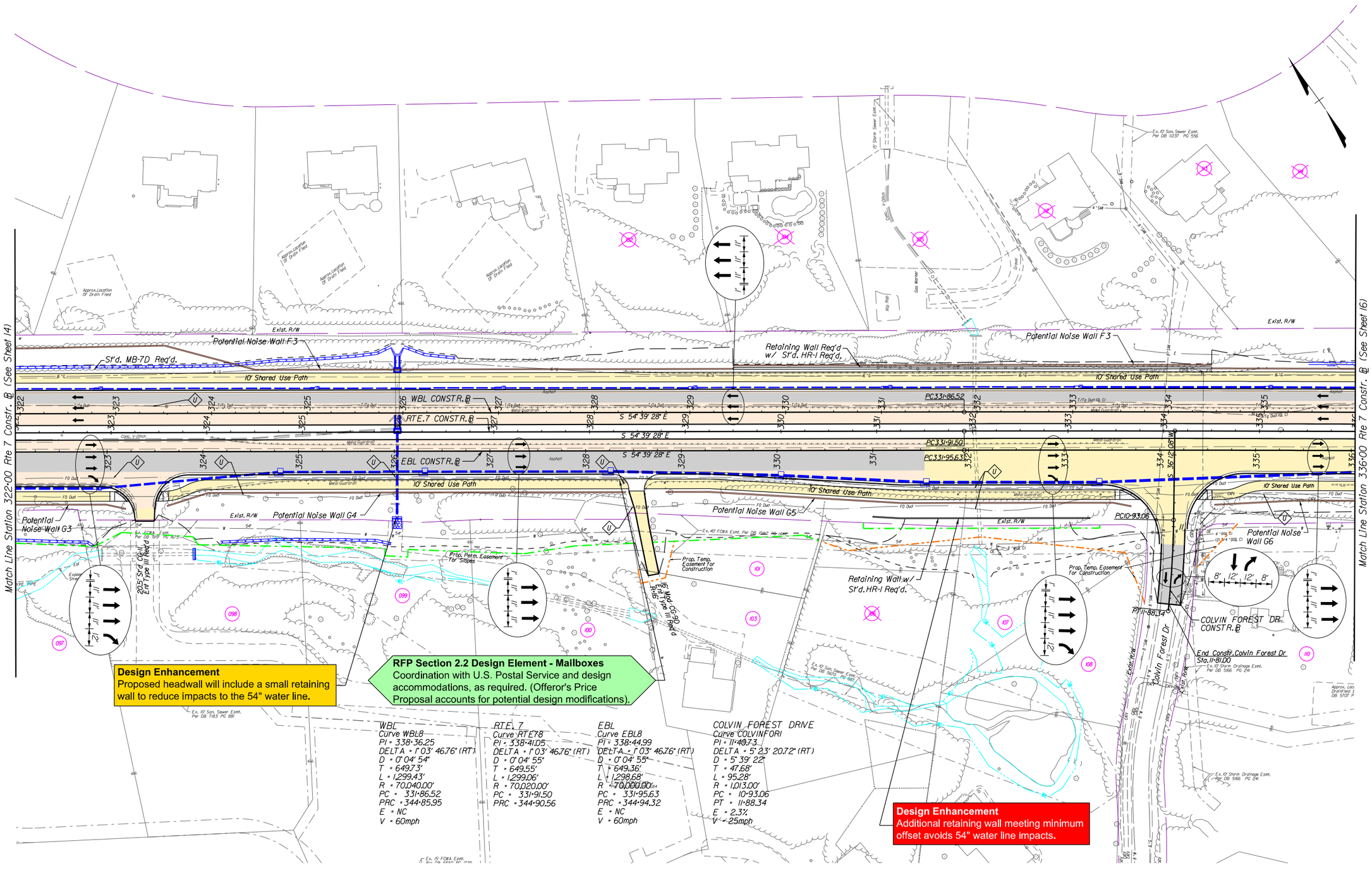
CONCEPTUAL ROADWAY PLANS



Design Enhancement
Proposed headwall will include a small retaining wall to reduce impacts to the 54" water line.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Design Enhancement
Additional retaining wall meeting minimum offset avoids 54" water line impacts.

WBL
Curve WBL8
PI = 338+36.25
DELTA = 1° 03' 46.76" (RT)
D = 0° 04' 54"
T = 649.73'
L = 1,299.43'
R = 70,040.00'
PC = 331+86.52
PRC = 344+85.95
E = NC
V = 60mph

RTE. 7
Curve RTE7B
PI = 338+41.05
DELTA = 1° 03' 46.76" (RT)
D = 0° 04' 55"
T = 649.55'
L = 1,299.06'
R = 70,020.00'
PC = 331+91.50
PRC = 344+90.56

EBL
Curve EBL8
PI = 338+44.99
DELTA = 1° 03' 46.76" (RT)
D = 0° 04' 55"
T = 649.36'
L = 1,298.68'
R = 70,000.00'
PC = 331+95.63
PRC = 344+94.32
E = NC
V = 60mph

COLVIN FOREST DRIVE
Curve COLVINFORI
PI = 11+40.73
DELTA = 5° 23' 20.72" (RT)
D = 5° 39' 22"
T = 47.68'
L = 95.28'
R = 1,013.00'
PC = 10+93.06
PT = 11+88.34
E = 2.3%
V = 25mph

CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
&
0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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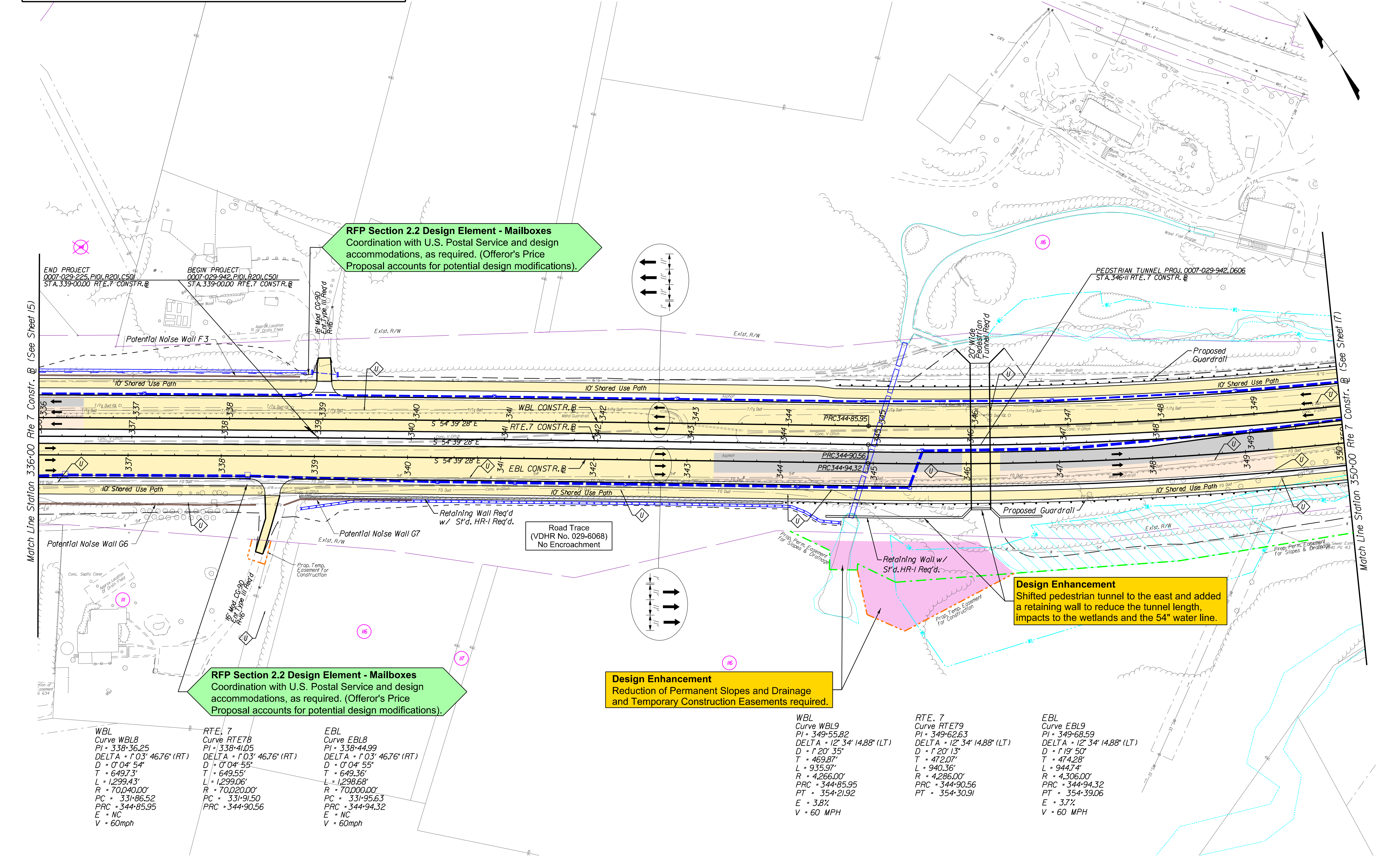
CONCEPTUAL ROADWAY PLANS


RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).
END PROJECT
0007-029-225, P101, R201, C501
STA. 339+00.00 RTE. 7 CONSTR. ℄
BEGIN PROJECT
0007-029-942, P101, R201, C501
STA. 339+00.00 RTE. 7 CONSTR. ℄
Potential Noise Wall F3
16' Mod. CG-9D
Ent. Type III Req'd
R=16'
Exist. R/W
10' Shared Use Path
WBL CONSTR. ℄
RTE. 7 CONSTR. ℄
EBL CONSTR. ℄
S 54° 39' 28" E
PRC 344+85.95
PRC 344+90.56
PRC 344+94.32
PEDESTRIAN TUNNEL PROJ. 0007-029-942, D606
STA. 346+11 RTE. 7 CONSTR. ℄
20' Wide Pedestrian Tunnel Req'd
Proposed Guardrail
Match Line Station 336+00 Rte 7 Constr. ℄ (See Sheet 15)
Match Line Station 350+00 Rte 7 Constr. ℄ (See Sheet 17)
Retaining Wall Req'd w/ St'd. HR-1 Req'd.
Potential Noise Wall G7
Potential Noise Wall G6
Road Trace
(VDHR No. 029-6068)
No Encroachment
Prop. Temp. Easement for Construction
Retaining Wall w/ St'd. HR-1 Req'd.
Prop. Perm. Easement for Slopes & Drainage
Design Enhancement
Shifted pedestrian tunnel to the east and added a retaining wall to reduce the tunnel length, impacts to the wetlands and the 54" water line.
Design Enhancement
Reduction of Permanent Slopes and Drainage and Temporary Construction Easements required.
RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).
WBL
Curve WBL8
PI = 338+36.25
DELTA = 1° 03' 46.76" (RT)
D = 0° 04' 54"
T = 649.73'
L = 1,299.43'
R = 70,040.00'
PC = 331+86.52
PRC = 344+85.95
E = NC
V = 60mph
RTE. 7
Curve RTE78
PI = 338+41.05
DELTA = 1° 03' 46.76" (RT)
D = 0° 04' 55"
T = 649.55'
L = 1,299.06'
R = 70,020.00'
PC = 331+91.50
PRC = 344+90.56
EBL
Curve EBL8
PI = 338+44.99
DELTA = 1° 03' 46.76" (RT)
D = 0° 04' 55"
T = 649.36'
L = 1,298.68'
R = 70,000.00'
PC = 331+95.63
PRC = 344+94.32
E = NC
V = 60mph
WBL
Curve WBL9
PI = 349+55.82
DELTA = 12° 34' 14.88" (LT)
D = 1° 20' 35"
T = 469.87'
L = 935.97'
R = 4,266.00'
PRC = 344+85.95
PT = 354+21.92
E = 3.8%
V = 60 MPH
RTE. 7
Curve RTE79
PI = 349+62.63
DELTA = 12° 34' 14.88" (LT)
D = 1° 20' 13"
T = 472.07'
L = 940.36'
R = 4,286.00'
PRC = 344+90.56
PT = 354+30.91
EBL
Curve EBL9
PI = 349+68.59
DELTA = 12° 34' 14.88" (LT)
D = 1° 19' 50"
T = 474.28'
L = 944.74'
R = 4,306.00'
PRC = 344+94.32
PT = 354+39.06
E = 3.7%
V = 60 MPH

CONSTRUCTION LIMITS
- - - - - - CUT
— — — — FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

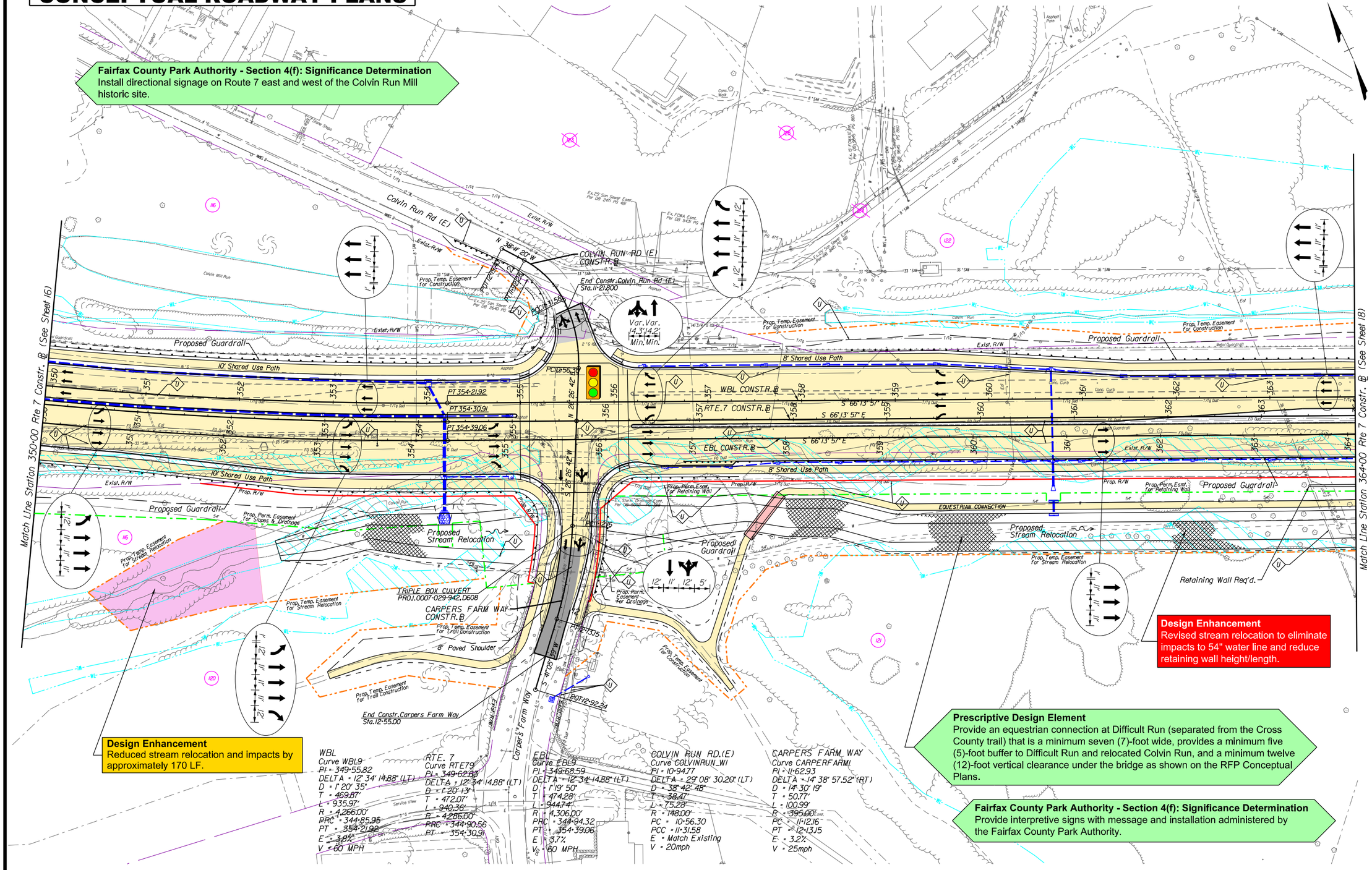
VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER
16

d9947B016.dgn
6/18/2018

CONCEPTUAL ROADWAY PLANS

Fairfax County Park Authority - Section 4(f): Significance Determination
Install directional signage on Route 7 east and west of the Colvin Run Mill historic site.



WBL
Curve WBL9
PI = 349+55.82
DELTA = 12° 34' 14.88" (LT)
D = 1° 20' 35"
T = 469.87'
L = 935.97'
R = 4,266.00'
PRC = 344+85.95
PT = 354+21.92
E = 3.8%
V = 60 MPH

RTE. 7
Curve RTE79
PI = 349+62.83
DELTA = 12° 34' 14.88" (LT)
D = 1° 20' 13"
T = 472.07'
L = 940.36'
R = 4,286.00'
PRC = 344+90.56
PT = 354+30.91

EBL
Curve EBL9
PI = 349+68.59
DELTA = 12° 34' 14.88" (LT)
D = 1° 19' 50"
T = 474.28'
L = 944.74'
R = 4,306.00'
PRC = 344+94.32
PT = 354+39.06
E = 3.7%
V = 60 MPH

COLVIN RUN RD.(E)
Curve COLVINRUN_WI
PI = 10+94.77
DELTA = 29° 08' 30.20" (LT)
D = 38° 42' 48"
T = 38.47'
L = 75.28'
R = 148.00'
PC = 10+56.30
PCC = 11+31.58
E = Match Existing
V = 20mph

CARPERS FARM WAY
Curve CARPERFARM1
PI = 11+62.93
DELTA = 14° 38' 57.52" (RT)
D = 14° 30' 19"
T = 50.77'
L = 100.99'
R = 395.00'
PC = 11+12.16
PT = 12+13.15
E = 3.2%
V = 25mph

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
SCALE 0 50' 100'

d994780f.dgn
6/18/2018

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

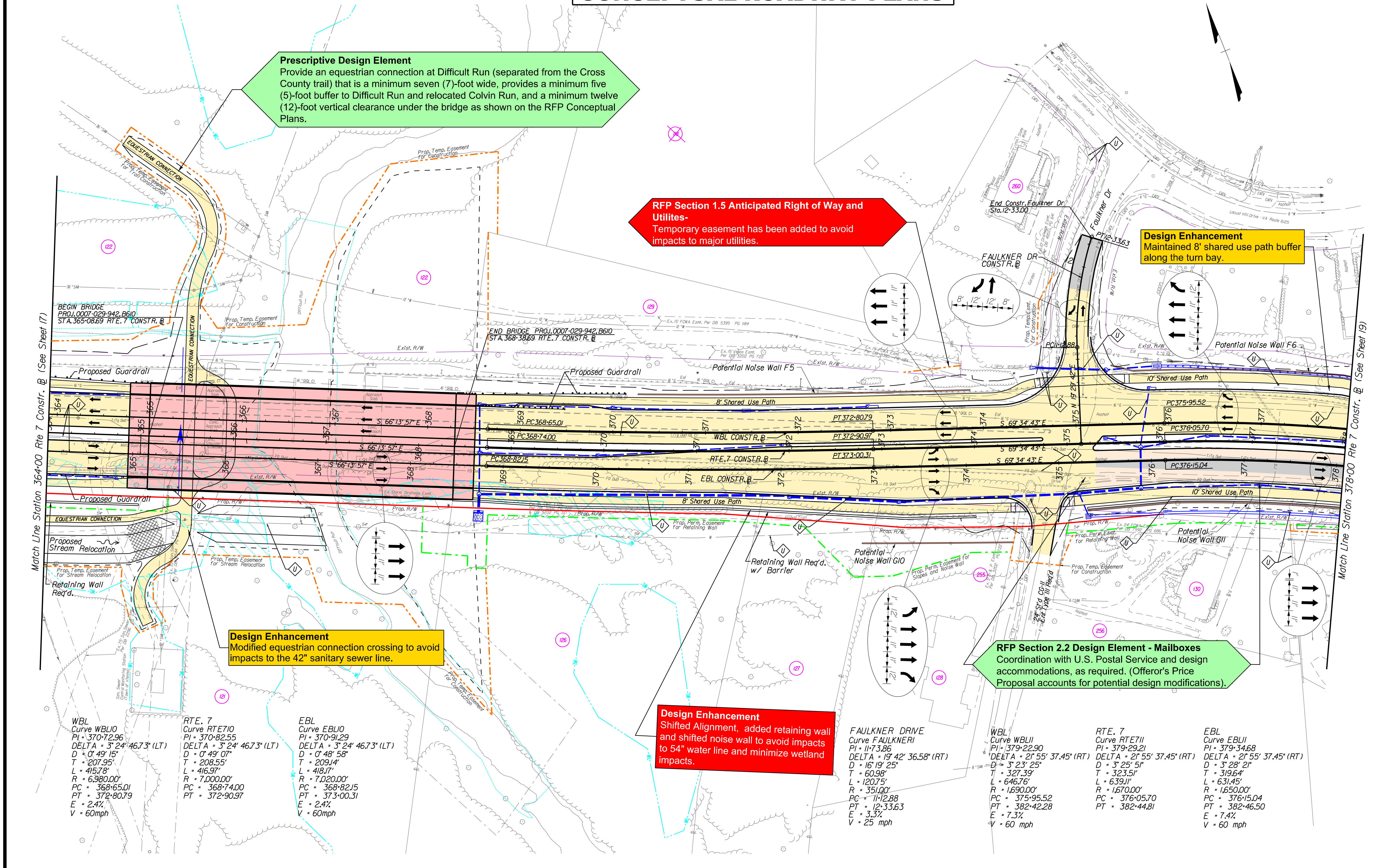
DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636 & 0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER 17
PAGE NUMBER Page 24

CONCEPTUAL ROADWAY PLANS



CONSTRUCTION LIMITS
- - - - - - CUT
— — — FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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18

PAGE NUMBER

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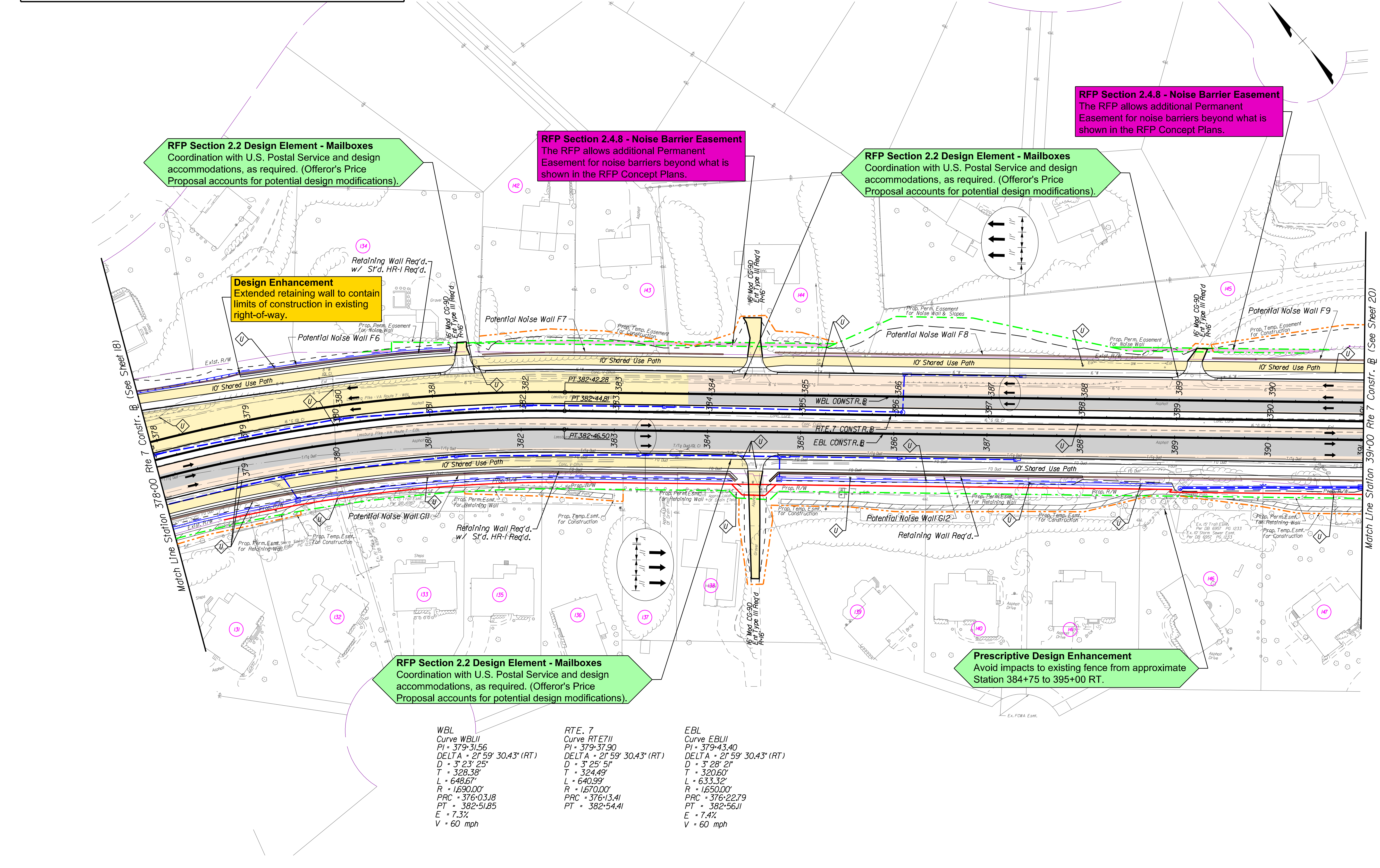
6/18/2018

CONCEPTUAL ROADWAY PLANS



CONSTRUCTION LIMITS	PROP. NEW PAVEMENT	PROP. MILL & OVERLAY	WETLAND & STREAM IMPACTS
CUT	PROPOSED BRIDGE	PROP. PAVEMENT WIDENING	OBSCURE PAVEMENT
FILL			UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
&
0007-029-942 R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER 19

d9947B019.dgn
6/18/2018

CONCEPTUAL ROADWAY PLANS

Match Line Station 391+00 Rte 7 Constr. ℄ (See Sheet 19)

Match Line Station 405+00 Rte 7 Constr. ℄ (See Sheet 21)

Design Enhancement
Shifted alignment to avoid 54" water line impacts. Maintained full buffer width.

Prescriptive Design Element
Impacts to the existing fence have been avoided

Design Enhancement
Shifted alignment, reduced buffer width & eliminated retaining wall to avoid 54" water line impacts.

Design Enhancement
Shifted alignment and reduced buffer width to avoid 54" water line impacts.

Design Enhancement
Lowered profile 2.5'. Sag curve meets comfort curve criteria for 67 MPH. Lighting to be provided.

Design Enhancement
Lowered profile 2.75'. Sag curve meets comfort curve criteria for 66 MPH. Lighting to be provided.

RTE 7 WBL
STA = 387+91.47
EL = 280.95
SSD = 605'
ex = -10.35'
K = 170
L = 1,186.00
V = 60 MPH
RFP PROPOSED GRADE
EXISTING GRADE
-3.04%
STA = 398+85.47
EL = 247.69
ex = 6.67'
K = 98
L = 725.00
V = 50 MPH
+4.32%
PROPOSED GRADE

RTE 7 EBL
STA = 387+66.41
EL = 282.00
SSD = 598'
ex = -11.58'
K = 165
L = 1,238.00
V = 60 MPH
RFP PROPOSED GRADE
EXISTING GRADE
-3.06%
STA = 398+86.00
EL = 247.69
ex = 6.43'
K = 95
L = 700.00
V = 45 MPH
+4.29%
PROPOSED GRADE

SCALE
V: 1"=20'
H: 1"=100'

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
PLAN SCALE

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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6/15/2018

CONCEPTUAL ROADWAY PLANS

WBL
Curve WBL12
PI = 409+52.15
DELTA = 1° 32' 53.32" (LT)
D = 0° 28' 39"
T = 162.13'
L = 324.24'
R = 12,000.00'
PC = 407+90.02
PRC = 411+14.26
E = NC
V = 60 MPH

RTE.7
Curve RTE712
PI = 409+54.95
DELTA = 1° 32' 53.32" (LT)
D = 0° 28' 36"
T = 162.40'
L = 324.78'
R = 12,020.00'
PC = 407+92.55
PRC = 411+17.33

EBL
Curve EBL12
PI = 409+56.91
DELTA = 1° 32' 53.32" (LT)
D = 0° 28' 33"
T = 162.67'
L = 325.32'
R = 12,040.00'
PC = 407+94.24
PRC = 411+19.56
E = NC
V = 60 MPH

WBL
Curve WBL13
PI = 412+70.89
DELTA = 1° 29' 26.35" (RT)
D = 0° 28' 33"
T = 156.63'
L = 313.24'
R = 12,040.00'
PRC = 411+14.26
PT = 414+27.50
E = NC
V = 60 MPH

RTE.7
Curve RTE713
PI = 412+73.70
DELTA = 1° 29' 26.35" (RT)
D = 0° 28' 36"
T = 156.37'
L = 312.72'
R = 12,020.00'
PRC = 411+17.33
PT = 414+30.05

EBL
Curve EBL13
PI = 412+75.67
DELTA = 1° 29' 26.35" (RT)
D = 0° 28' 39"
T = 156.11'
L = 312.20'
R = 12,000.00'
PRC = 411+19.56
PT = 414+31.76
E = NC
V = 60 MPH

WBL
Curve WBL14
PI = 418+60.64
DELTA = 3° 37' 37.87" (LT)
D = 0° 29' 54"
T = 364.13'
L = 728.02'
R = 11,500.00'
PC = 414+96.50
PT = 422+24.53
E = NC
V = 60 MPH

EBL
Curve EBL14
PI = 418+66.16
DELTA = 3° 37' 37.87" (LT)
D = 0° 29' 47"
T = 365.40'
L = 730.56'
R = 11,540.00'
PC = 415+00.76
PT = 422+31.32
E = NC
V = 60 MPH

TROTTING HORSE LN
Curve HA_TROTTING_3
PI = 12+23.82
DELTA = 5° 02' 56.74" (RT)
D = 3° 18' 15"
T = 76.45'
L = 152.81'
R = 1,734.00'
PC = 11+47.37
PT = 13+00.17
E = 2.0%
V = 25 MPH

FORESTVILLE DRIVE
Curve FORESTVILLE-1
PI = 12+78.77
DELTA = 20° 07' 35.24" (LT)
D = 6° 03' 24"
T = 167.88'
L = 332.30'
R = 946.00'
PC = 11+10.89
PT = 14+43.19
E = 2.4%
V = 25 MPH

RTE.7
Curve RTE714
PI = 418+63.82
DELTA = 3° 37' 37.87" (LT)
D = 0° 29' 50"
T = 364.77'
L = 729.29'
R = 11,520.00'
PC = 414+99.05
PT = 422+28.34

POT 15+77.05

PT 14+43.19

End Constr. Trotting Horse Lane Sta. 12+29.00

End Constr. Forestville Drive Sta. 14+12.00

End Constr. Beulah Road Sta. 21+60.00

POT 22+65.05

Match Line Station 405+00 Rte 7 Constr. ℄ (See Sheet 20)

Match Line Station 419+00 Rte 7 Constr. ℄ (See Sheet 22)

TROTTING HORSE LN CONSTR. ℄

FORESTVILLE DR CONSTR. ℄

WBL CONSTR. ℄

RTE. 7 CONSTR. ℄

EBL CONSTR. ℄

BEULAH ROAD CONSTR. ℄

BEULAH RD

Trotting Horse Lane

FORESTVILLE DR

St'd. PE-1 Entr. Req'd, Type III, W=13', Constr. 20' Return Radius

Retaining Wall Req'd w/ St'd HR-1 Req'd

Potential Noise Wall H3

Prop. Perm. Esmt for Retaining Wall

Prop. Perm. Easement for Retaining Wall

Prop. Temp. Easement for Construction

Prop. Perm. Easement for Drainage

Prop. R/W

Exist. R/W

10' Shared Use Path

Do Not Disturb

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.

Design Enhancement
Reduced limits of retaining wall.

Design Enhancement
Incorporated curb & gutter to contain design elements within existing R/W. Reduced Temporary Construction Easement Required.

Design Enhancement
Shifted alignment and reduced buffer width to avoid 54" water line impacts.

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.

Design Enhancement
Revised drainage design to remove impact to existing 54" water line as well as reduction of Permanent Drainage Easement required.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service required. Design accommodates proposed mailbox location.

Design Enhancement
Shifted alignment to avoid 54" water line impacts. Maintained full buffer width.

Design Enhancement
Shifted alignment and reduced buffer width to avoid 54" water line impacts.

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
PLAN SCALE 0 50' 100'

d9947802.dgn
6/15/2018

DESIGN - BUILD TEAM
WAGMAN LANE
General Construction | Heavy Civil | Geotechnical

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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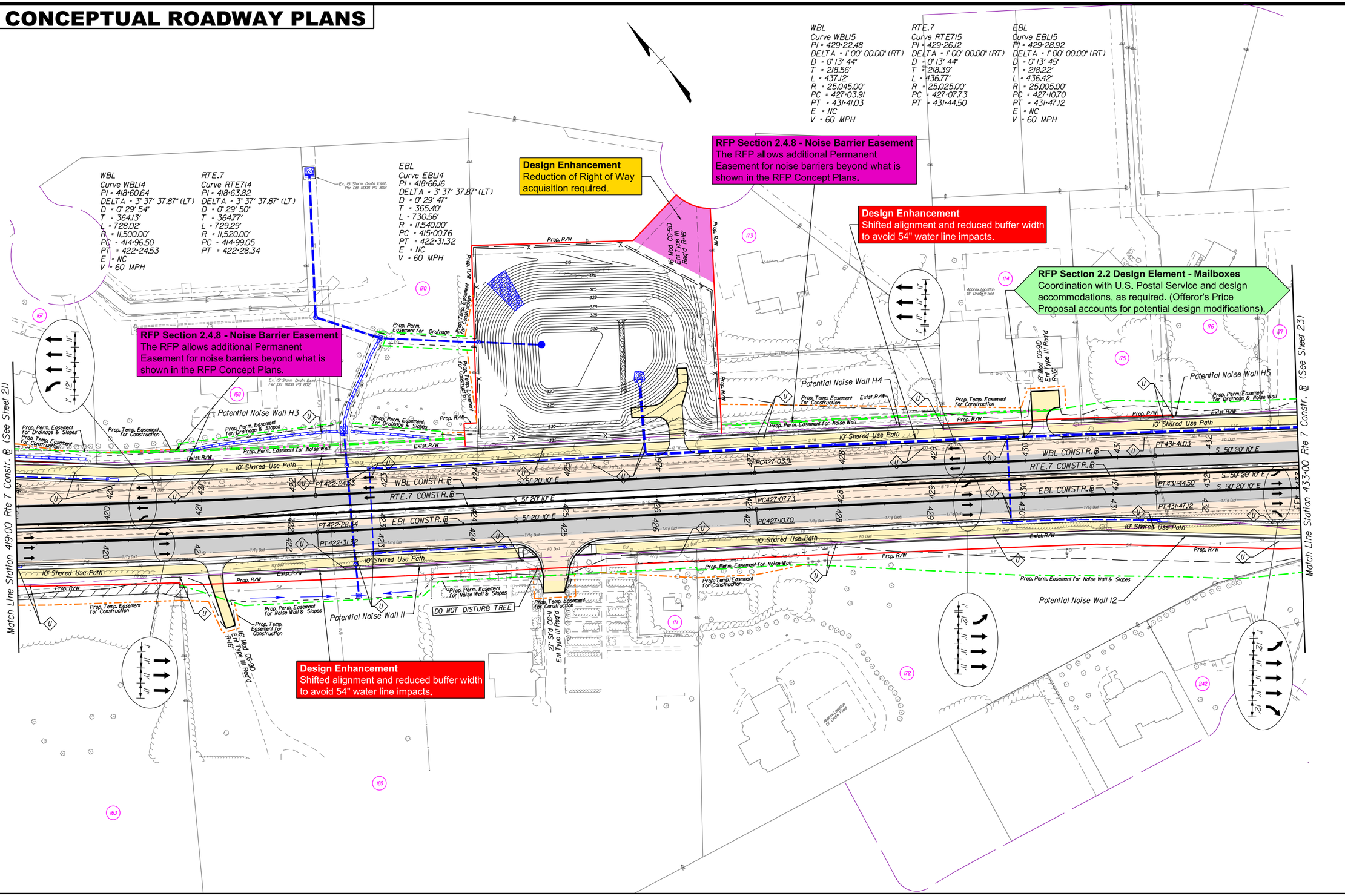
CONCEPTUAL ROADWAY PLANS



CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
PLAN SCALE 0 50' 100'

d9947B022.dgn
6/15/2018

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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CONCEPTUAL ROADWAY PLANS

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service required. Design accommodates proposed mailbox location.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service required. Design accommodates proposed mailbox location.

Design Enhancement
Shifted alignment and reduced buffer width to avoid 54" water line impacts.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.

RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for lateral shifts in noise barriers to avoid utility impacts.

Design Enhancement
Tied proposed sidewalk and curb into existing. Reduces proposed elements outside of Right of Way and the overall Temporary Construction Easement required.

RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for lateral shifts in noise barriers to avoid utility impacts.

WBL
Curve WBLI6
PI = 444+41.92
DELTA = 4° 16' 35.26" (LT)
D = 0° 28' 39"
T = 448.04'
L = 895.66'
R = 12,000.00'
PC = 439+93.88
PT = 448+89.54
E = NC
V = 60 MPH

RTE.7
Curve RTE7I6
PI = 444+46.14
DELTA = 4° 16' 35.26" (LT)
D = 0° 28' 36"
T = 448.78'
L = 897.15'
R = 12,020.00'
PC = 439+97.35
PT = 448+94.51

EBL
Curve EBLI6
PI = 444+49.51
DELTA = 4° 16' 35.26" (LT)
D = 0° 28' 33"
T = 449.53'
L = 898.65'
R = 12,040.00'
PC = 439+99.98
PT = 448+98.62
E = NC
V = 60 MPH

ATWOOD ROAD
Curve ATWOOD-1
PI = 12+49.29
DELTA = 4° 00' 57.53" (LT)
D = 2° 01' 29"
T = 99.22'
L = 198.36'
R = 2,830.00'
PC = 11+50.07
PT = 13+48.43
E = NC
V = 25 MPH

Curve ATWOOD-2
PI = 14+58.31
DELTA = 56° 10' 41.80" (RT)
D = 36° 57' 54"
T = 82.72'
L = 151.98'
R = 155.000'
PC = 13+75.58
PT = 15+27.56
E = 4.00%
V = 25 MPH

Match Line Station 433+00 Rte 7 Constr. ℄ (See Sheet 22)

Match Line Station 446+50 Rte 7 Constr. ℄ (See Sheet 24)

CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN LANE
General Construction | Heavy Civil | Geotechnical

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
&
0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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6/15/2018

CONCEPTUAL ROADWAY PLANS

Alert: Site plan proposed for this area. Check for the site plan construction at each stage of project development and order additional survey when constructed. Status of any proffered R/W should be checked at R/W stage.

RFP Section 1.5 - Anticipated Right of Way & Utilities
The RFP allows minor adjustements to fee simple right of way along WB lanes in the vicinity of Andrew Chapel Cemetery and St. Athanasius Church to eliminate conflict between noise barrier and 54" water line. Permanent easements have been adjusted to avoid impacts to major utilities.

Prescriptive Design Element
Proposed Retaining Wall to minimize impacts to Eastern Ridge School.

RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.

Design Enhancement
Shifted alignment to avoid 54" water line impacts. Maintained full buffer width.

RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for lateral shifts in noise barriers to avoid utility impacts.

Prescriptive Design Element
Do not disturb shrine on the Saint Athanasius Church property

Design Enhancement
Shifted alignment to avoid 54" water line impacts. Maintained full buffer width.

Match Line Station 23+75

TOWLSTON RD (NORTH) CONSTR.℄

TOWLSTON RD (SOUTH) CONSTR.℄

TOWLSTON RD NORTH

TOWLSTON RD SOUTH

WBL CONSTR.℄

EBL CONSTR.℄

RTE.7 CONSTR.℄

10' Shared Use Path

5' Asphalt Path

5' Sidewalk

Potential Noise Wall H1

Potential Noise Wall I1

Potential Noise Wall I6

Potential Noise Wall J2

Potential Noise Wall J4

Retaining Wall Req'd w/ Std HR-I Req'd

Match Line Station 446+50 Rte 7 Constr.℄ (See Sheet 23)

Match Line Station 460+50 Rte 7 Constr.℄ (See Sheet 25)

WBL
Curve WBLI7
PI = 459+27.29
DELTA = 16° 03' 42.84" (RT)
D = 3° 06' 50"
T = 259.61'
L = 515.81'
R = 1,840.00'
PC = 456+67.68
PT = 461+83.49
E = 7.0%
V = 60 MPH

RTE.7
Curve RTE7I7
PI = 459+29.43
DELTA = 16° 03' 42.84" (RT)
D = 3° 08' 53"
T = 256.79'
L = 510.21'
R = 1,820.00'
PC = 456+72.64
PT = 461+82.85

EBL
Curve EBLI7
PI = 459+30.72
DELTA = 16° 03' 42.84" (RT)
D = 3° 10' 59"
T = 253.97'
L = 504.60'
R = 1,800.00'
PC = 456+76.76
PT = 461+81.36
E = 7.1%
V = 60 MPH

WBL
Curve WBLI6
PI = 445+35.17
DELTA = 3° 16' 35.26" (LT)
D = 0° 28' 39"
T = 343.20'
L = 686.22'
R = 12,000.00'
PC = 441+91.96
PT = 448+78.18
E = NC
V = 60 MPH

RTE.7
Curve RTE7I6
PI = 445+39.56
DELTA = 3° 16' 35.26" (LT)
D = 0° 28' 36"
T = 343.78'
L = 687.36'
R = 12,020.00'
PC = 441+95.78
PT = 448+83.14

EBL
Curve EBLI6
PI = 445+43.10
DELTA = 3° 16' 35.26" (LT)
D = 0° 28' 33"
T = 344.35'
L = 688.51'
R = 12,040.00'
PC = 441+98.75
PT = 448+87.26
E = NC
V = 60 MPH

TOWLSTON ROAD (SOUTH)

Curve TOWLSTON_S-1
PI = 13+11.05
DELTA = 45° 38' 20.59" (LT)
D = 11° 56' 12"
T = 201.97'
L = 382.34'
R = 480.00'
PC = 11+09.09
PRC = 14+91.43
E = Match Existing
V = 30 MPH

Curve TOWLSTON_S-2
PI = 15+86.51
DELTA = 22° 46' 24.91" (RT)
D = 12° 08' 13"
T = 95.07'
L = 187.64'
R = 472.08'
PRC = 14+91.43
PT = 16+79.07
E = Match Existing
V = 30 MPH

End Constr.Towlston Rd (North) Sta.25+75.00

End Constr.Left Turn Lane Sta.14+80.50

PRC 14+91.43

PT 16+79.07

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
PLAN SCALE 0 50' 100'

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6/15/2018

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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24

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Page 31

CONCEPTUAL ROADWAY PLANS

RFP Section 1.5 - Anticipated Right of Way & Utilities
Temporary easements have been adjusted to avoid impacts to major utilities.

WBL
Curve WBL17
PI = 459+27.29
DELTA = 16° 03' 42.84" (RT)
D = 3° 06' 50"
T = 259.61'
L = 515.81'
R = 1,840.00'
PC = 456+67.68
PT = 461+83.49
E = 7.0%
V = 60 MPH

RTE.7
Curve RTE717
PI = 459+29.43
DELTA = 16° 03' 42.84" (RT)
D = 3° 08' 53"
T = 256.79'
L = 510.21'
R = 1,820.00'
PC = 456+72.64
PT = 461+82.85

EBL
Curve EBL17
PI = 459+30.72
DELTA = 16° 03' 42.84" (RT)
D = 3° 10' 59"
T = 253.97'
L = 504.60'
R = 1,800.00'
PC = 456+76.76
PT = 461+81.36
E = 7.1%
V = 60 MPH

Design Enhancement
Reduction of Permanent Drainage Easement required.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Design Enhancement
Shifted alignment to avoid 54" water line impacts. Maintained full buffer width.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service and design accommodations, as required. (Offeror's Price Proposal accounts for potential design modifications).

Design Enhancement
Shifted alignment to avoid 54" water line impacts. Maintained full buffer width.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service required. Design accommodates proposed mailbox location.

Prescriptive Design Element
Do not disturb statue on the Saint Athanasius Church property

Design Enhancement
Aligned potential noise barrier to remove direct conflict with 54" water line

Design Enhancement
Maintained 8' shared use path buffer along the turn bay.

TRAP ROAD
Curve TRAP-1
PI = 11+23.49
DELTA = 24° 43' 12.81" (LT)
D = 22° 49' 37"
T = 55.00'
L = 108.29'
R = 251.00'
PC = 10+68.49
PT = 11+76.78
E = 3.2%
V = 20 MPH

LUCKY ESTATES DR.
Curve LUCKY-1
PI = 11+01.86
DELTA = 7° 08' 12.44" (RT)
D = 11° 27' 33"
T = 31.18'
L = 62.28'
R = 500.00'
PC = 10+70.67
PT = 11+32.95
E = Match Existing
V = 20 MPH

Match Line Station 460+50 Rte 7 Constr. ℄ (See Sheet 24)

Match Line Station 474+50 Rte 7 Constr. ℄ (See Sheet 26)

CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

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6/15/2018

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
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CONCEPTUAL ROADWAY PLANS

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service required.
Design accommodates proposed mailbox location.

RFP Section 2.2 Design Element - Mailboxes
Coordination with U.S. Postal Service required.
Design accommodates proposed mailbox location.

Design Enhancement
Shifted Service Road #2's edge of pavement to accommodate Noise Barrier in median. Reduces utility impacts and permanent easements required.

Design Enhancement
Shifted alignment to avoid 36" water line impacts. Maintained full buffer width.

Design Enhancement
Reduction of Permanent Drainage Easement required.

Prescriptive Design Element
The SWM pond shall be located as shown in the RFP conceptual plans which places the SWM pond approx. half on the Wolf Trap HOA property and half on Jill's House property

Match Line Station 474+50 Rte 7 Constr. ℄ (See Sheet 25)

Match Line Station 488+50 Rte 7 Constr. ℄ (See Sheet 27)

End Constr. Royal Estates Drive Sta. 11+15.00

ROYAL ESTATES DR. CONSTR. ℄

WBL CONSTR. ℄

RTE. 7 CONSTR. ℄

EBL CONSTR. ℄

10' Shared Use Path

Potential Noise Wall K3

Do Not Disturb

End Constr. Wolftrap Run Rd. Sta. 30+75.00

WOLFTRAP RUN RD CONSTR. ℄

SERVICE ROAD #2 CONSTR. ℄

Proposed Guardrail

Retaining Wall Req'd w/ St'd HR-1 Req'd

SERVICE RD. #2
Curve SERVICE2-1
PI = 21+86.87
DELTA = 2° 09' 28.59" (RT)
D = 3° 02' 22"
T = 35.50'
L = 71.00'
R = 1,885.00'
PC = 21+51.36
PT = 22+22.36
E = 2.0%
V = 25mph

WOLFTRAP RUN RD.
Curve WOLFTRAPRUN-1
PI = 31+34.03
DELTA = 15° 54' 18.70" (LT)
D = 14° 52' 55"
T = 53.78'
L = 106.88'
R = 385.00'
PC = 30+80.24
PT = 31+87.12

SERVICE ROAD #2
Curve SERVICE2-2
PI = 34+84.19
DELTA = 5° 42' 12.90" (RT)
D = 3° 10' 59"
T = 89.67'
L = 179.18'
R = 1,800.00'
PC = 33+94.52
PCC = 35+73.71
E = 2.0%
V = 25 MPH

CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

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6/15/2018

DESIGN - BUILD TEAM

WAGMAN
General Construction | Heavy Civil | Geotechnical

LANE

DESIGN TEAM

RK&K

rda

STATE PROJECT NUMBERS

0007-029-225
R20I, C50I, B636
&
0007-029-942
R20I, C50I, B610

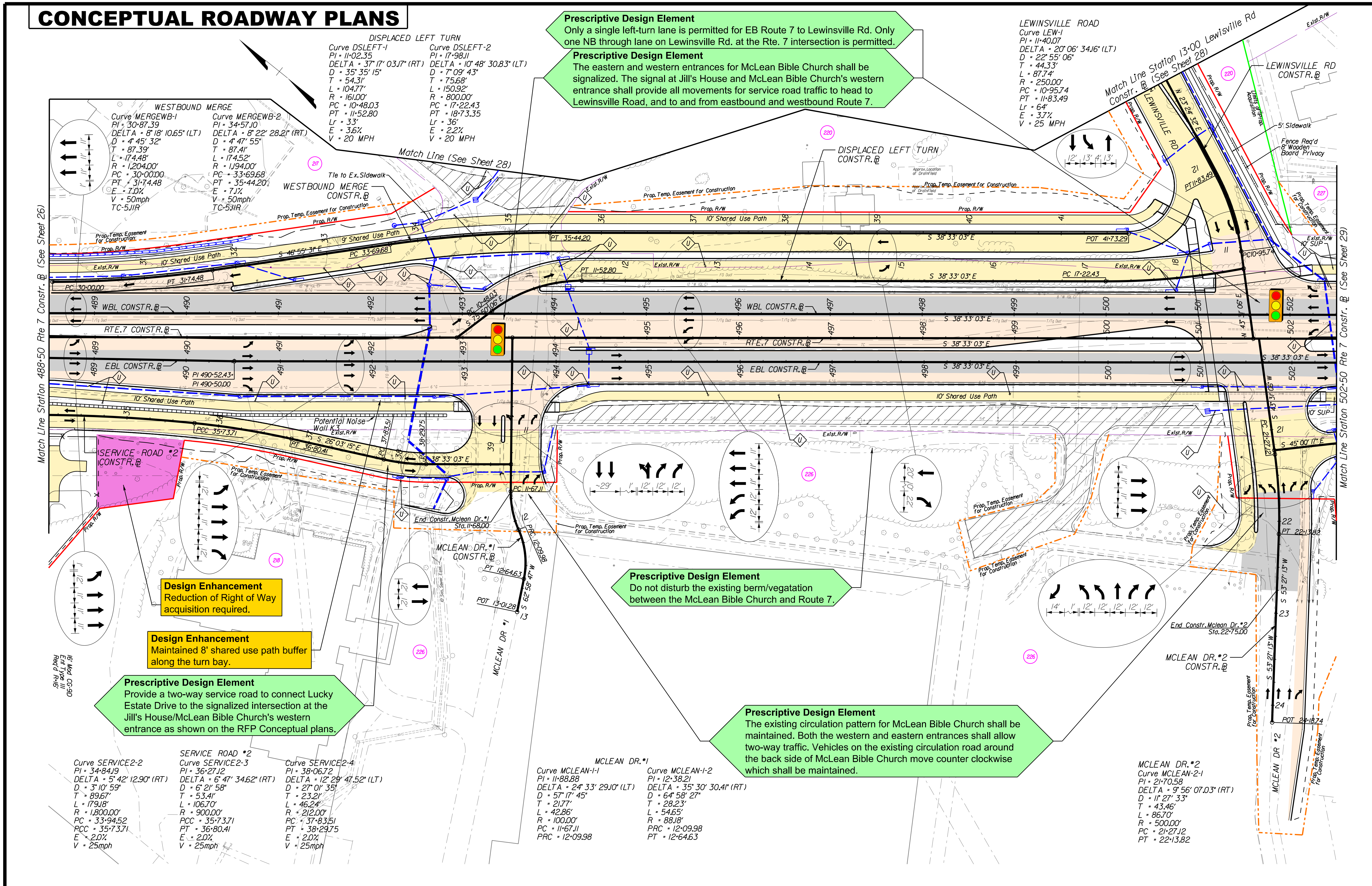
VDOT
VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER
26

PAGE NUMBER

CONCEPTUAL ROADWAY PLANS



CONSTRUCTION LIMITS
CUT
FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS: 0007-029-225 R201, C501, B636 & 0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION

ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER 27

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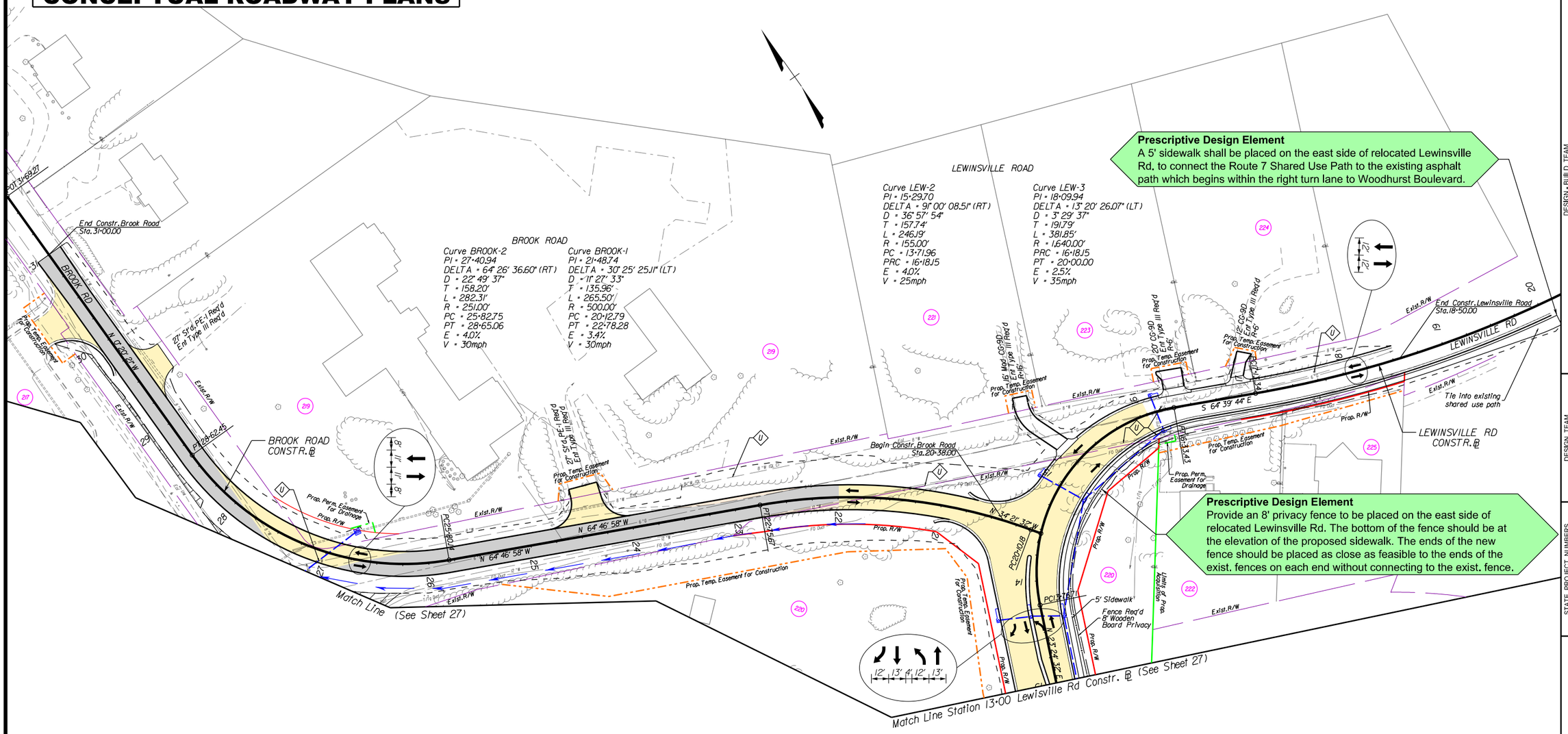
6/15/2018

CONCEPTUAL ROADWAY PLANS



Prescriptive Design Element
A 5' sidewalk shall be placed on the east side of relocated Lewinsville Rd. to connect the Route 7 Shared Use Path to the existing asphalt path which begins within the right turn lane to Woodhurst Boulevard.

Prescriptive Design Element
Provide an 8' privacy fence to be placed on the east side of relocated Lewinsville Rd. The bottom of the fence should be at the elevation of the proposed sidewalk. The ends of the new fence should be placed as close as feasible to the ends of the exist. fences on each end without connecting to the exist. fence.

CONSTRUCTION LIMITS
- CUT
- FILL

PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN
General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

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PAGE NUMBER Page 35

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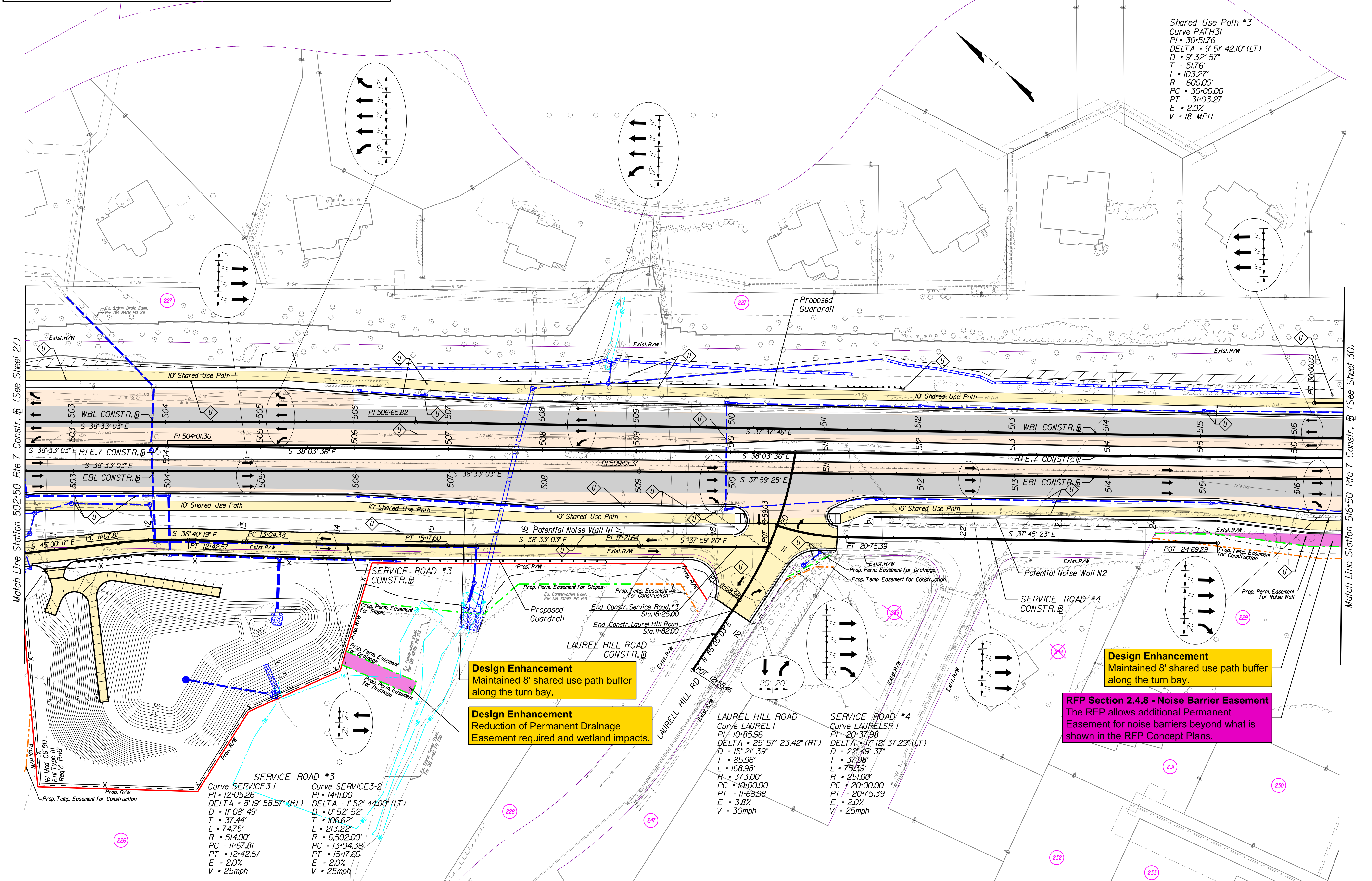
6/15/2018

CONCEPTUAL ROADWAY PLANS


Shared Use Path #3
Curve PATH31
PI = 30+51.76
DELTA = 9° 51' 42.10" (LT)
D = 9° 32' 57"
T = 51.76'
L = 103.27'
R = 600.00'
PC = 30+00.00
PT = 31+03.27
E = 2.0%
V = 18 MPH
Match Line Station 502+50 Rte 7 Constr. ℄ (See Sheet 27)
Match Line Station 516+50 Rte 7 Constr. ℄ (See Sheet 30)
10' Shared Use Path
WBL CONSTR. ℄
RTE. 7 CONSTR. ℄
EBL CONSTR. ℄
Exist. R/W
Proposed Guardrail
Potential Noise Wall N1
Potential Noise Wall N2
SERVICE ROAD #3 CONSTR. ℄
SERVICE ROAD #4 CONSTR. ℄
LAUREL HILL ROAD CONSTR. ℄
LAURELL HILL RD
Prop. Perm. Easement for Slopes
Prop. Temp. Easement for Construction
Prop. Perm. Easement for Drainage
Prop. Perm. Easement for Noise Wall
End Constr. Service Road #3 Sta. 18+25.00
End Constr. Laurel Hill Road Sta. 11+82.00
Design Enhancement
Maintained 8' shared use path buffer along the turn bay.
Design Enhancement
Reduction of Permanent Drainage Easement required and wetland impacts.
Design Enhancement
Maintained 8' shared use path buffer along the turn bay.
RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.
LAUREL HILL ROAD
Curve LAUREL-1
PI = 10+85.96
DELTA = 25° 57' 23.42" (RT)
D = 15° 21' 39"
T = 85.96'
L = 168.98'
R = 373.00'
PC = 10+00.00
PT = 11+68.98
E = 3.8%
V = 30mph
SERVICE ROAD #4
Curve LAURELSR-1
PI = 20+37.98
DELTA = 17° 12' 37.29" (LT)
D = 22° 49' 37"
T = 37.98'
L = 75.39'
R = 251.00'
PC = 20+00.00
PT = 20+75.39
E = 2.0%
V = 25mph
SERVICE ROAD #3
Curve SERVICE3-1
PI = 12+05.26
DELTA = 8° 19' 58.57" (RT)
D = 11° 08' 49"
T = 37.44'
L = 74.75'
R = 514.00'
PC = 11+67.81
PT = 12+42.57
E = 2.0%
V = 25mph
Curve SERVICE3-2
PI = 14+11.00
DELTA = 1° 52' 44.00" (LT)
D = 0° 52' 52"
T = 106.62'
L = 213.22'
R = 6,502.00'
PC = 13+04.38
PT = 15+17.60
E = 2.0%
V = 25mph

CONSTRUCTION LIMITS			
- - - - - - CUT	PROP. NEW PAVEMENT	PROP. MILL & OVERLAY	WETLAND & STREAM IMPACTS
— — — FILL	PROPOSED BRIDGE	PROP. PAVEMENT WIDENING	OBSCURE PAVEMENT

UTILITY IMPACT

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS: 0007-029-225 R201, C501, B636 & 0007-029-942 R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER 29

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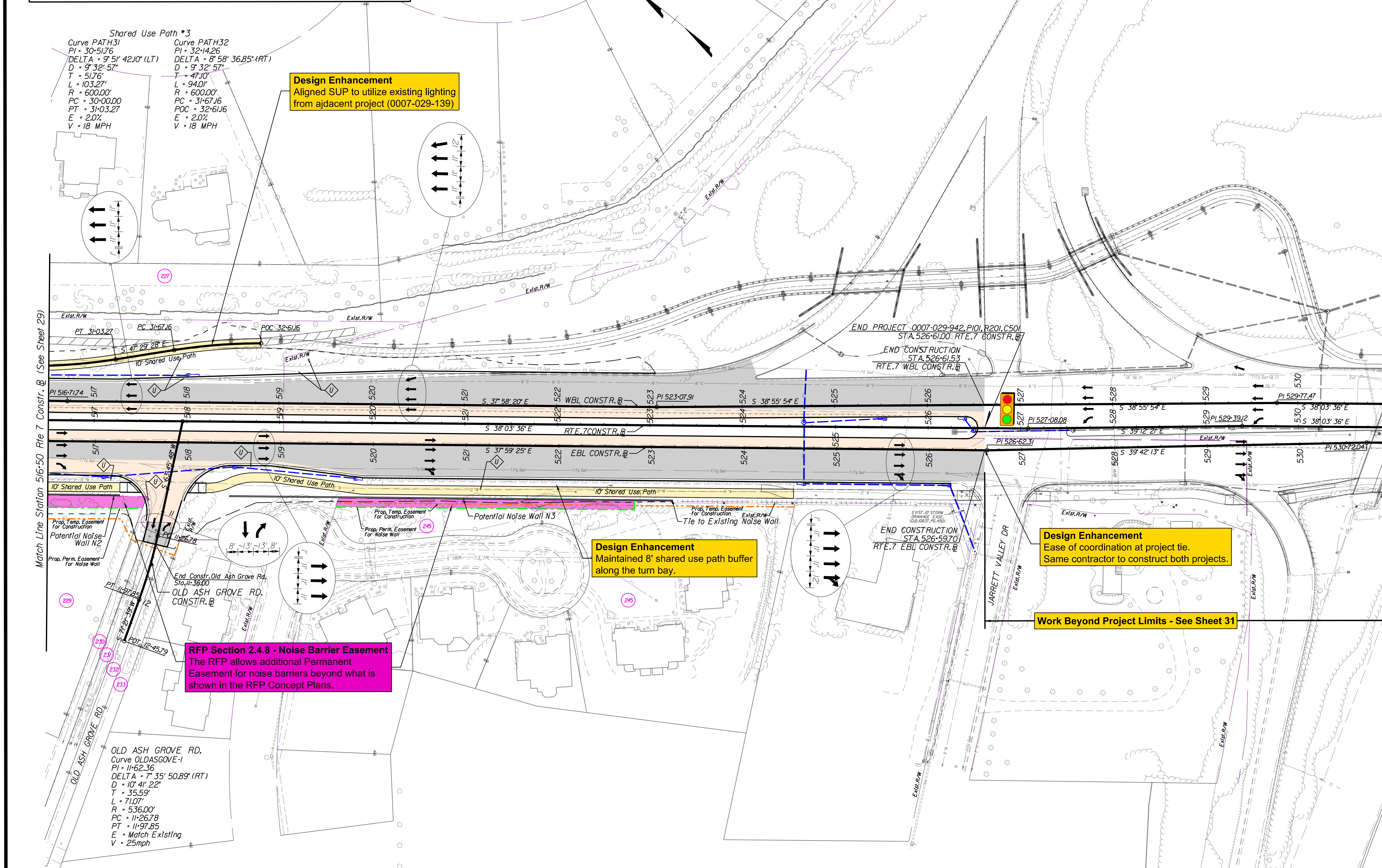
6/15/2018

CONCEPTUAL ROADWAY PLANS



Shared Use Path #3
Curve PATH31
PI = 30+51.76
DELTA = 9° 51' 42.10" (LT)
D = 9° 32' 57"
T = 51.76'
L = 103.27'
R = 600.00'
PC = 30+00.00
PT = 31+03.27
E = 2.0%
V = 18 MPH
Curve PATH32
PI = 32+14.26
DELTA = 8° 58' 36.85" (RT)
D = 9° 32' 57"
T = 47.10'
L = 94.01'
R = 600.00'
PC = 31+67.16
POC = 32+61.16
E = 2.0%
V = 18 MPH
Design Enhancement
Aligned SUP to utilize existing lighting from ajdacent project (0007-029-139)
Match Line Station 516+50 Rte 7 Constr. B (See Sheet 29)
10' Shared Use Path
S 38° 03' 36" E
RTE.7 CONSTR. B
WBL CONSTR. B
EBL CONSTR. B
END PROJECT 0007-029-942, PI01, R201, C501
STA.526+61.00 RTE.7 CONSTR. B
END CONSTRUCTION
STA.526+61.53
RTE.7 WBL CONSTR. B
END CONSTRUCTION
STA.526+59.70
RTE.7 EBL CONSTR. B
Potential Noise Wall N3
Tie to Existing Noise Wall
Potential Noise Wall N2
End Constr. Old Ash Grove Rd. Sta. 11+36.00
OLD ASH GROVE RD. CONSTR. B
JARRETT VALLEY DR
Design Enhancement
Maintained 8' shared use path buffer along the turn bay.
Design Enhancement
Ease of coordination at project tie.
Same contractor to construct both projects.
Work Beyond Project Limits - See Sheet 31
RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.
OLD ASH GROVE RD.
Curve OLDASGOVE-1
PI = 11+62.36
DELTA = 7° 35' 50.89" (RT)
D = 10° 41' 22"
T = 35.59'
L = 71.07'
R = 536.00'
PC = 11+26.78
PT = 11+97.85
E = Match Existing
V = 25mph

CONSTRUCTION LIMITS
- - - - - - CUT
— — — — FILL

PROP. NEW PAVEMENT	PROP. MILL & OVERLAY
PROPOSED BRIDGE	PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS	UTILITY IMPACT
OBSCURE PAVEMENT	

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

DESIGN - BUILD TEAM: WAGMAN General Construction | Heavy Civil | Geotechnical; LANE

DESIGN TEAM: RK&K; rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
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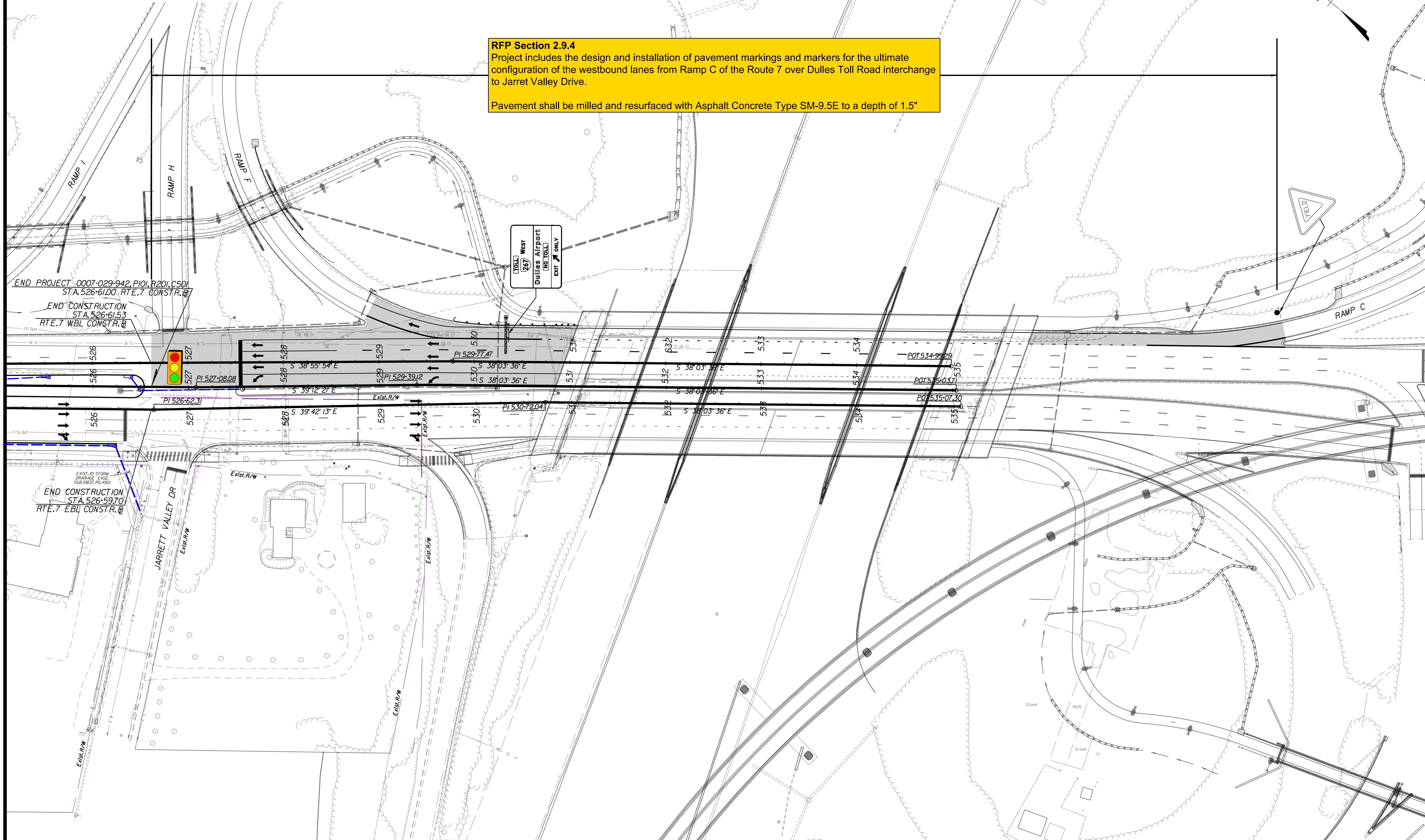
6/15/2018

CONCEPTUAL ROADWAY PLANS

Work beyond project limits in accordance with RFP Section 2.9.4

RFP Section 2.9.4
Project includes the design and installation of pavement markings and markers for the ultimate configuration of the westbound lanes from Ramp C of the Route 7 over Dulles Toll Road interchange to Jarret Valley Drive.

Pavement shall be milled and resurfaced with Asphalt Concrete Type SM-9.5E to a depth of 1.5"



CONSTRUCTION LIMITS	
- - - - - - -	CUT
— — — —	FILL

PROP. NEW PAVEMENT	PROP. MILL & OVERLAY
PROPOSED BRIDGE	PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS	UTILITY IMPACT
OBSCURE PAVEMENT	

EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT

PLAN SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE

DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225
R201, C501, B636
&
0007-029-942
R201, C501, B610

VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER 31

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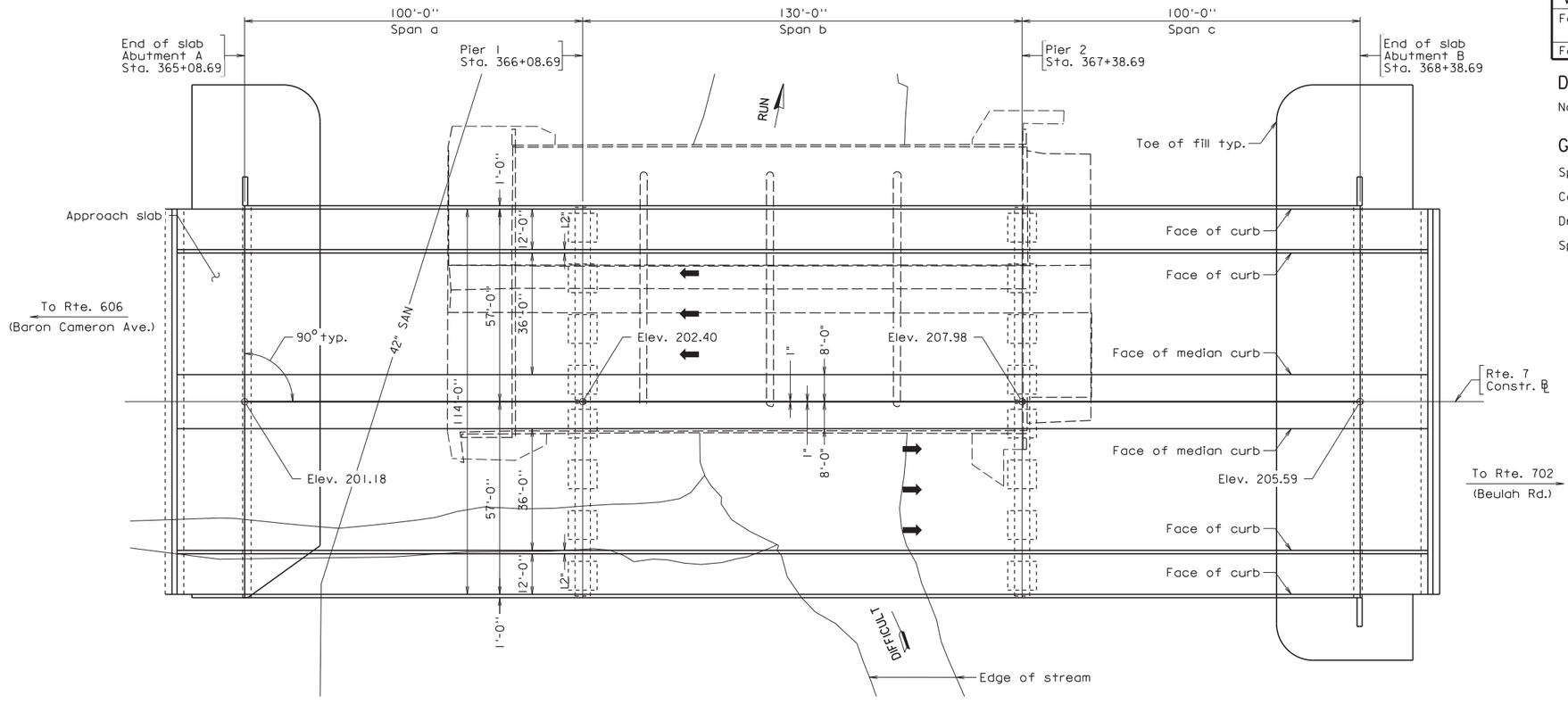
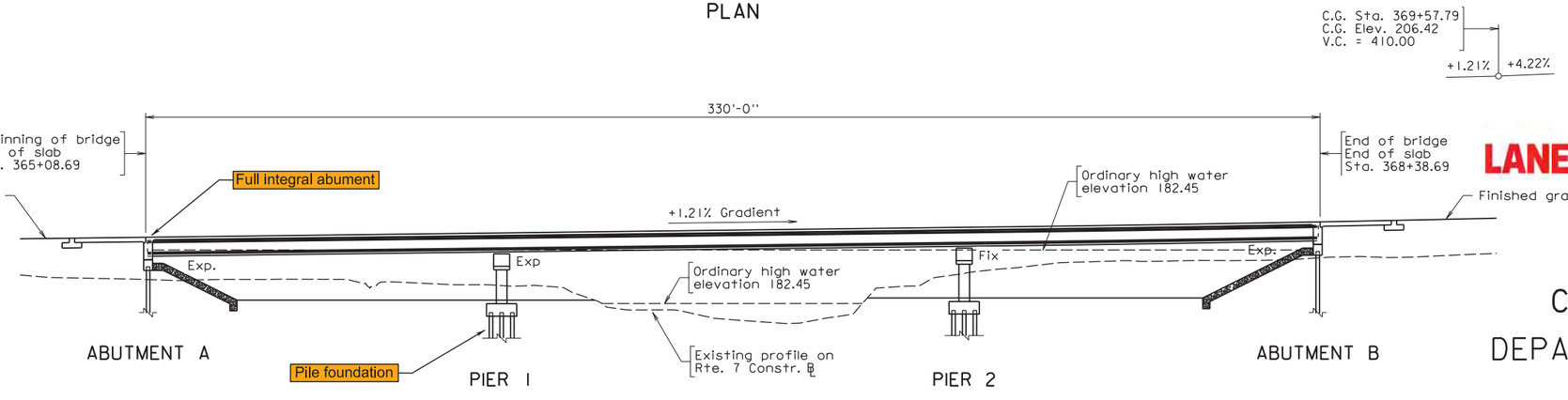
6/15/2018

4.3.2 CONCEPTUAL STRUCTURAL PLAN - ROUTE 7 BRIDGE OVER DIFFICULT RUN

STATE	FEDERAL AID		STATE	
	ROUTE	PROJECT	ROUTE	PROJECT
VA.	—	STP-5A01(745)	7	0007-029-942, B610
Federal Structure No. 000000000030828			FHWA Construction and Scour Code:	X081-S8
Federal Stewardship and Oversight Code:		FO		UPC No. 994



PLAN



DEVELOPED SECTION ALONG CONSTR. ℄

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

Span layout: 100'-130'-100' prestressed concrete beam spans

Capacity: HL-93 loading.

Drainage area: 44.4 sq. mi.

Specifications:

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

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

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

LANE WAGMAN RK&K rda

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON
RTE. 7 (LEESBURG PIKE) OVER DIFFICULT RUN
FAIRFAX COUNTY - 0.9 MI. W.
RTE. 702 (BEULAH RD.)
PROJ. 007-029-942, B610

Recommended for Approval: _____ Dat
Design Build Project Manager

Approved: _____ Dat
Chief Engineer

Date: March 4, 2018

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
VDOT PROJECT MANAGER
DISTRICT CONSTRUCTION ENGINEER
RK&K RICHMOND, VA STRUCTURAL ENGINEER

PLANS BY:	Consultant
COORDINATED:	
SUPERVISED:	
DESIGNED:	M. Chris Vaught
DRAWN:	Jill R. Boxley
CHECKED:	

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

Scale: 1" = 20'

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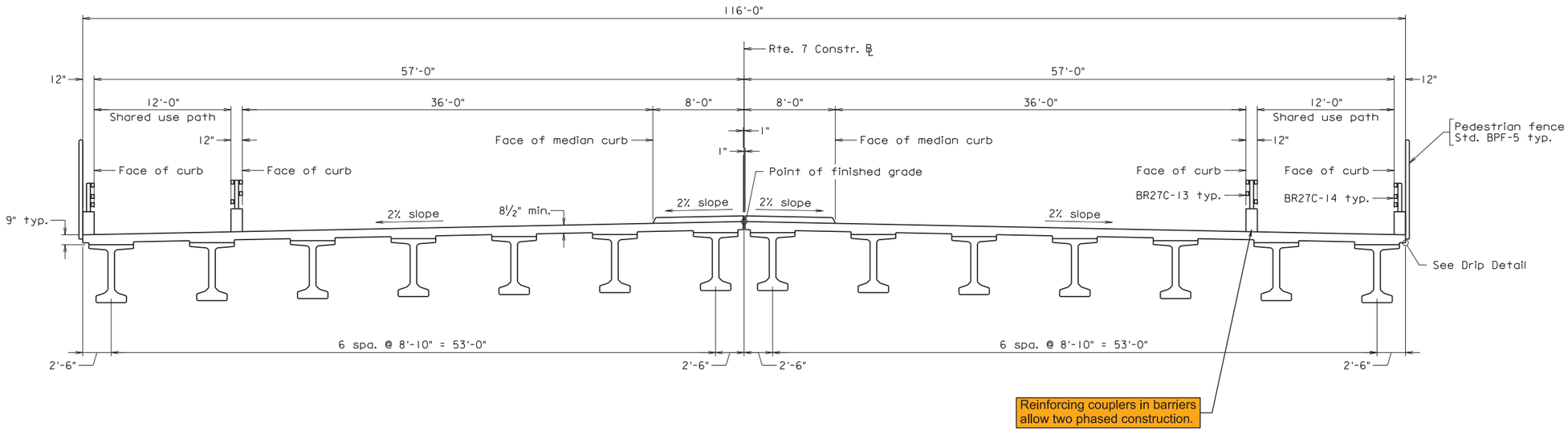
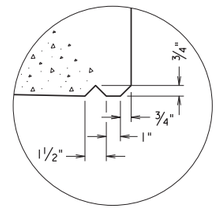
2/23/2018

STATE	FEDERAL AID		STATE	
	ROUTE	PROJECT	ROUTE	PROJECT
VA.	—		7	0007-029-941, B610





DRIP DETAIL
Not to scale

b99478_002.dgn

RK&K
RICHMOND, VA
STRUCTURAL ENGINEER

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: 3/16" = 1'-0" unless otherwise noted

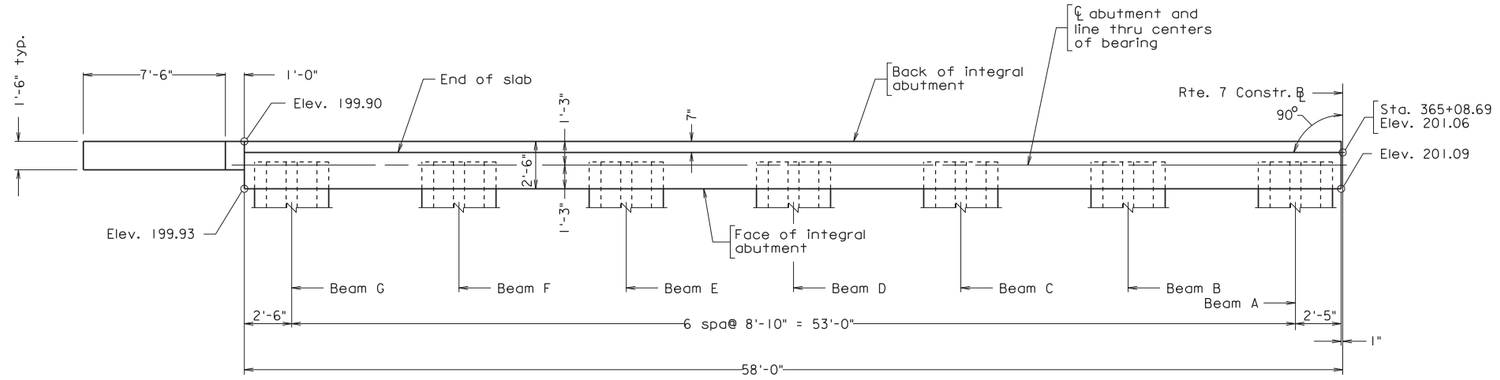
No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

TRANSVERSE SECTION

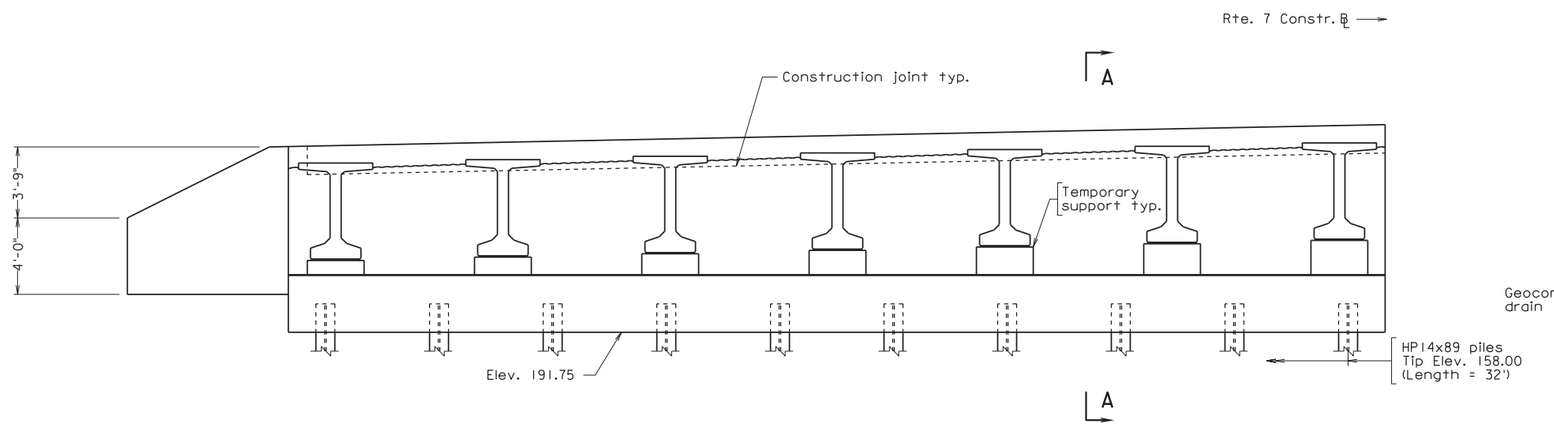
Designed: MCV	Date	Plan No.	Sheet
Drawn: JHH	Mar. 2018		2 of
Checked:			

STATE	FEDERAL AID		STATE	
	ROUTE	PROJECT	ROUTE	PROJECT
VA.	—		7	0007-029-941, B610



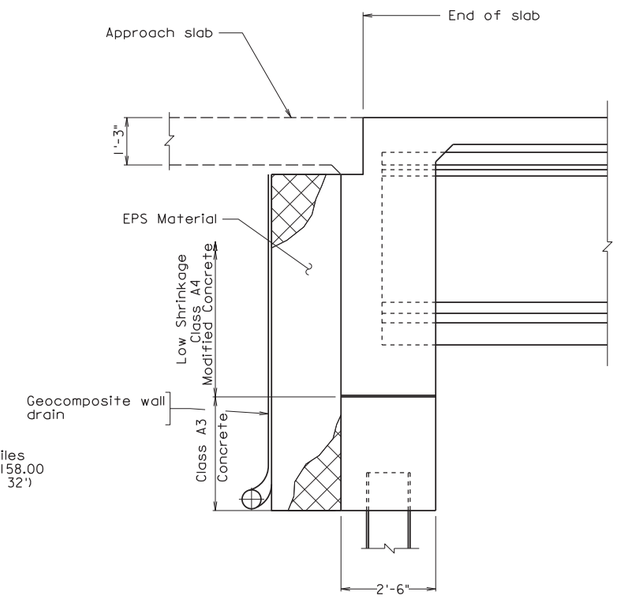
PLAN

WBL Abutment A shown, others similar

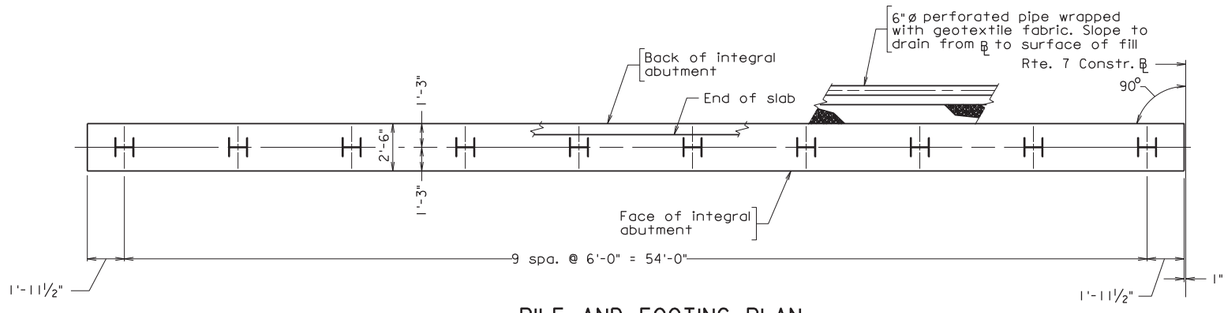


ELEVATION

WBL Abutment A shown, others similar



SECTION A-A



PILE AND FOOTING PLAN

WBL Abutment A shown, others similar

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

b99478_003.dgn

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Scale: ⅜" = 1'-0" unless otherwise noted

No.	Description	Date
	Revisions	

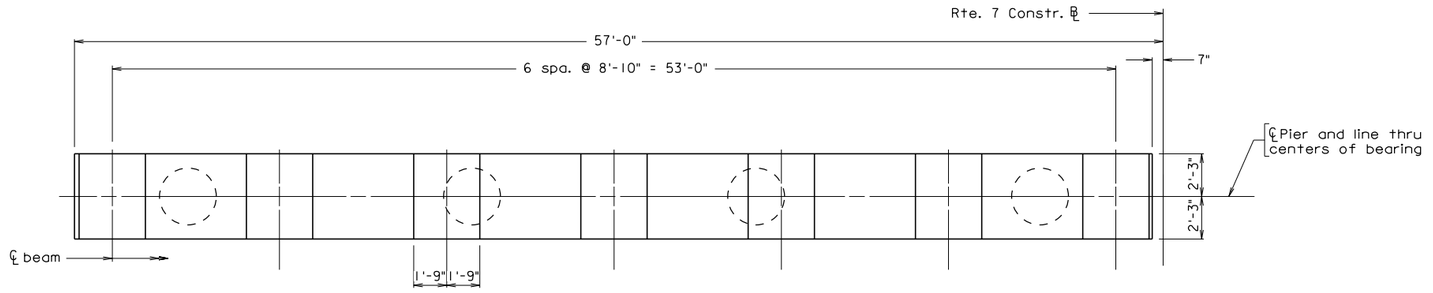
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

ABUTMENT PLAN, ELEVATION AND SECTION

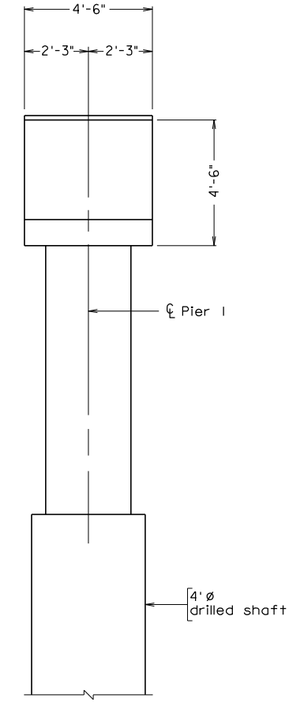
Designed: MCV	Date	Plan No.	Sheet
Drawn: JNR	Mar. 2018		3 of
Checked:			

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—		7	0007-029-941, B610	4



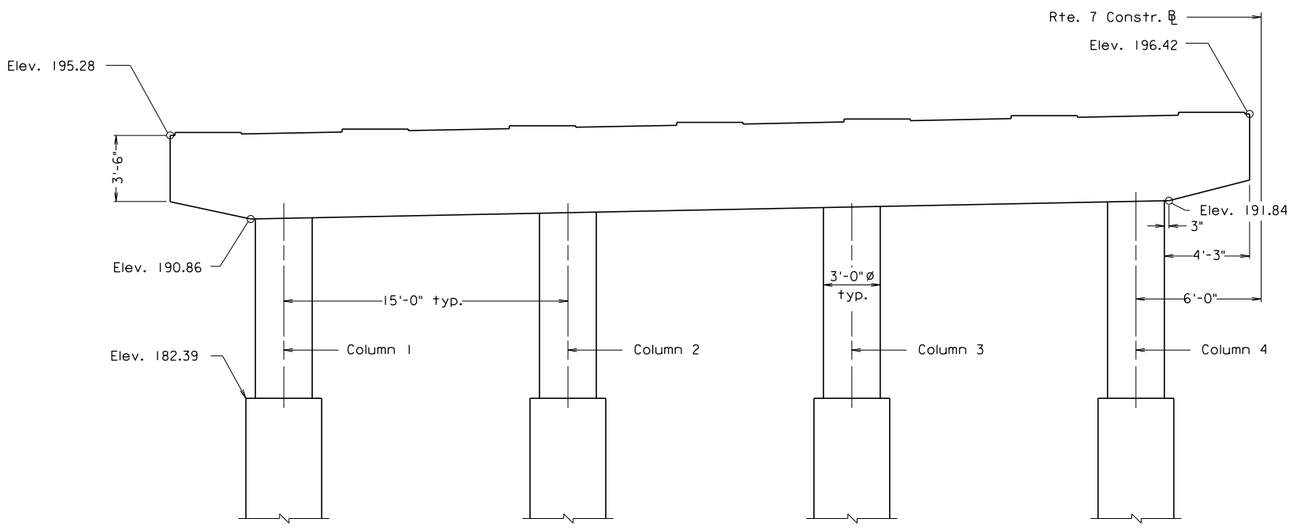
PLAN OF CAP

WBL Pier 1 shown, others similar



END VIEW

Scale: 3/8" = 1'-0"



ELEVATION

WBL Pier 1 shown, others similar

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: 1/4" = 1'-0" unless otherwise noted

b99478_004.dgn

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STRUCTURAL ENGINEER

No.	Description	Date
Revisions		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

PIER PLAN, ELEVATION AND SECTION

Designed: MCV	Date	Plan No.	Sheet No.
Drawn: JHR	Mar. 2018		4 of 4
Checked:			

STATE	FEDERAL AID		STATE	
	ROUTE	PROJECT	ROUTE	PROJECT
VA.	——	STP-5A01(745)	——	0007-029-942
Federal Structure No.			FHWA Construction and Scour Code:	X032-S5
Federal Stewardship and Oversight Code: FO			UPC No.	994

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

Span layout: 58' steel truss

Capacity: 90psf and H5 truck

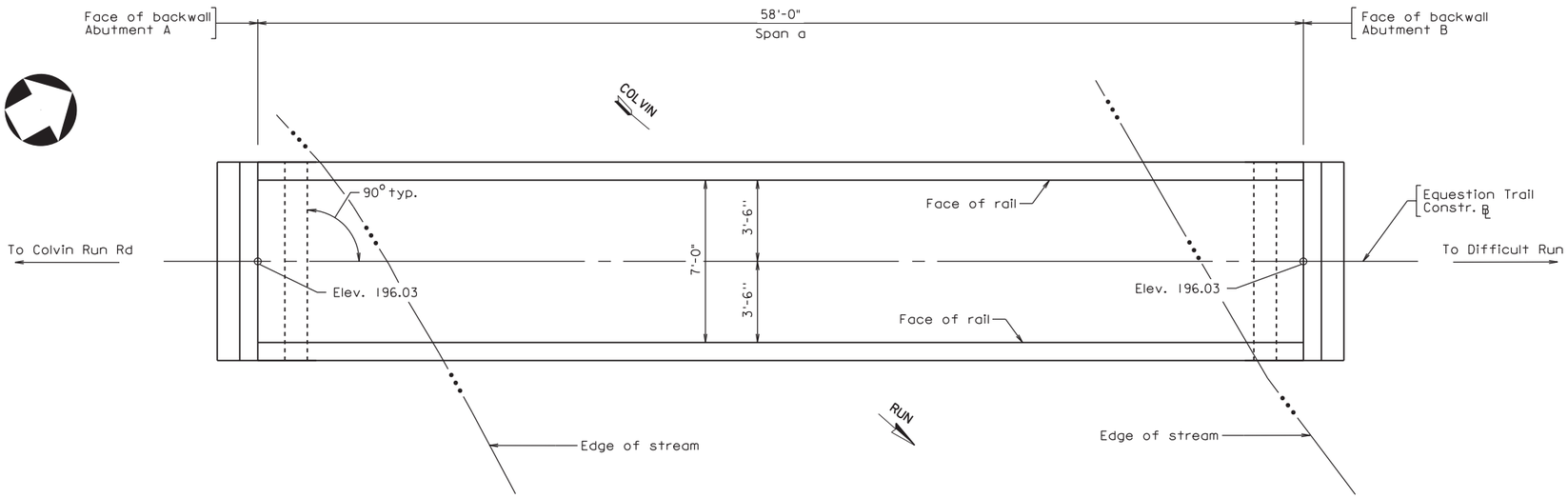
Drainage area: 44.4 sq. mi.

Specifications:

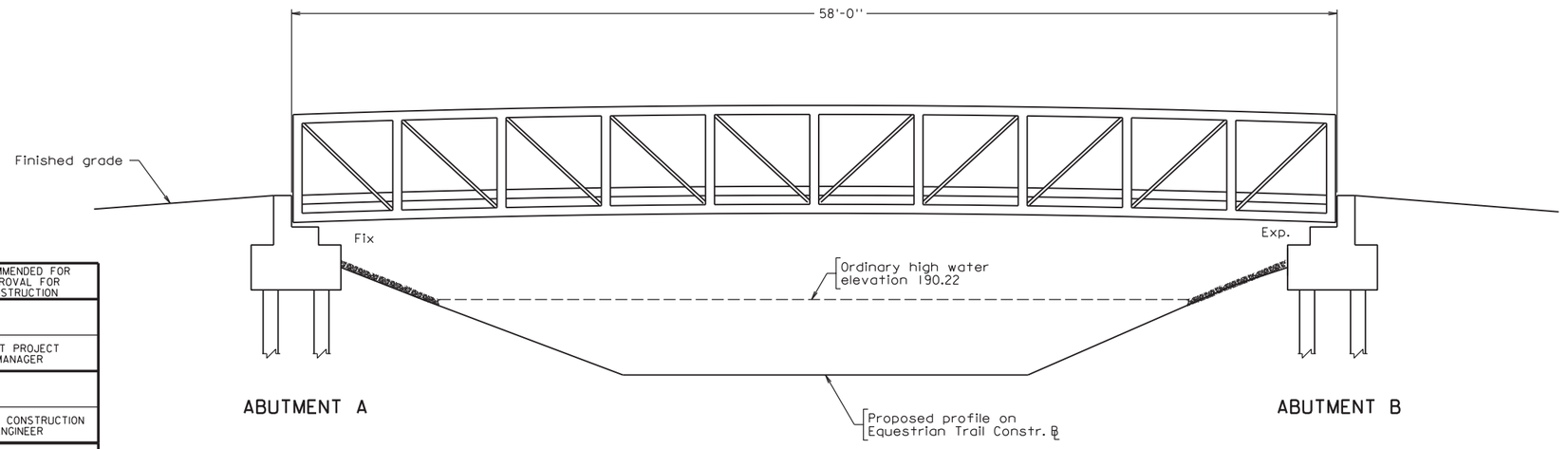
Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

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



PLAN



DEVELOPED SECTION ALONG CONSTR. ℄

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
VDOT PROJECT MANAGER
DISTRICT CONSTRUCTION ENGINEER
RK&K RICHMOND, VA STRUCTURAL ENGINEER

PLANS BY:	Consultant
COORDINATED:	
SUPERVISED:	
DESIGNED:	M. Chris Vaught
DRAWN:	Jill R. Boxley
CHECKED:	

6/15/2018 3:28:23 PM b001.dgn

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

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

No.	Description	Date
	REVISIONS	
	For Table of Revisions, see Sheet 2.	

LANE WAGMAN General Construction | Heavy Civil | Geotechnical RK&K rda

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON
EQUESTION TRAIL OVER COLVIN RUN
FAIRFAX COUNTY - 0.04 MI. W.
COLVIN RUN RD.
PROJ. 007-029-942

Recommended for Approval: _____ Dat
Design Build Project Manager

Approved: _____ Dat
Chief Engineer

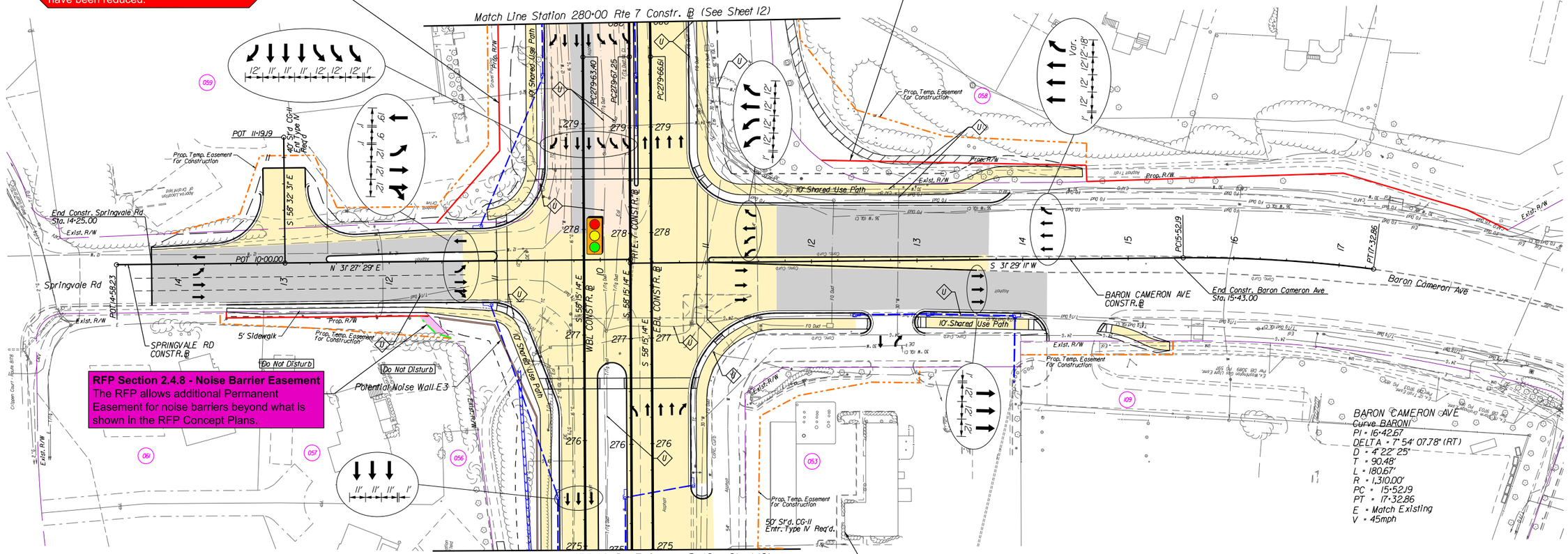
Date: March 4, 2018

4.3.3 CONCEPTUAL INTERSECTION PLAN - ROUTE 7 & CAMERON AVENUE/ SPRINGVALE ROAD AT-GRADE INTERSECTION

CONCEPTUAL ROADWAY PLANS

Design Enhancement
With the revision to the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements the proposed right-of-way take and easements have been reduced.

Design Enhancement
With the revision to the typical section to reflect the new RFP Baron Cameron Avenue intersection requirements the proposed right-of-way take has been reduced.



RFP Section 2.4.8 - Noise Barrier Easement
The RFP allows additional Permanent Easement for noise barriers beyond what is shown in the RFP Concept Plans.

Prescriptive Design Element
A single access/entrance from Eastbound Route 7 to the frontage road shall be maintained.

WBL
Curve WBL5rev
PI = 282+30.48
DELTA = 12° 25' 03.14" (LT)
D = 2° 20' 02"
T = 267.08'
L = 532.06'
R = 2,455.00'
PC = 279+63.40
PT = 284+95.46
E = 5.8%
V = 60mph

RTE. 7
Curve RTE75rev
PI = 282+39.11
DELTA = 12° 25' 03.14" (LT)
D = 2° 17' 34"
T = 271.87'
L = 541.60'
R = 2,499.00'
PC = 279+67.25
PT = 285+08.85

EBL
Curve EBL5rev
PI = 282+40.66
DELTA = 12° 25' 03.14" (LT)
D = 2° 16' 28"
T = 274.04'
L = 545.94'
R = 2,519.00'
PC = 279+66.61
PT = 285+12.55
E = 5.7%
V = 60mph

CONSTRUCTION LIMITS
CUT
FILL
PROP. NEW PAVEMENT
PROPOSED BRIDGE
PROP. MILL & OVERLAY
PROP. PAVEMENT WIDENING
WETLAND & STREAM IMPACTS
OBSCURE PAVEMENT
UTILITY IMPACT
EXIST. RIGHT OF WAY
PROP. RFP RIGHT OF WAY
PROP. RFP PERM. EASEMENT
PROP. RFP TEMP. CONSTR. EASEMENT
SCALE 0 50' 100'

DESIGN - BUILD TEAM
WAGMAN General Construction | Heavy Civil | Geotechnical
LANE
DESIGN TEAM
RK&K
rda

STATE PROJECT NUMBERS
0007-029-225 R201, C501, B636
&
0007-029-942 R201, C501, B610

VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION
ROUTE 7 CORRIDOR IMPROVEMENTS
FAIRFAX COUNTY
DESIGN-BUILD PROJECT

SHEET NUMBER 11
PAGE NUMBER Page 44

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6/18/2018

LANE

WAGMAN

General Construction | Heavy Civil | Geotechnical

14500 AVION PARKWAY
SUITE 200
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