

RESPONSE TO REQUEST FOR PROPOSALS

Interstate 66/Route 15 Interchange Reconstruction

A DESIGN-BUILD PROJECT

FROM: APPROXIMATELY 0.4 MILES WEST OF ROUTE 15

TO: APPROXIMATELY 0.6 MILES EAST OF ROUTE 15

PRINCE WILLIAM COUNTY, VIRGINIA

State Project No.: 0066-076-074

Federal Project No.: IM-066-1(341)

Contract ID Number: C00100566DB63

Volume I: Technical Proposal



SUBMITTED TO:



SUBMITTED BY:



IN ASSOCIATION WITH:





January 23, 2014

Mr. John C. Daoulas, P.E.
Virginia Department of Transportation
1401 East Broad Street
Amex Building, 8th Floor
Richmond, VA 23219

RE: I-66/Route 15 Interchange Reconstruction
From: Approximately 0.4 miles west of Route 15
To: Approximately 0.6 miles east of Route 15
Section 4.1 - Letter of Submittal

Dear Mr. Daoulas:

Shirley Contracting Company, LLC (Shirley), 8435 Backlick Road Lorton, Virginia 22079 as the Offeror, is pleased to submit this Technical Proposal for the I-66/Route 15 Interchange Reconstruction Project (the Project) to the Virginia Department of Transportation (VDOT). Together with Dewberry Consultants LLC as the Engineer of Record, our Team will provide VDOT and the traveling public with an unequaled level of assurance that the Project will be completed successfully and will exceed the priorities established.

Declarations:

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

Our Point of Contact will be:

Garry A. Palleschi
Vice President
Shirley Contracting Company, LLC
8435 Backlick Road
Lorton, Virginia 22079
703-550-3579 (Phone)
703-550-9346 (Fax)
gpalleschi@shirleycontracting.com

Our Principal Officer will be:

Michael E. Post
President/CEO/Manager
Shirley Contracting Company, LLC
8435 Backlick Road
Lorton, Virginia 22079
703-550-8100 (Phone)
703-550-3558 (Fax)
mpost@shirleycontracting.com

Final Completion Date: July 28, 2017

Proposal Payment Agreement:

An executed Proposal Payment Agreement, Attachment 9.3.1 is included as an attachment to this Letter of Submittal.

Certification of Debarment:

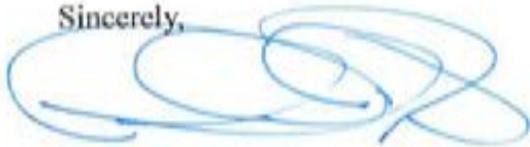
Signed Certification of Debarment Forms are included as an attachment to this Letter of Submittal.

Written Statement of Compliance:

Shirley's Technical Proposal is fully compliant with the Design Criteria Table included in the RFP Technical Requirements (Part 2) as Attachment 2.2 and all other requirements of the RFP. Shirley also certifies that the proposed limits of construction to include all stormwater management facilities are within the existing/proposed right-of-way limits shown on the RFP plans with the exception of permanent and temporary easements, and that our design concept does not require Design Exceptions and/or Design Waivers unless they are identified or included in the RFP or Addendum.

On behalf of our Team, we thank the Virginia Department of Transportation for the opportunity to submit this Technical Proposal in response to your Request for Proposals and we look forward to your favorable review.

Sincerely,



Michael E. Post
President/CEO/Manager
Shirley Contracting Company, LLC

4.2 OFFEROR'S QUALIFICATIONS

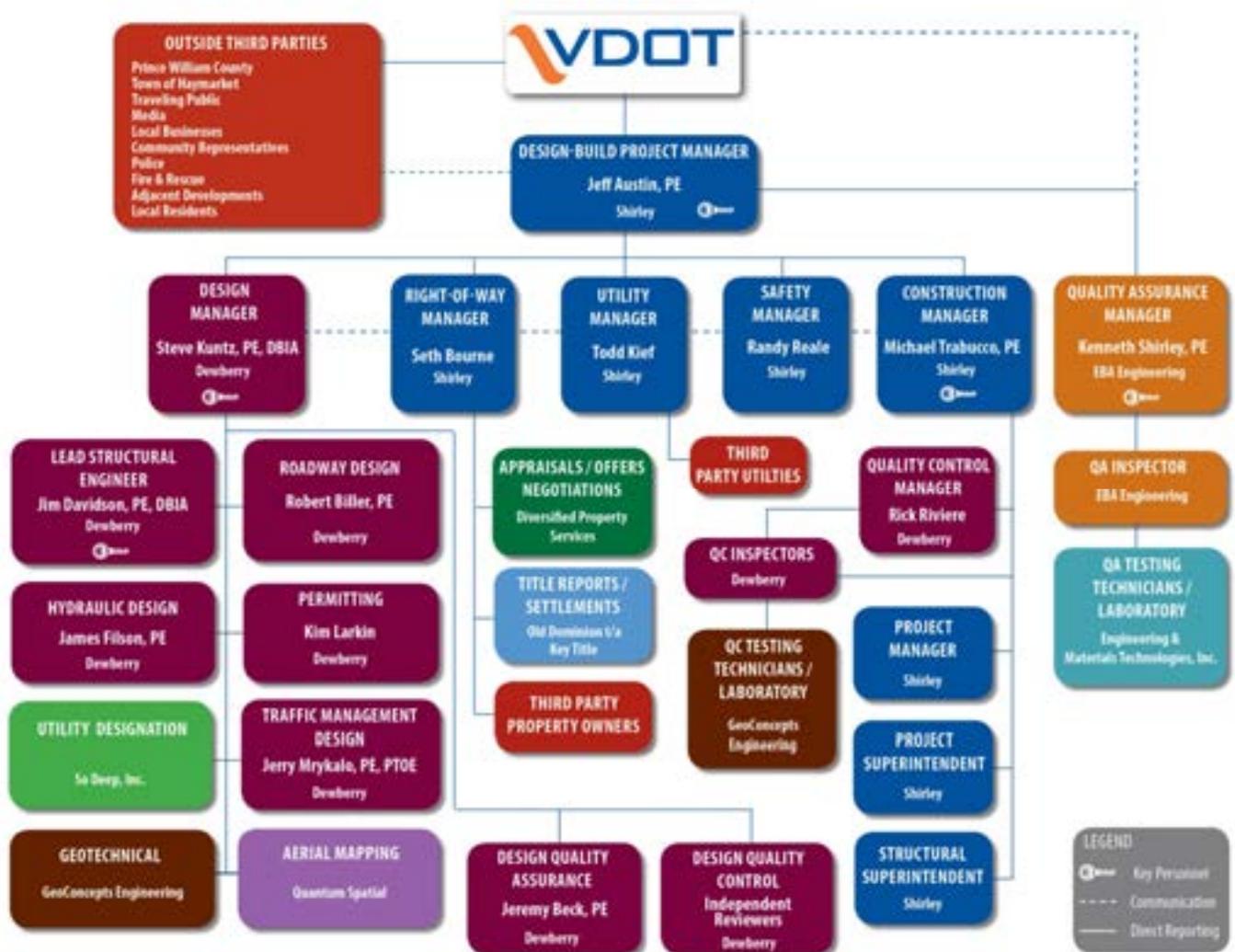
4.2 Offeror's Qualifications

4.2.1 CONFIRMATION

We confirm that the information contained in our Statement of Qualifications (SOQ) remains true and accurate in accordance with Section 11.4, except for the following: AeroMetric, Inc. has officially changed their business name to Quantum Spatial, Inc. VDOT was notified of this change on December 4, 2013.

4.2.2 ORGANIZATIONAL CHART

The Project Organizational Chart below identifies the “chain of command” and major functions to be performed and their reporting relationships in managing, designing and constructing the Project, including quality control/quality assurance. As there are no changes to the chain of command, an updated narrative is not required.



4.3 Design Concept

INTRODUCTION

The I-66/Route 15 Interchange Reconstruction Project (the Project) represents the culmination of years of construction improvements to the I-66 corridor in the rapidly growing Haymarket and Gainesville areas of Prince William County. Many of these projects have been completed, or are underway, by the Shirley/Dewberry Team, thus providing VDOT and the public with a design/build partnership with unparalleled experience and knowledge of the challenges and issues facing such a complex project. It is this experience that our Team drew upon as we prepared this Technical Proposal to explore options and alternative concepts in an effort to:

- a) Ensure the safety of all involved as **THE** top priority,
- b) Minimize the impact to the public during construction,
- c) Exceed the established goals, scope of work, and specified criteria,
- d) Reduce the long-term maintenance cost to VDOT,
- e) Create an efficient design and construction concept,
- f) Maximize coordination with adjacent projects.

As our Team reviewed the RFP Conceptual Plans, we found them to be based on solid design concepts and well-founded solutions without requiring significant modification. As discussed at our Team's Proprietary Meeting, we did develop and investigate an alternate design concept which could be investigated further during the final design phase, but does not at this time definitively result in improvements to the basic concept presented in the RFP without risk to one or more of the objectives noted above.

However, as we evaluated the design in detail and prepared our overall schedule and sequence of work, several other concepts developed by our Team during this process clearly result in improvements, enhancements, and benefits to VDOT, the public, and the affected stakeholders. These improvements are described in the following narrative and are shown in the attached Volume II Design Concept document, and include:

1. **Shifting the alignment of Route 15 approximately 20 feet to the west:** Increases safety by reducing the construction impacts to the traveling public, minimizes risk by eliminating intermediate/partial demolition of the existing bridge, provides traffic improvements earlier in the schedule, and allows for completion of bridge B-680 earlier in the construction timeline;
2. **Reducing the length of the flyover bridge (B-680) by approximately 199 feet:** Results in reduced long-term maintenance costs to VDOT, lower initial construction costs, and the ability to complete the Project approximately 2 weeks ahead of schedule, by July 28, 2017;
3. **Eliminating a bridge pier for the flyover bridge (B-680) in the median of Route 15:** Increases public safety by eliminating a fixed-object on Route 15, reduces VDOT's long-term maintenance costs, and reduces initial construction cost;
4. **Modified the profile for Ramp E:** Reduces VDOT's long-term maintenance costs and reduces initial construction costs, reduces view impacts to/from Haymarket associated with the third level ramp;
5. **Modified the configuration of Service Road A and improved parking on Parcel 02:** Minimizes impacts to the public, maintains access to adjacent, un-impacted properties, and reduces initial construction costs;

6. **Adjusted the alignment of Ramp B:** Minimizes utility impacts, increases public safety, improves traffic operations by opening improvements earlier in the schedule;
7. **Modified the alignment of Route 55:** Reduces impacts to the traveling public, especially pedestrians and bicyclists, increases the safety to the traveling public, and reduces initial construction costs;
8. **Added pedestrian movements on Route 55:** Increases the long-term safety to pedestrians and eliminates future reconstruction costs and temporary traffic control impacts associated with future traffic signal modifications;
9. **Modified the alignment of Ramp C:** Increases public safety by reducing impacts to the traveling public during construction;
10. **Miscellaneous adjustments to various design elements:** Ensures coordination between adjacent projects while meeting applicable design standards and criteria;
11. **Reduced bridge B-678 length by approximately 35 feet:** Results in aesthetics consistent with adjacent bridges currently under design, reduces long-term maintenance costs to VDOT, and minimizes initial construction costs;
12. **Reduced bridge B-679 length by approximately 42 feet, refined configuration:** Results in a reduction in VDOT's long-term maintenance and initial construction costs;
13. **Eliminated retaining wall at Ramp B:** Reduces VDOT's long-term maintenance and initial construction costs; and
14. **Modified location of sound barrier wall:** Ensures long-term access is provided for VDOT inspections.

As required by the RFP documents, our Team's concept meets or exceeds all requirements identified in the RFP and in the Design Criteria Table. Limits of construction for the Project, including the proposed stormwater management facilities, are completely within the existing and/or proposed right-of-way limits shown in the RFP plans (with the exception of permanent and temporary easements which will be developed during final design), and no design exceptions or design waivers are required by our Team's concept beyond those already identified in the RFP documents.

4.3.1 CONCEPTUAL ROADWAY PLANS

The Team's Conceptual Roadway Plans are included in our Volume II Design Concept document. Descriptions of these Design Concepts and details regarding enhancements made to the RFP Plans that meet and/or exceed project requirements are described below.

GENERAL GEOMETRY, HORIZONTAL ALIGNMENT, AND TYPICAL SECTION

The general geometry including the number of lanes, shoulders and shared use paths for each roadway section included in our Volume II Design Concept are described below. Pavement sections proposed for each roadway alignment are anticipated to be consistent with the minimum pavement sections identified in the RFP documents and are shown on the typical sections included in our Volume II Design Concept.

I-66

- **Description of Design Concept:** - Improvements to I-66 consist of auxiliary lane widening in the eastbound direction to provide a 2-lane acceleration area for Ramp C/Ramp E traffic. Additional improvements consist of reconstruction of the existing pavement at the Ramp A and Ramp D gore areas. Auxiliary lanes will be a minimum of 12' wide, and shoulders will be 12' wide except where they are adjacent to barriers or guardrail, where the shoulder width will be increased to 14' to maintain a 12' "usable" shoulder area.

- ***Construction Impacts, Safety, and Operational Considerations*** - A unique benefit that our Team can provide for the I-66 auxiliary lane improvements is that they can be constructed simultaneously with the I-66 Widening Improvements Project. **Our Team's focus on integrating the work of both projects will ensure that impacts to traffic are minimized, the safety of the traveling public is maintained, and the work is prosecuted efficiently.**

Route 15

- ***Description of Design Concept*** - Improvements will be completed to provide a horizontal alignment and vertical profile which meets the requirements for a 50mph GS-5 facility. The typical section will provide:
 - 2 – 12' thru lanes in the northbound direction
 - 3 – 12' thru lanes in the southbound direction (between Heathcote Boulevard and Ramp D)
 - Provisions for a future 12' southbound lane thru the intersection with Route 55
 - Dual 12' wide left turn lanes at Route 55, Ramp A, and Heathcote Boulevard
 - Single 12' wide right turn lanes/auxiliary lanes at Route 55, Ramp C, Ramp A, and Heathcote Boulevard
 - CG-7 curb and gutter on the outsides of Route 15, with CG-3 installed on raised medians
 - 8' wide paved right shoulder on southbound Route 15 south of Route 55

Turn lane lengths and taper lengths identified in the RFP Conceptual Plans will be provided by our concept, and intersection spacing and ramp terminal spacing will be consistent with that identified in the RFP concept. A 10' wide shared use path will be constructed along the northbound lanes of Route 15 extending from the intersection with Route 55 to the existing shared use path facility just south of Heathcote Boulevard. Access improvements to the properties on the east side of Route 15 south of Route 55 consist of right and left turn lane improvements, consolidated entrances, and relocation of entrances further to the south of Route 55.

- ***Construction Impacts, Safety, and Operational Considerations*** - First, by shifting the alignment of Route 15 approximately 20' to the west as identified above, more permanent roadway elements can be constructed well outside of existing traffic patterns, thereby reducing temporary impacts to traffic during construction, improving temporary traffic operations, and minimizing temporary/"throw-away" pavement construction. Second, the modified alignment improves the gore spacing between Heathcote Boulevard and the Ramp E diverge, allowing the full gore recovery area to be incorporated into the design - a functional improvement over the RFP concept and one that will increase safety over the long-term by providing the appropriate recovery area for lost motorists. Third, the horizontal alignment adjustment allows for the geometry approaching the Heathcote Boulevard intersection to be consistent with the existing conditions, eliminating the need for wedge-overlays or cross-slope adjustments through the existing intersection. Finally, our Team will advance the design of the foundations and piers for bridges B-678 and B-680 so that they can be completed while median widening of I-66 is also underway by our Team, avoiding multiple installations of temporary barrier on the median of I-66.

Route 55

- ***Description of Design Concept*** - Route 55 improvements will be designed and constructed to meet the standards and criteria for a 30mph GS-6 facility. As discussed in our Team's Proprietary Meeting, we have adjusted the alignment of Route 55 slightly to allow our Team to salvage more of the existing curb, gutter and sidewalk on the south side of Route 55 east of Route 15. This also

allows us to retain the existing median on Route 55 west of Route 15. The typical section proposed for Route 55 will consist of the following:

- 2 – 12' wide thru lanes in each direction
- Single 12' wide auxiliary/turn lanes approaching the Route 15 intersection
- 5' wide brick sidewalk facilities behind CG-6 curb and gutter as shown on the plans
- 4' wide on-road bike lanes on each side of Route 55 east of Route 15
- Raised, variable width stamped and colored concrete medians east of Route 15

To the west of Route 15, a 10' shared-use path will be constructed on the north side of Route 55 to provide a connection between the existing shared-use path facility further to the west, and proposed sidewalk and shared-use path improvements to the east on Route 55 and Route 15 respectively.

- ***Construction Impacts, Safety and Operational Considerations*** - The modification to the alignment of Route 55 allows our Team to substantially reduce temporary construction impacts to motorists, pedestrians and bicyclists by eliminating the need to install temporary barrier and/or channelizing devices on the south side of Route 55. Additionally, the existing sidewalks on the south side of Route 55 can be maintained by our proposed configuration, eliminating the majority of the removal and reconstruction identified in the RFP concept. The proposed alignment modification does not introduce additional property, parking, or grading impacts along Route 55, including to the Quarles property. Finally, our Team's localized knowledge and understanding of the Haymarket area's traffic and pedestrian movements led us to identify the need for the additional pedestrian crossing of Route 55 proposed during our Proprietary Meeting. We are pleased that our recommendation to VDOT was recognized as a safety improvement and operational benefit to the Project, and as a result, the ultimate pedestrian crossing and associated signal equipment will be included in our Team's configuration of the Route 15/Route 55 intersection signal layout.

Ramps A and D

- ***Description of Design Concept*** - Ramps A and D will be designed and constructed to meet standards and criteria for 50mph GS-R facilities, with design speeds reduced to 30mph at the intersections with Route 15. The typical section for both ramps will consist of a 16' wide single lane ramp which will transition to/from a 24' wide dual lane ramp near the intersections with Route 15. Shoulder widths will be a minimum of 4' to the right of traffic and a minimum of 8' to the left of traffic. Where guardrail is required, shoulder widths will be increased by 2' to account for reductions in the usable shoulder width adjacent to guardrail.
- ***Construction Impacts, Safety and Operational Considerations*** - Construction of the Ramp A and Ramp D improvements will be sequenced so that temporary traffic barrier necessary for the lane and shoulder widening is only placed on one side of the ramp at a time. Because our Team will be underway with construction of the I-66 Widening Improvements Project, we will sequence construction of the ramp gore area pavement replacement to minimize traffic impacts and duration of construction, eliminate overlapping work areas, and ensure that all lane shifts necessary to completely reconstruct the pavement are designed and implemented to maintain the full, existing design speed throughout the construction area.

Ramp B

- ***Description of Design Concept*** - Ramp B will be designed and constructed to meet standards and criteria for a 50mph GS-R facility except at the intersection with Route 15 where a 30mph design speed will be provided in accordance with the RFP requirements. Lane widths will be 12' wide with

an overall ramp width varying between 24 and 48 feet, and paved shoulders will be provided on the left and right sides of the ramp with widths of 4' (minimum) and 8' (minimum) respectively.

- ***Construction Impacts, Safety and Operational Considerations*** - As shown on the RFP Conceptual Plans, there are existing overhead utilities on Parcel 12 that conflict with the construction of Ramp B. While relocation of these poles will be required so that they are located outside of the proposed limited access line, our Team has adjusted the alignment of Ramp B so that relocation of the poles is not required prior to construction of the ramp. This modification will allow construction of the Ramp to proceed independent and/or concurrent with these utility relocations, thus providing operational benefits to the traveling public earlier in the construction process. Additionally, our Team is proposing to install curb at the outside edge of shoulder near the beginning of Ramp B. This modification, combined with the installation of guardrail in line with the face of curb, will allow our Team to construct a 2:1 cut slope between the ramp and the sound barrier wall. Doing so eliminates one of the retaining walls identified in the RFP Conceptual Plans and provides a reduction in VDOT's long-term maintenance costs.

Ramp C

- ***Description of Design Concept*** - Ramp C will be designed and constructed to meet standards and criteria for a 50mph GS-R facility except at the intersection with Route 15 where a 30mph design speed will be provided in accordance with the RFP requirements. The typical section will consist of a single 16' wide travel lane and 4' (minimum) and 8' (minimum) shoulders to the left and right of the ramp, respectively. Lighting improvements will be installed as required by the RFP documents, and are described in more detail later in this document. A grade separated crossing of the 10' wide shared use path will be constructed below Ramp C to maintain a free-flow pedestrian crossing of the proposed interchange ramp.
- ***Construction Impacts, Safety and Operational Considerations*** - In an effort to minimize construction impacts to the traveling public, our Team's design concept shifts the alignment of Ramp C slightly away from the existing ramp. This allows construction of the pedestrian underpass to occur outside of existing traffic. A full width right shoulder can be maintained on the existing ramp while the underpass is constructed, and grading of slopes and the required vertical profile adjustment can be completed without impacts to traffic on the existing ramp. Our Team will also sequence work so that the auxiliary lane and gore area construction at I-66 is constructed concurrently with the outside widening of I-66, avoiding multiple temporary barrier placement operations and reducing temporary impacts to the traveling public.

Ramp E

- ***Description of Design Concept*** - Ramp E will be designed and constructed to meet standards and criteria for a 35mph GS-R facility, except at the junction with Ramp C, where the design speed will be increased to 50mph while avoiding adverse superelevation break-overs in the gore area. The typical section will consist of a single 16' wide travel lane and 4' (minimum) and 8' (minimum) shoulders to the left and right of the ramp, and the location of the wide shoulder will vary along the ramp to ensure adequate sight-lines are maintained along the entire ramp alignment. Lighting improvements will be installed as required by the RFP documents, and are described in more detail later in this section under "Other Key Project Features."
- ***Construction Impacts, Safety and Operational Considerations*** - Our Team has improved the alignment of Ramp E to provide increased gore spacing to Heathcote Boulevard and the ability to construct a standard ramp gore design. This results in improved traffic operations at the diverge as

well as increased motorist safety by providing the required recovery area at the gore. The adjusted alignment of Ramp E has also allowed our Team to make substantial enhancements to the design of bridges B-679 and B-680 which will be described in more detail in section 4.3.2 below.

Service Road A:

- **Description of Design Concept** - Service Road A will be designed and constructed to meet standards and criteria for a 20mph GS-8 facility. The typical section will consist of two 12' wide travel lanes and curb and gutter (CG-6) with a raised grass bench adjacent to the roadway. At the intersection with Route 15, pavement widths will be increased to accommodate turning movements and off-tracking of a WB-62 vehicle.
- **Construction Impacts, Safety and Operational Considerations** - The design of Service Road A will be similar to the RFP Conceptual Plans. However, our Team has made, and will continue to make, improvements to the parking and access on/through Parcel 02. Specifically, our Team is proposing to construct a full depth asphalt entrance on Service Road A as opposed to the concrete CG-9B identified in the RFP plans. This modification is necessary due to the high volume of truck traffic utilizing the existing paved and gravel driveways to access their properties. Following construction of Service Road A, all of this traffic will be routed through the new entrance, and our proposed full depth pavement section will be much more durable and will therefore reduce future maintenance costs. Additionally, following completion of updated aerial mapping and field surveys, our Team will determine if curb and gutter or open shoulder parking lot facilities are more appropriate on Parcel 02 to ensure proper drainage is maintained adjacent to and around the existing building. In an effort to eliminate any access concerns during construction, the entirety of Access Road A and the adjoining entrances and parking improvements will be completed before existing access to and from Route 15 is reconfigured. This will ensure that property owner access is maintained throughout construction.

MAXIMUM GRADES

The maximum grades anticipated for each major roadway segment are identified in Table 1 below, along with the approximate location of each maximum grade:

Table 1 - Maximum Grades

Alignment/Facility	Maximum Grade	Location of Max. Grade
Route 15	4.00%	Approaching Heathcote Boulevard
Route 55	0.82%	Match Existing West of Route 15
Ramp A	-3.78%	Below Ramp E Bridge (B-679)
Ramp B	2.61%	Approaching Route 15
Ramp C	-5.33%	At Gore Area with Ramp E
Ramp D	3.12%	Matches Existing
Ramp E	6.00%	Prior to and After Ramp E Bridge (B-680)
Shared Use Path	5.00%	At Box Culvert Crossing of Ramp C
Service Road A	3.00%	Approaching Sheetz Property

CONCEPTUAL HYDRAULIC AND STORMWATER MANAGEMENT DESIGN

Our Team has investigated the drainage requirements and layout of the proposed interchange taking into account the drainage design which we have recently developed for the I-66 Widening Project. Based on that design, we have identified ways to simplify and improve upon the drainage layout shown in the RFP Conceptual Plans.

Roadway Drainage

Drainage improvements for Route 15, Route 55, and the interchange ramps will consist of a combination of curb inlets, closed storm sewer systems, and open channels and ditches. Designs for each of these systems will be completed in accordance with the VDOT Drainage Manual specific to the type of facility being designed and the design criteria for each roadway element. Drainage layouts have been completed in a way which minimizes disruption to traffic during installation, minimizes deep culvert and structure installations in an effort to reduce long-term maintenance costs and improve accessibility for inspections, and to reduce potential erosion and runoff concerns from the taller slopes associated with the high fill placement approaching each of the bridges on the Project. Provided below is a brief description of the key project drainage elements:

Closed System Drainage – Since the majority of the Project consists of improvements on roadways with curb and gutter typical sections, the bulk of the drainage facilities required will consist of inlets placed along the curb or curb and gutter, connected to closed system storm drainage facilities. Closed system designs will be developed where curb and gutter is installed, consistent with the required roadway typical section, as well as where curb or barriers are introduced to prevent erosion of slopes in high fill areas, or where curb is introduced at the edges of paved shoulders to avoid earthwork operations and reduce impacts to adjacent private properties. In all locations, **concrete curb or curb and gutter will be installed, and no use of asphalt curb or back-up material is proposed in an effort to improve the long-term durability and eliminate the need for future maintenance.** Where closed systems are introduced along I-66 and in front of the proposed bridge abutments, the shoulder width will be increased from 12’ to 14’ to maintain adequate “usable” shoulder widths for disabled vehicles and maintenance access. All closed system drainage pipes will utilize materials allowed in the VDOT PC-1 criteria, and will convey water to adequate receiving channels including project ditches, existing systems (which are analyzed to be adequate for the additional flow), or to proposed stormwater management facilities.

Major Cross Culverts – As shown on our Volume II Design Concept document, several new cross culverts will be required to maintain drainage below Route 15, I-66, and the interchange ramps. **Each of these facilities has been located so that crossings are perpendicular to the travel lanes, reducing the installation length and impacts to traffic when temporary traffic barrier is installed at the edges of the existing roadway.** All pipes which are placed in more than 20’ of fill or have excessive cover depths will be “upsized” according to VDOT drainage requirements in consideration for future inspection and access needs. In several instances, our Team has adjusted the locations of existing culverts in order to improve grading of the interchange and to reduce the lengths and/or heights of retaining walls or bridge wing walls. Where possible, new cross culverts will be installed in phases to avoid impacts to the traveling public. Where culvert installations are excessively deep, the use of jack and bore methods for installation will be used.

Open Channels and Roadside Ditches – Our Team’s concept utilizes several open channels and roadside ditches to maintain flow from off-site areas through the Project and to convey on-site water to appropriate receiving channels. During final designs, all ditches will be developed to reduce the need for guardrail or barrier installation through identification of traversable and recoverable roadside slopes, or by locating the ditches outside of the roadway clear-zone. All ditches will be analyzed for both capacity and velocity, and linings will be identified which will prevent and eliminate erosion concerns both during construction and following completion for improved long-term maintenance. When wetland delineations are completed for the Project, we will investigate areas where “ditch-for-ditch” mitigation is feasible to reduce environmental impacts and to create a final product which is similar to existing, established channels and streams.

Stormwater Management

Our Team has utilized the current versions of VDOT Instructional & Information Memorandums, VDOT's Stormwater Program Advisory, the VDOT Drainage Manual, and the VDOT BMP Handbook, combined with our Team's unique and improved interchange configuration to meet the phosphorus removal rate requirements for stormwater management for the Project.

Based on our analysis of the standards and the configuration of our proposed interchange and roadway improvements, our Team intends to construct two (2) stormwater management basins within VDOT's right-of-way for adequate stormwater management. Doing so, we are able to treat the anticipated 3.67 pounds per year for the Broad Run watershed and 7.16 pounds per year for the Bull Run watershed which will be necessary based on our interchange concept. Each of these basins will be Extended Detention Enhanced basins which will not only meet the treatment requirements, but will also minimize maintenance concerns through construction of more "conventional" stormwater management facilities. As identified in our Volume II Design Concept document, these basins are located:

1. North of I-66 adjacent to Ramp A, and
2. On the west side of Route 15 at the southern limits of the Project.

Access to each of these facilities will be provided through construction of gravel access roads with adequate turnarounds for maintenance vehicles. A cable barricade will be installed across the access roads to prevent unwanted parking or access, and the basin adjacent to Route 15 will be completely enclosed with chain link fence for safety purposes and to prevent unwanted access. A double-swing fence gate will be installed at this pond where the access road enters the fenced in area.

In addition to the two proposed stormwater management basins, our Team will design the proposed improvements to ensure drainage continues to be conveyed to the existing stormwater management basins located adjacent to the Project – one to the north of I-66 near the new Haymarket Health Center, and one on the east side of Route 15 immediately adjacent to Norfolk Southern Railroad.

PROPOSED UTILITY IMPACTS

Table 2 below is a summary of the known utilities, anticipated conflicts, and our Team's plan for relocating unavoidable conflicts.

Table 2 - Existing Utilities & Potential Conflicts

Utility/Owner Description	Approximate Location	Known Or Potential Conflict	Relocation Plan/Avoidance Strategy
OVERHEAD POWER/COMM LINES			
Overhead Dominion Power/Comcast Communication Line	Route 15 Northbound Sta. 503+25 to 512+00	Possible conflict with Route 15 NB widening	Coordinate with design & place new poles if existing utilities can't be avoided.
Overhead Dominion Power/Verizon Communication Line	Route 15 Northbound Sta. 513+20 to 522+00	Possible conflict with Route 15 NB widening	Coordinate with design & place new poles if existing utilities cannot be avoided.
Overhead Dominion Power Line	Route 15 & Ramp C/D Signal	Conflict with Proposed Signal Construction & Route 15 widening	Coordinate with design and relocated to new poles.
Overhead Verizon Communication Line	Route 55 North side widening approx. sta. 608+00 - 616+00	Possible conflict with turn lane construction to Quarles entrance (06) & Route 55 north side widening.	Coordinate with design and relocate to new poles.

Utility/Owner Description	Approximate Location	Known Or Potential Conflict	Relocation Plan/Avoidance Strategy
Overhead Dominion Power Line	Route 55 South side	Possible conflict with Route 55 EB.	Due to realignment of Route 55 should be able to avoid - No conflicts expected.
Overhead Dominion Power Line	Ramp B - North side & Intersection with Route 15	Existing Poles located within L/A limits will be relocated	Coordinate with design and relocate to new poles.
Overhead Dominion Power Line	Route 15 East side Sta. 530+00 to 536+00	Existing Poles located outside of proposed widening.	Coordinate with design - No conflicts expected.
UNDERGROUND POWER/COMMUNICATION LINES			
Verizon	Route 15 East side from Route 55 to Ramp C/D	Potential Conflict with Route 15 road widening/Shared use path.	Expose and relocate line without disconnection.
Fiber Light Underground Line	Route 55 South side Sta. 600+00 to 61200	Potential Conflict with Storm Drainage.	Coordinate with design and avoid conflicts; expose & relocate without disconnection.
DVP Underground Line	Route 55 north side - Feed to CVS	Potential Conflict with Route 15/55 Widening.	Coordinate with design & relocate as necessary.
NSRR Communication	Route 55 Traffic Signal & NSRR Warning Signal	Potential Conflict with Route 15 Southbound Widening west side.	Coordinate with design & relocate as necessary.
PWC WATER			
18" PWC Waterline	Route 15 Crossing Sta. 511+10	Possible conflict with Storm Drainage.	Accurately locate & coordinate with design of storm avoid expected
PWC SANITARY SEWER			
10" PWC Sanitary Sewer	I-66 WB Sta. 144+70 (Outside)	No conflict expected.	Coordinate with I-66 Widening Project.
10" PWC Sanitary Sewer	Route 55 North side Sta. 610+75 to 615+00	No Conflicts with Sanitary Line expected - Adjust MH Frame & Covers.	Accurately locate & coordinate with design adjust MH frame & covers as necessary.
3" PWC Sanitary Force Main	Route 15 Crossing Sta. 511+15	Potential conflict with road widening operations.	Accurately locate & coordinate with design; No conflict.
GAS LINES			
12" Washington Gas Line	Route 15 crossing station 509+00	Potential conflict with subgrade.	Coordinate with current roadway design to avoid relocation.
12" Washington Gas Line	Route 55 crossing station 604+00	Potential conflict with subgrade.	Coordinate with current roadway design to avoid relocation.
12" Washington Gas Line	Route 15 West side station 537+00 to Ramp E station 20+00	Conflict with roadway construction.	Relocate existing facility alignment offset & lower facility

SOUND BARRIER WALL LOCATIONS

Consistent with the RFP documents, one (1) sound barrier wall be designed and constructed adjacent to westbound I-66 and Ramp B, extending from approximately westbound I-66 Sta. 136+10 to approximately Ramp B Sta. 14+60. The proposed sound barrier wall is shown on sheet 5 in our Volume II Design Concept document, and is further discussed in Section 4.3.2(c) below.

“OTHER” KEY PROJECT FEATURES

In addition to the major design and construction elements described above, there are several other key project features which must be integrated into the Conceptual Plans. These include:

Traffic Signals

As part of the interchange and roadway improvements, three (3) traffic signals will need to be maintained as part of our maintenance of traffic activities and ultimately removed and replaced. A fourth signal will need to be modified based on changes to existing lane configurations. The signals requiring modification or replacement are:

1. Route 15 at Ramps A & B (maintained, removed and replaced)
2. Route 15 at Ramp D (maintained, removed and replaced)
3. Route 15 at Route 55 (maintained, removed and replaced)
4. Route 15 at Heathcote Boulevard (modified)

Because of the relatively close intersection spacing on Route 15 between Ramps A & B, Ramp D, and Route 55, it will be critical for the our Team to properly synchronized these signals during and after construction to avoid negative affects to traffic. During final design, we will work with VDOT to obtain the existing operation and timing information for each of these signals, and will collect additional traffic counts on project roadways so that signal timings and phasing can be updated to optimize the signal operations. As with all of our projects, we will investigate ways to implement interim improvements during construction.

As an **enhancement** to the RFP requirements, the Team plans to implement an early improvement to the signal at the Route 15/Route 55 intersection immediately upon mobilization. At this location, the existing controller limits the operations of the intersection when the signal is pre-empted by the at-grade Norfolk Southern railroad crossing immediately to the south of the Project. **Our Team will explore installation of the permanent signal controller and equipment as soon as possible so that operations can be improved throughout construction.** This should provide immediate reductions to the queuing on Route 15 by allowing dual left turns from southbound Route 15 to eastbound Route 55 when a train is crossing Route 15.

Roadway Lighting

Consistent with the requirements of the RFP documents, our Team will design and construct two separate lighting systems for Route 15 between the Ramp A/B and Ramp D intersections, and for the entire length of Ramp E including the merge area on eastbound I-66. We recognize that the installation of these lighting improvements will enhance the safety and operations of the roadway facilities, and we will complete the lighting analysis using AGI-32 software to ensure proper illuminance levels and lighting ratios are achieved while avoiding bright and/or dark spots on all illuminated roadways. On Route 15, intersection lighting will be incorporated into the signal designs, and decorative light fixtures will be used which are consistent with the RFP documents and coordinated with the fixtures proposed on the Old Carolina and Catharpin Road bridges as part of the I-66 Widening Project.

Coordination with Norfolk Southern Railroad (NSRR)

A critical Team coordination effort throughout the entire design and construction phases will be with Norfolk Southern Railroad (NSRR) regarding their at-grade crossing on Route 15 just beyond the southern Project limits. With our on-going coordination efforts with NSRR at the US Route 29/Linton Hall Interchange, our Team is well-positioned to seamlessly integrate this coordination with this Project's scope. While our concept will require no direct impacts to NSRR property or their existing facilities, communication between the existing at-grade crossing gates/arms, the advance warning lights, and the proposed signal improvements at Route 15 and Route 55 will need to be coordinated throughout construction. We will work closely with NSRR and VDOT to ensure safe, uninterrupted operation of the at-grade crossing of the railroad. We will include NSRR in discussions to optimize the Route 15/Route 55

intersection signal, and will ensure that any temporary and permanent modifications to the signalized intersection are properly coordinated in advance with NSRR.

4.3.2 CONCEPTUAL STRUCTURAL PLANS

The Team's Conceptual Structural Plans are included in our Volume II Design Concept document. Descriptions of these Conceptual Plans and details regarding enhancements made to the RFP Plans that meet and/or exceed project requirements are as follows:

BRIDGE STRUCTURES:

B-678: Route 15 Bridge over I-66

- **Typical Section** - The typical section is consistent with the RFP configuration and provides 3 – 12' wide southbound lanes, 2 – 12' wide northbound lanes, 2' offsets to bridge parapets, 1' offsets to the variable width raised concrete median, a 14' wide barrier separated shared-use path facility adjacent to the northbound lanes, and a variable width median to accommodate dual 12' wide northbound left turn lanes.
- **Structure Span/Type** - The structure consists of 2 - 100' spans. Abutments will be full integral type behind MSE Walls and the pier will be located in the median of I-66, supported by a pile foundation. Girders will be concrete bulb-tees.
- **Finishes** - Finishes will consist of concrete bulb-tee girders, architectural treatments on all vertical concrete surfaces as outlined in the RFP, ornamental fencing, and light poles on the outside bridge parapets.
- **Construction Impacts, Safety and Operational Considerations** - First, as described in the Route 15 roadway narrative above, the horizontal alignment of the bridge has been shifted approximately 20 feet to the west. This allows Phase 1 of the bridge to be constructed to accommodate all northbound and southbound traffic when complete. After traffic is switched in Phase 2, the entire existing bridge can be demolished and the remainder of the bridge can be constructed in a single phase, thereby eliminating a partial demolition phase of the existing bridge. This eliminates temporary traffic impacts associated with multiple nighttime closures of I-66 since all existing bridge girders can be removed during a single construction period. Our Team's modification also eliminates the need to complete a load rating of the existing bridge, thus eliminating the risk that it will not meet rating requirements introduced by a temporary roadway section. Second, the alignment modifications proposed on Route 15 and Ramp E allow for the elimination of the B-680 bridge pier in the median of Route 15 immediately adjacent to B-678. This allows the median barrier, impact attenuator, and fixed object in the median of Route 15 to be eliminated from B-678, resulting in significant safety improvements to motorists. Third, our proposed bridge span configuration has allowed us to reduce the bridge length by approximately 35', resulting in less future maintenance costs to VDOT, and it will match the configuration and span arrangements of the Old Carolina Road and Catharpin Road overpasses of I-66 immediately adjacent to the Project.

B-679: Ramp E Bridge over Ramp B

- **Typical Section** - The typical section will consist of a single 16' wide travel lane, a 6' right shoulder, and a 10' wide left shoulder. The shoulder widths have been switched from the conventional layout to provide adequate sight lines along the ramp and adjacent to the barrier, consistent with those identified in the RFP Conceptual Plans.
- **Structure Span/Type** - The structure consists of a single 66' span utilizing steel girders and deck slab extensions with MSE abutments, consistent with the requirements of the VDOT *Structure and Bridge Manual*, Volume V, Part 2. Although the bridge is on a curved alignment, our Team is able

to utilize straight girders with variable width overhangs, which allows us to utilize the deck slab extension abutments.

- **Finishes** - As required by the RFP documents, steel girders are proposed for this bridge to provide an aesthetic appearance consistent with that of bridge B-680. Architectural treatments will be incorporated on all vertical concrete surfaces as outlined in the RFP.
- **Construction Impacts, Safety and Operational Considerations** - The reduction in span length of approximately 42' represents a significant improvement for future maintenance and inspection needs by VDOT. Due to the combined modifications to the alignment and profile of Ramp E, we have also been able to reduce the overall length and height of the MSE retaining walls, further reducing future inspection and maintenance needs. Abutment B, located along the left shoulder of Ramp A, has been located such that horizontal sight lines are maintained below the bridge.

B-680: Ramp E Flyover Bridge over I-66 and Route 15

- **Typical Section** - The typical section will be identical to that of B-679 described above, including the reversed 6' and 10' shoulders to provide proper sight distances along the bridge.
- **Structure Span/Type** - The structure will consist of two spans of 153'-6" and 169'-6". The bridge superstructure will consist of curved steel girders and Virginia Alternate abutments behind MSE walls in accordance with the VDOT *Structure and Bridge Manual*, Volume V, Part 2. The bridge pier will be located in the median of I-66 and will be in-line with the B-678 bridge pier located immediately to the east.
- **Finishes** - Steel girders are required based on the curvature of the ramp and the length of the required spans. As noted above, B-679 has been designed so that both ramp bridges will have identical steel girder aesthetic properties, and concrete elements of the bridge and walls will incorporate the required architectural treatments identified in the RFP.
- **Construction Impacts, Safety and Operational Considerations** - First, the reduction of the overall bridge length from approximately 525' to approximately 326' represents a significant improvement through reductions to long-term maintenance and inspection needs and costs. Second, the combined effect of our Team's improved alignment of Ramp E and the reduced bridge length has allowed us to eliminate the pier from the median of Route 15. This represents a significant safety improvement not only to the traveling public through elimination of several fixed objects on Route 15, but also to VDOT staff who will not need to inspect the pier immediately adjacent to traffic for the life of the structure. Third, the profile for Ramp E to the east of Route 15 has been adjusted, resulting in reduced MSE retaining walls and reduced long-term maintenance and inspection costs, as well as reduced view impacts to and from the Town of Haymarket, which will help continue public support for the Project.

RETAINING WALLS

Wall No. 1

This wall is located on the north side of Route 55 from approximately Sta. 610+40 to Sta. 612+90 between the existing parking lot and proposed sidewalk. Our Team's concept design is for this wall to be a VDOT Standard RW-3 having an exposed height of less than 3', and will incorporate architectural treatments on the exposed face and a fence since it will be constructed adjacent to the proposed sidewalk facility. The wall will maintain the necessary buffer adjacent to the sidewalk facility, as well as allow for opening and closing of doors in the reconfigured parking lot on the opposite side of the wall and adjacent to the fence. During final design and following completion of more detailed field surveys, we will investigate ways to minimize or eliminate this wall in an effort to reduce long-term maintenance costs, as well as the potential for graffiti.

Wall No. 2

This wall is located along the east side of Service Road A. Our Team's concept design is for this wall to be a VDOT Standard RW-3 with an anticipated exposed height ranging from 6' to 8' to avoid impacts to the existing parking lot on Parcel 03. The wall will have architectural treatments incorporated on the exposed face for consistency with other concrete project elements. During final design and following completion of more detailed field surveys, we will investigate ways to minimize or eliminate this wall in an effort to reduce long-term maintenance costs, as well as eliminate the potential for unsightly graffiti since it is located well off of any major roadway and in an unlit area.

Wall No. 3

A third wall was identified in the RFP Conceptual Plans along Ramp B to avoid impacts to an adjacent property. Based on our Team's realignment of Ramp B and grading adjustments, **we have been able to eliminate this retaining wall.** Instead, concrete curb will be installed at the outside edge of shoulder and will extend to the beginning of the ramp, connecting to the concrete barrier which will be installed below the proposed Old Carolina Road Bridge over I-66 as part of the I-66 Widening Project our Team is completing. Through introduction of the curb, a bench will be provided leading immediately to a 2:1 cut slope extending up to original ground. With this enhancement, our Team can not only eliminate the retaining wall, but also avoid construction of a large drainage ditch and excavation adjacent to private properties and the proposed sound barrier wall.

SOUND BARRIER WALL

As shown in the RFP Conceptual Plans, a sound barrier will be designed and constructed on the north side of I-66 just west of Old Carolina Road extending for a length of approximately 600'. As a result of our Team's on-going work with VDOT on the I-66 Widening Project, we understand VDOT's desire to maintain a 10' offset from the back of the sound barriers to private property to facilitate future inspection and maintenance. Accordingly, because we are proposing a minor adjustment to the alignment of Ramp B at the gore with I-66 (described above), we will incorporate a minor adjustment to the location of the sound wall to provide the desired 10' offset. During preparation of this Technical Proposal, we reviewed this modification with our sound wall specialist and have confirmed that a reanalysis or updated noise study will not be required for this change since it is within the tolerances of the noise modeling software.

4.4 Project Approach

4.4.1 PROJECT COORDINATION AND PUBLIC OUTREACH

The successful completion of a large design-build project begins with proper identification of impacted stakeholders and continues through the design and construction phases with open and honest communication and consistent coordination. The success of the I-66/Route 15 Interchange Reconstruction Project (the Project) will be no different, but a distinct advantage that our Team provides is that we are already actively engaged with a majority of the stakeholders affected. Of the four (4) projects specifically identified in the RFP which must be coordinated with on a regular basis, our Team is currently under contract for two of them: the US Route 29/Linton Hall Road Interchange and I-66 Widening Projects. For the remaining projects, we have already been in contact with the design-build team completing the I-66 ATM Project as well as with Town of Haymarket staff to discuss their Pedestrian Connections Project. Having these positive relationships and an understanding of stakeholder needs in place will greatly streamline and simplify the coordination between all of the projects.

STAKEHOLDER COORDINATION

As noted above, many of the stakeholders we expect to coordinate with on this Project will be the same as those already being coordinated with on our US Route 29/Linton Hall Road Interchange and I-66 Widening Projects. These stakeholders include:

- The Virginia Department of Transportation (VDOT)
- The Town of Haymarket
- Prince William County
- Police, Fire & Rescue
- Local Residents and businesses
- Traveling Public
- Community organizations
- Local schools
- Norfolk Southern Railroad (NSRR)

In addition, upon review of the specific scope of work included with this Project, we anticipate the list of additional stakeholders to include:

- Haymarket Health Center
- Haymarket Pedestrian and Bicycle Groups

From the outset of this Project, we will work with VDOT to develop a comprehensive list of all stakeholders that are, or could be affected, and will prepare an action plan to include them in our outreach efforts. As the Project develops, it will be vitally important to update these efforts so that the plan remains flexible, adaptable and effective. Proper identification of the roles of each of these groups, and the way in which design and construction is coordinated and completed, will be critical to the overall success and public support for the Project.

As discussed, our Team's ongoing work on the I-66 Widening and US Route 29/Linton Hall Road Interchange Projects will provide a distinct advantage towards coordination efforts with affected stakeholders on this Project. Building on established relationships, we will continue coordination with the following groups:

- ***The Virginia Department of Transportation (VDOT)*** – The Team firmly believes that a design-build project such as this one cannot be successful without establishing a partnership with VDOT. The primary way to accomplish this is through open and honest communication throughout all phases of the work. Fortunately, with the I-66 Widening Project well underway, these lines of

communication are in place and present a unique opportunity for both parties to build upon. We currently have in-place jointly scheduled monthly Progress Meetings that could easily be held “back-to-back” so that everyone's time is utilized more efficiently. Stand-alone meetings are always available when necessary to discuss critical elements or topics which are specific to this Project. Our coordination efforts begin upon Notice to Proceed with the Project "Kick-off Meeting" where we will communicate our proposed approach, schedule for design and work packages, and identification of other critical submittals. During construction, regularly scheduled Progress Meetings will continue with VDOT to review project status and to preview upcoming project milestones and anticipated work activities. “Look ahead” schedules will be provided so that inspection staff is aware of upcoming work, and any witness or hold points will be identified. Throughout the construction phase, we will provide information to the VDOT Project Management staff to be shared with and supportive of VDOT Public Affairs as necessary to identify upcoming work activities, temporary lane closures, and any night-time activities which could impact traffic flow. It is important to note that the Team is committed to coordinating all public outreach efforts through VDOT's Office of Public Affairs and we are prepared to support them as needed.

- ***The Town of Haymarket*** – The Team recognizes that the Town will be an integral partner contributing to the success of the Project. With much of the project scope directly impacting business, residences, and vehicular, bicycle, and pedestrian movements in and around the Town, it will be essential to actively include them in project planning activities. As we prepared this Technical Proposal, we reached out to Town staff and spoke with the Town Engineer, Holly Montague, P.E., to begin outreach efforts. We have discussed the Town’s Pedestrian Connections Project and understand that, throughout design and construction of the improvements to the I-66/Route 15 Interchange, and specifically those on Route 55, our Team will have to maintain open lines of communication with Town staff. Further, we are aware of Town activities such as Haymarket Day, October Fest, and regularly scheduled parades, each of which introduce traffic restrictions and temporary closures of Route 55. The Team commits to working closely with the Town to communicate changes in traffic patterns and other impacts and will look for creative and effective ways to broadcast advance notifications to businesses and the public.
- ***Prince William County*** – Both Shirley and Dewberry have long-standing relationships with Prince William County, and are currently working on several projects for them. These relationships will aid in coordination and communication with key PWC Transportation staff. For our regular coordination meetings, we will invite PWC staff to attend so that they are aware of upcoming activities and remain involved in the Project. During construction, we will coordinate with the Gainesville District Supervisor’s office to identify dates for information meetings and "Pardon Our Dust" meetings so that he or his staff can remain involved in the public outreach efforts.
- ***Police, Fire & Rescue*** – As with any large-scale transportation improvement project, communication with emergency services will be essential. Any changes to traffic patterns, detours, lane-closures, access points for residences, businesses, and construction areas, must be communicated in advance so that life-safety services are never compromised. Beginning in the early stages of development, our Team will meet with each of these services to establish 24/7 emergency contacts, develop methods for communicating Project impacts, and identifying Project timelines. At a minimum, direct coordination and communication will be maintained with Fire & Rescue Station 4 (on Route 55), Station 15 (located north on Route 15), and Station 24 (located on Antioch Road in Dominion Valley to the north). The Town of Haymarket, Prince William County Police and Virginia State Police will be coordinated with throughout the Project for upcoming roadway modifications and temporary lane closures, and will be involved with temporary traffic

control for night-time work activities such as bridge demolition, girder removal, girder erection, and new traffic signal installation and service switch-overs.

- ***Local Residents and Businesses*** - This Project will have an almost daily impact to local residents and businesses in the area. Therefore communication with local residents, community organizations, churches, and businesses will be essential. One way to do so will be to build on the existing email distribution list our Team already has in place from our on-going work on the other projects in the area to ensure outreach to the appropriate parties is maintained. Due to the extensive improvements proposed on Route 55 and the southern end of Route 15, our Team will include these stakeholders in communication efforts in order to provide advance notice of upcoming lane closures, traffic shifts, and roadway openings. We will also attend public meetings as requested to provide project updates, and will establish contact information with the Project Team so that the public has an opportunity to reach out directly to us.
- ***Traveling Public*** - With significant volumes of traffic potentially affected by the Project, continuous coordination and communication will be an absolute necessity. Our Team will utilize numerous tools to effectively communicate with the traveling public, including variable message boards, additional advance signing, presentations and community meetings, media outlets, and of course direct coordination with VDOT project management staff and VDOT Public Affairs.
- ***Community Organizations*** - An affected group that can also be of tremendous value in communicating to the public are the various community organizations. These groups can reach out to large portions of the community at one time and can include the Chamber of Commerce, local churches, and homeowner associations. Working with these groups is also an important way to gain public support for the Project. Early identification of these groups and development of a comprehensive email distribution list will aid in the Public Outreach discussed later in this section. We will also look to identify businesses which have a larger outreach potential through their customers and clients to help disseminate information during construction and prior to major traffic switch or modification events.
- ***Schools*** – There should be little to no significant impact to schools and bus routes because of the Project since no full roadway closures or detours are planned. However, we will communicate daily lane closures, traffic shifts, and new roadway openings with Prince William County Public Schools so that bus routes to Battlefield High School, Reagan Middle School, Buckland Mills Elementary School, Mountain View Elementary School, Alvey Elementary School, Tyler Elementary School, and Pace West School can plan accordingly. We will do the same with the Town of Haymarket for St. Paul’s School.
- ***Norfolk Southern Railroad (NSRR)*** – Although not directly impacted through construction of the proposed improvements on Route 15, the limits of widening and lane shifts on Route 15 will extend to within approximately 30’ of the NSRR property line. The existing advance warning signal and pre-emption equipment at the Route 15/Route 55 signalized intersection will need to be maintained throughout construction, and coordinated when the new traffic signal is installed. An early action item of the design phase will be to contact NSRR to review the project scope and obtain information on their pre-emption and signal equipment in an effort to understand what modifications may be necessary. As a result of our on-going work at the US Route 29/Linton Hall Road Interchange, **our Team already has the contacts in place with NSRR to initiate this coordination and communication immediately upon NTP.** Additionally, our Team recognizes that pavement immediately adjacent to the at-grade crossing on Route 15 deteriorates rapidly and

is completely reconstructed approximately every other year. Since this replacement/upgrade most recently occurred during the summer of 2013, and required a complete closure of Route 15 to do so, we will include discussions with NSRR about the timing of any future reconstruction activities and their coordination with this Project.

Regarding the additional stakeholders identified above, our Team has developed the following coordination and outreach efforts that will be initiated at the beginning of the Project:

- ***Haymarket Health Center*** – The Haymarket Health Center, which opened several years ago, recently expanded its operations by opening a new emergency facility. In early 2014, this location will complete a further major expansion by opening a new 60 bed hospital. Given the critical nature of the health center's operations, and the fact that it is located off of Heathcote Boulevard immediately west of Route 15, constant coordination of this Project's activities will be a high priority of the Team. At the earliest stages, we will initiate a dialogue with Health Center personnel to discuss project timelines and the anticipated sequence of work. As design progresses and construction timelines begin to be developed, we will identify changes in roadway configurations and alignments, and establish procedures for communicating these changes with them. Of critical importance will be coordination with respect to the helicopter landing pad which is immediately adjacent to Ramp A. Our Team will work with Health Center staff to identify timelines and locations of construction cranes, construction of the flyover bridge, and installation of light poles to ensure that flight patterns are unaffected. Warning beacons will be installed on cranes as necessary to ensure adequate identification of potential hazards adjacent to the landing area and approach flight paths.
- ***Haymarket Pedestrian and Bicycle Groups*** – There is a large group of bicyclists who regularly use the Route 55 corridor. Rides are routinely arranged by and start at Haymarket Bicycles on Route 55 just east of the Project limits. As part of our "Pardon Our Dust" and other advance construction outreach meetings, we will contact the bicycle shop directly to discuss upcoming lane and access changes on Route 55 and Route 15 which could impact bicycle routes. Similar to our past outreach efforts with the Northern Virginia Regional Park Authority (NVRPA) on our projects affecting the W&OD Trail, we will establish regular procedures to inform patron, teams and rider groups about construction impacts that may affect them. While pedestrian groups are not as well organized as the bicyclists, there is a significant amount of pedestrian activity along Route 55 due to the number of retail businesses and restaurants in Haymarket. Our Team has already made improvements to the Conceptual Plans which will maintain many of the existing sidewalks, thus reducing construction impacts to pedestrians, and we will work with local businesses prior to and during construction to ensure patrons are aware of upcoming construction activities and potential impacts.

COORDINATION WITH ADJACENT PROJECTS

As noted in the RFP documents, there are four (4) ongoing design and construction projects which either partially overlap the footprint of this Project or need to be coordinated with from a traffic operation standpoint. Fortunately, because the first two projects are underway by the Team, VDOT can rely on a greatly simplified and proactive approach to project coordination. Our efforts will include:

1. ***I-66 Widening Project*** – The I-66 Widening Project will require very close coordination since the limits of work on I-66 extend through the Route 15 Interchange. Further, the temporary closure of Old Carolina Road will likely divert additional traffic onto Route 15 and/or Route 55 through the limits of this Project. To address these concerns, the RFP requires that joint meetings between the

projects be organized and conducted on at least a quarterly basis. This is a requirement that the Team can greatly exceed - **our Team will have organized coordination meetings on at least a monthly basis, and likely more frequently.** In addition, since our Team is involved in the day-to-day operations of the I-66 Widening Project, coordination between projects will be occurring constantly. This will ensure that daily operations between projects do not adversely impact either projects activities or the operation of any of the roadways within either projects limits. Temporary lane closures will be coordinated to minimize the number and durations of closures required and work will be sequenced so that elements of both projects can be completed simultaneously. We will also identify areas where it will be possible to accelerate design and construction to turn-over permanent elements of both projects to the public sooner rather than later. As we prepared this Technical Proposal, we have identified common elements of both projects that could be coordinated to minimize impacts to the public. These include:

- Median widening for the I-66 Widening Project and bridge pier construction for the I-66/Route 15 Interchange Project.
 - Outside barrier placement for bridge construction and widening on the I-66 Widening Project and outside barrier placement for Interchange ramp tie-ins on the I-66/Route 15 Interchange Project.
 - Drainage pipe installations and extensions for both projects.
 - Temporary overnight closures for bridge demolition and girder erections over I-66 on both projects.
2. ***US Route 29/Linton Hall Road Interchange Project*** - Similar to the I-66 Widening Project, **we will be able to coordinate with this Project on a daily basis.** Based on the planned schedule for the next major traffic switches for the US Route 29/Linton Hall Road Interchange Project, we actually expect an improvement to both projects. Specifically, with the elimination of the traffic signal at US Route 29 and Linton Hall Road during the summer of 2014, we expect that delays on Route 29 to be significantly reduced and that more traffic will therefore utilize the Route 29 corridor to continue south from I-66 instead of continuing to the Route 15 interchange. Traffic patterns will be closely monitored to ensure that this is the case and that unexpected, adverse patterns do not develop.
 3. ***I-66 ATM – Segments 1 through 4*** – As the ATM Project limits stop well in advance of the footprint of the I-66/Route 15 Interchange Project, we do not anticipate any direct, physical conflicts between them, however, we will meet with their team upon NTP to begin the coordination efforts. We have already reached out to the TransCore ITS, LLC Team who is performing the ATM improvements, and will coordinate on a regular basis with respect to their temporary lane closures (if necessary) as their work elements are installed, tested, and become operational. Coordination meetings will be held quarterly, or more frequently as necessary based on the amount of work underway on each project.
 4. ***Town of Haymarket Pedestrian Connections Project*** - We are aware of the proposed pedestrian improvements which are currently underway by the Town to provide additional pedestrian facilities along Route 55 immediately adjacent to the Project site. The main goal of coordination between projects will be to ensure that design information relative to pedestrian facility types, alignments, typical sections, and cross locations is shared between projects, and to ensure use of facilities are maintained during construction of the I-66/Route 15 Interchange and associated work on Route 55. As our TMP discussion in Section 4.5 will indicate, our Team will maintain pedestrian and bicycle accommodations through all stages of construction, and we will coordinate

with the Town to identify when specific stages of construction will be implemented, and any temporary measures which may be necessary to maintain proper connections between facilities. During design we expect that quarterly coordination meetings will be appropriate to manage the interaction between projects, and that this coordination may increase as construction on Route 55 begins. **Our Team's modification to the RFP concept which allows existing sidewalk facilities along a majority of the south side of Route 55 to remain in place will be a significant benefit to maintaining pedestrian and bicycle accommodations throughout construction**, easing the coordination efforts between projects.

PUBLIC OUTREACH

In addition to communication and coordination with the stakeholders described previously, our Team recognizes and understands that open and regular communication with the public is critical to the success of the Project. Public outreach by our Team will use several different methods, all of which have been used by our Team successfully on past and on-going design-build projects. It is important to note that all of our efforts will be coordinated through and supportive of VDOT's Office of Public Affairs. These public outreach efforts include:

- ***Citizen Information Meetings*** - During the design phase, additional information meetings will be held with local residents to provide updates to the project design and anticipated construction schedules. Information meetings will be announced through postings in newspapers, online, on VDOT's website, and through direct mailers or email "blasts" to the local HOA groups, citizen groups, and agencies. Notice of the meetings will be provided well in advance of each meeting, and graphics, slide presentations, and a combination of formal and informal presentations will be used to disseminate the appropriate information to everyone.
- ***Email Distribution List*** – Although not required by the RFP, our Team has found that development of a comprehensive email distribution list of Project Stakeholders, community representatives and organizations, businesses, and individuals including the traveling public, is an effective way to keep the public informed of current project events. Based on our Team's on-going work on the I-66 Widening Project and the US Route 29/Linton Hall Road Interchange Project, we already have the basis for the email distribution lists. During the Project, our Team will utilize the Email Distribution List to notify the public of upcoming Citizen Information Meetings, "Pardon Our Dust" meetings, changes in traffic patterns and road closures, and updates to the project schedule. An Email Distribution List sign-up sheet is provided at each public meeting in an effort to keep this list up to date. **Development and use of the list is one way our Team exceeds the requirements for Public Outreach.** In addition, we will work with local businesses to disseminate information to their clients who may not live in the local area, but need to be aware of upcoming events which could impact their travel patterns to access the same businesses.
- ***"Pardon Our Dust" Meetings*** – During the construction phase, information meetings similar to Citizen Information Meetings will be held to provide updates to construction activities and alert residents and motorists to upcoming traffic pattern changes. These meetings are typically scheduled prior to major traffic switches, and we expect to have meetings immediately prior to the start of construction, prior to the partial opening of the new Route 15 Bridge over I-66, prior to the opening of the Ramp E fly-over, and prior to opening of the ultimate interchange improvements. Additional meetings may also be identified during the construction process to provide updates to the development of the Project. Similar to the Citizen Information Meetings, graphics, presentations, and photos of project progress will be shared so that everyone is aware of the work which is underway and which will be taking place in the future.

- ***VDOT Website Updates*** – Consistent with our other design-build projects, and as requested by VDOT, we will coordinate with the VDOT Project Manager to ensure that VDOT’s Office of Public Affairs has accurate information to place on VDOT’s website. Photos, text, and graphics will be shared as necessary and/or requested to ensure accurate and current information is always available to the public. Critical information, such as timing of traffic switches and nighttime work activities, will be identified well in advance so that information can be provided to the general public in a timely manner.

4.5 CONSTRUCTION OF THE PROJECT

4.5 Construction of the Project

4.5.1 SEQUENCE OF CONSTRUCTION

When preparing our sequence of construction, our Team focused on minimizing impacts to, and maximizing the safety of the traveling public, adjacent property owners, the workers on the Project and everyone else impacted by construction. Our planned sequence of construction will significantly limit traffic disruptions in the work area and facilitate complete construction **prior** to the Final Completion date of July 28, 2017 as noted in the RFP documents. Our proposed sequence of construction is sequenced as follows:

- **Stage 1** - Construct detour pavement in the existing Route 15 median.
- **Stage 2** – Construct ultimate Route 15 southbound lanes including portions of Bridge B678 (Route 15 over I-66), Ramps A, B, C, D, & E, Route 55, Bridge B679 (Ramp E over Ramp A), and Bridge B680 (Ramp E over Route 15 & I-66).
- **Stage 3A** – Construct ultimate Route 15 northbound Lanes including remaining portion of Bridge B678 (Route 15 over I-66), remaining portions of all interchange ramps, remaining portions of Route 55, and the remainder of Bridge B680 (Ramp E over Route 15 & I-66).
- **Stage 3B** - Place Surface Asphalt and "Finishes" such as final pavement markings.

Prior to performing any land disturbing operations, all of the necessary environmental permits will be obtained and appropriate erosion & sediment control devices will be installed. All environmental controls will be maintained throughout the duration of the Project. Provided below is a description of each stage and the benefits of this proposed sequence:

Stage 1

During Stage 1 construction, portions of the existing median of Route 15 will be reconstructed (as shown in green in Figure A) with a full depth asphalt section to provide for shifting Route 15 southbound traffic to the east or median during Stage 2.

The modified alignment of Route 15 proposed by our Team, combined with the temporary median pavement and temporary shifting of traffic to the east in Stage 2 allows for complete construction of the ultimate Route 15 southbound lanes out of traffic. This separation between the



Figure A - Stage 1

existing lanes and the work area maximizes safety for both the traveling public and construction personnel, minimizes disruptions to vehicular traffic, and eliminates the need for multiple traffic switches which would have been required by the RFP concept.

Full temporary traffic controls will be provided to ensure safety will be maintained, including temporary traffic signal modifications, full signing & marking, and the use of temporary raised pavement markers to maximize driver comprehension. This Stage 1 construction in the median of Route 15 can be performed quickly as it does not require acquisition of any easements or right-of-way, and will be constructed without the need for long term thru lane or turn lane closures. In addition, since the temporary pavement installed will be the required permanent, full depth section, traffic will not be impacted in later stages, and unnecessary wasting of asphalt is avoided.

Stage 2

Stage 2 consists of constructing the ultimate Route 15 southbound lanes, portions of Bridge B678 (Route 15 over I-66), portions of Ramps A, B, C, D, & E, portions of Route 55, Bridge B679 (Ramp E over Ramp A), and portions of Bridge B680 (Ramp E over Route 15 & I-66) as shown in Figure B:

Route 15 Southbound Construction

First, temporary concrete barrier will be placed along the west side of existing Route 15, which facilitates safe construction of the ultimate Route 15 southbound lanes to the west of existing Route 15 roadway from approximately station 502+00 to 539+00. The erosion and sediments controls, earthwork operations, drainage (including the storm water management facilities), grading, and roadway pavement construction up to the layer of intermediate asphalt will then be completed.

Route 15 southbound was sequenced to be constructed first in order to minimize potential utility conflicts early in the Project as a majority of the utilities are located on the east or northbound side of Route 15. The Route 15 southbound portion of Bridge B678 (Route 15 over I-66) will be constructed in this stage without any impact to the existing bridge structure as our



Figure B - Stage 2

Team's alignment shifts the bridge west of the existing roadway and bridge. This allows for less disruption to existing traffic on Route 15 and safer construction as the existing bridges aren't going to be temporarily modified or impacted.

Route 15 Ramp Construction

Temporary group II channelizing devices and concrete barrier service will be installed on the left side of existing Ramp A (Route 15 to I-66 westbound) and existing Ramp D (I-66 eastbound to Route 15) for construction of the ramp widening through the layer of intermediate asphalt. Our proposed alignments have the widening occurring on a single side of the existing ramps to avoid having either multiple traffic switches or having "cattle chuting" with barrier on both sides of the existing ramps, which would be necessary if widening were performed on both sides. Significant portions of Ramp B (I-66 westbound to Route 15), Ramp C (Route 15 to I-66 eastbound), and Ramp E (Route 15 southbound to I-66 eastbound flyover ramp) will be constructed on alignments that are shifted to minimize impacts to traffic on the existing ramps, which maximizes traveler mobility during construction and also eliminates the safety concerns of performing construction operations directly adjacent to traffic. In addition, the noise barrier and pedestrian underpass associated with Ramp C will be constructed during this stage with a safe separation from the existing ramp. Bridge B679 (Ramp E over Ramp A) will be constructed completely in this phase. Abutment A and pier substructure components of Bridge B680 (Ramp E over Route 15 & I-66) will be constructed as well.

Route 55 Construction

First, pedestrian safety controls (including temporary sidewalk connections), group II channelizing devices and concrete barrier service will be installed on the north (westbound) side of Route 55 to facilitate earthwork, grading, drainage and roadway construction activities through the intermediate asphalt layer during this stage of construction. Our sequence has the north side construction activities occurring first to minimize potential utility conflicts as most of the significant existing utilities are located along the south side of Route 55. In addition, our modified alignment maintains the existing south side of Route 55 curb line, which further minimizes potential utility conflicts, minimizes impacts to the existing businesses, and allows for the continuous maintenance of safe pedestrian and bicycle traffic.

Route 15 Traffic Switch

Upon completion of the construction activities detailed above, Route 15 northbound and southbound traffic will be switched from the existing Route 15 alignment onto the newly constructed Route 15 southbound lanes. Temporary traffic controls with gradual shifts designed to meet the full posted speed limit of Route 15 will be utilized in order to maximize traveler mobility and avoid possible vehicle sideswiping. Following this switch the balance of Route 15 construction operations can be performed in one final stage versus multiple stages as would be required per the RFP design concept, thereby maximizing safety and driver understanding by limiting the amount of different roadway configurations drivers will encounter. Also, the benefit to performing work in this manner allows for majority of our planned operations to be performed with very minimal utility conflicts and right-of-way impacts. In recognition of the time it can take to obtain easement rights and then relocate utilities as required for the Route 15 northbound lanes, completion of the first two stages of work without the need for these acquisitions or relocations represents a significant benefit to the Project. It also minimizes the risks associated with right-of-way acquisition and utility relocations, which could otherwise delay critical construction elements. Furthermore, our Team can most effectively coordinate the design and construction operations with the other active construction projects in the area since we are responsible for the I-66 Widening Project which extends through the Route 15 Interchange Project area.

Stage 3A

Stage 3A consists of constructing the ultimate Route 15 northbound lanes, the remainder of Bridge B678 (Route 15 over I-66), the remainder of Bridge B680 (Ramp E over Route 15 & I-66), and the remainder of Route 55, Ramp B, and Ramp C as shown in Figure C:

Route 15 Northbound Construction

Figure C - Stage 3A



At the outset of Stage 3A, all traffic along Route 15 will have been shifted onto the newly constructed portions of southbound Route 15 as described in Stage 2. Stage 3A work includes installation of the necessary temporary traffic control measures, necessary utility relocations, and construction of the ultimate Route 15 northbound lanes including grading, drainage, and pavement section through the intermediate asphalt layer. The existing Route 15 southbound bridge will have the monitoring equipment and instrumentation safely removed and then demolition of the structures performed. All of the necessary coordination and assistance will be provided to the Virginia Center for Transportation Innovation and Research (VCTIR) and FHWA as required for the long term bridge performance program. The Route 15 northbound portion of Bridge B678 (Route 15 over I-66) will be completely constructed in this stage adjacent to the previously completed southbound structure. This work will be performed behind temporary concrete barrier to minimize traffic

impacts and maximize safety for the traveling public, construction workers, and inspection staff. This work will be seamlessly coordinated with the I-66 Widening Project, including coordination of temporary traffic controls in order to avoid conflicting traffic control devices. This provides a significant advantage in coordination and communication to guarantee that all of the work is performed efficiently with the least amount of disruption and conflict with the other projects in the area.

Route 15 Ramps & Route 55 Construction

The remaining portions of Bridge B680 (Ramp E over Route 15 & I-66) will be completed as well during this stage. The superstructure bridge construction of B680 is sequenced to be performed after the completion of Bridge B678 (Route 15 over I-66) to allow for minimizing the inefficiencies and restrictions of having the flyover superstructure spanning overtop of Bridge B678 (Route 15 over I-66) prior to its completion. After completion of ultimate Route 15 northbound lanes including the remaining portion of

Bridge B678 (Route 15 over I-66), the majority of the remaining portions of the Ramps as well as the portion of Route 55 not built in stage 2 will also be constructed. Prior to completing the interchange, there are two small tie-in operations that have to be performed associated with the completion of the Ramp B (I-66 westbound to Route 15) at Route 15 and Ramp E (Route 15 southbound to I-66 eastbound) in the vicinity of existing Ramp C (Route 15 to I-66 eastbound), which will be performed as part of Stage 3B. As facilities are completed in Stage 3A, all ultimate traffic devices will be installed as appropriate (including signing, lighting, electrical, and guardrail) in order to maximize safety.

Stage 3B

Stage 3B represents the completion stage of work. At the beginning of this stage, work will be focused on completion of Ramp B (I-66 westbound to Route 15) from approximately Station 23+00 to 25+00 and Ramp E (Route 15 southbound to I-66 eastbound) from approximately Station 31+00 to 33+00. Additionally, all permanent overhead sign installations not already installed will be completed in this stage, along with completion of installation of the remainder of the permanent lighting and electrical elements.

The final portion of Ramp B construction near Route 15 and existing Ramp B tie-in will be performed by asphalt buildup to create the full depth pavement section required. All work will occur during off-peak hours to minimize disruptions to traffic. These off-peak lane closures will be limited to the hours of lowest traffic volumes (in order to minimize impacts to the public and maximize safety) by utilizing a site-specific temporary lane closure analysis as described below in Section 4.5.2 (Transportation Management Plan).

The remaining portion of Ramp E will be completed after Ramp C is opened to traffic. Upon completion of Ramp E, all traffic will be opened up into the ultimate lane configuration. Any remaining median, concrete flat work, surface asphalt, final pavement markings and other “finishes” will be performed prior to final completion of July 28, 2017.

SEQUENCE OF CONSTRUCTION BENEFITS

The numerous benefits of our proposed construction sequence identified above are summarized as follows:

- By shifting existing Route 15 southbound traffic to the east in Stage 1 of construction, more substantial portions of Route 15 southbound can be constructed offline, thereby reducing impacts to the traveling public and also maximizing safety of the traveling public and construction personnel.
- By changing the alignment of Route 15 further to the west, Bridge B-678 (Route 15 over I-66) can be constructed in two stages without partial demolition and temporary modifications to the existing bridges over I-66. This allows for demolition of the existing bridges to occur at one time, reducing impacts to the traveling public and making the demolition a much safer and more efficient operation.
- By shifting the Route 15 northbound lanes to Stage 3A of construction, we can eliminate all of the risks associated with possible delays in easement acquisition and utility relocations within this area.
- By changing the alignment of Route 55 and maintaining the southern curb line, we can construct the Route 55 improvements in fewer stages of construction, thus reducing impacts to businesses, vehicular, pedestrian and bicycle traffic. Also, by constructing the north side of the Route 55 widening first, we can minimize potential utility conflicts as a majority of the existing utilities are located on the south side of Route 55.

- The reduced number of overall construction stages will promote public understanding and support of the Project and associated traffic impacts. Project staging will be regularly communicated via Citizen Information Meetings, email distribution lists, and “Pardon Our Dust” meetings, and other methods as described in Section 4.4.1.
- Our Team's modifications to the roadway geometry and our planned construction sequencing provide benefits to material and equipment staging and storage areas. By separating the work areas and creating large open spaces away from travelways, we are able to establish these areas outside of the clear zone and without affecting vehicle sight lines, thus increasing the safety to the public.

RIGHT-OF-WAY CONSIDERATIONS

The sequencing of construction proposed by our Team has been developed to reduce the amount of right-of-way needed for initial construction activities. As previously identified, no right-of-way acquisitions are required for Stage 1 construction, and the key components of Stage 2 construction, specifically Bridge B-678 and significant portions of Route 15 realigned, can also be completed without impacting private properties. The sequencing of work in this manner ensures that right-of-way acquisitions and negotiations are not on the critical path of the Project, so that potential delays to acquisitions will not affect the overall construction timeline.

Because our Team has extensive experience with acquisitions and relocations, we recognize that the time required to complete a relocation can be substantially longer than those for a partial acquisition. Numerous properties are "total-takes" which are not necessarily reliant on final design. We are therefore incorporating the planning for these known relocations and total-takes in this Technical Proposal submission. We plan to develop advance acquisition right-of-way plans which will be used to obtain early approval for these “total take” acquisitions. This advance acquisition right-of-way plan set will be developed immediately following NTP and will be submitted for approval so that acquisitions of Parcels 10, 12, 13, 14, 16, and 17 can begin early during the design process, ensuring relocations will not adversely impact the construction schedule.

GEOTECHNICAL CONSIDERATIONS

The primary geotechnical concern for this Project is the presence of shallow rock. Since the majority of the construction proposed for the Project consists of placement of fills to support the realignment of Route 15 and the construction of the Ramp E flyover, the potential for rock material is actually a benefit since it will act as a stable working platform for fill placement. Excavation of material will be required at the beginning of Ramp E, but this excavation is only needed well outside of the existing Route 15 alignment, and won't have any impacts on the traveling public. Other minor adjustments made by our Team, such as the introduction of curb at the edge of shoulder on westbound I-66 approaching Ramp B will help to reduce concerns associated with rock excavation for drainage ditches, as well as over excavation which would have been required for construction of the retaining wall identified in the RFP plans. The completion of our geotechnical program will be an early priority of the design phase. Upon NTP, we will complete the property owner notification process and perform the field geotechnical investigations. Next, the laboratory work will be completed and the geotechnical recommendation report prepared and submitted to VDOT. The results of this report will be incorporated into the design and schedule planning activities.

ENVIRONMENTAL CONSIDERATIONS

Based on our Team's on-going work on the I-66 Widening Project, we have already designated all of the wetlands within the limits of the I-66/Route 15 Interchange. Additional designations will be required along Route 55 and the far northern and southern extents of Route 15, but based on preliminary investigations we have not identified the presence of any significant areas of wetlands or streams which

will require mitigation. Within the limits of the interchange, several culvert relocations and the construction of Ramp E and associated deep fills will require impacts to existing streams and channels. Because we have already received a jurisdictional determination on the streams and wetlands within the interchange area, we can immediately apply for the appropriate permits when plans are developed to approximately the 60% complete level. This will ensure that the necessary government approvals are obtained well in advance of planned Stage 1 construction activities. To date, our Team has never been delayed by acquisition of environmental permits on any of our design-build projects, and the up-front work we have already completed as part of the I-66 Widening Project will ensure that track record is maintained on this Project as well.

STAGING AND STORAGE

The Team understands that a clean, orderly project improves public perception and safety for all involved. As with all of our projects, storage of materials will be isolated to areas where safe delivery access can be provided while ensuring that no material is stored in a location which would introduce a hazard (such as blockage of sight lines) to the traveling public, construction, or inspection staff. A unique advantage our Team can provide to this Project is the ability to stage work activities, sequence work, and store materials in a combined manner with those already underway for the I-66 Widening Project. In addition, our Team will utilize portions of the total-take acquisition areas for storing of materials and staging of work. Other areas will be evaluated as the work gets underway.

COORDINATION WITH OTHER CONSTRUCTION PROJECTS

A key consideration for this Project to ensure its success and avoid adverse impacts to the traveling public will be the coordination with other active construction projects, and most specifically the I-66 Widening Project. While other projects are underway nearby, such as the US Route 29/Linton Hall Road Interchange Project, the I-66 ATM Project, and the Pedestrian Connections Project on Route 55 in Haymarket, these will likely have less of an impact on the design and construction of this Project. As we have already noted, our Team is uniquely positioned to coordinate between this Project, the I-66 Widening, and the US Route 29/Linton Hall Road Interchange Projects and, as part of this submission, we have identified several opportunities that will benefit the public. These include:

- ***I-66 Median Widening and B-678 and B-680 Bridge Pier Construction*** – Based on our Team’s sequence of construction for the I-66 Widening Project, median construction will be the first major stage of work. In an effort to avoid affecting traffic to widen the median of I-66 at two separate times (once for the I-66 Widening and again for this Project's bridge construction), we plan to advance the design of bridges B-678 and B-680 so that the pier construction can be completed simultaneously with the median widening. This will avoid placement of barrier on both sides of the I-66 travel lanes and will allow completion of median grading, drainage and final stabilization at one time for both projects.
- ***Outside Shoulder Barrier Placement*** – Coordination will be required between this project and the I-66 Widening Project when barrier is placed on the outside edges of I-66 to allow for both the widening of the thru lanes and for the construction of extended auxiliary lanes associated with realignment of Ramps B and C. Our Team will be able to complete all of this work simultaneously without the need for additional pavement in the auxiliary lane area along eastbound I-66 at the end of Ramp C. This will enhance the final product for both projects since all grading, drainage and pavement work can be completed as if it were one project and not two independent contracts. The elimination of overlapping work areas also will aid in accelerating construction in these areas, reducing the duration when temporary barrier is required on the outside edges of I-66 and positively impacting the traveling public.

- ***Drainage Pipe Installations and Extensions*** – Our Team has already looked at areas where drainage proposed for the I-66 Widening Project can be modified to take advantage of traffic staging and lane configurations in order to lessen impacts to the traveling public. We will coordinate between projects during design to look for additional ways to avoid deep excavations next to active travel lanes, and will also look for ways to improve drainage crossing locations so that skewed pipe crossings are reduced or eliminated where possible.
- ***Coordination of Temporary Traffic Switches*** – One of the challenges of constructing multiple projects with overlapping footprints is that coordination of temporary traffic switches and completion of work elements can potentially conflict. To avoid these conflicts, we intend to develop daily work schedules and temporary lane closures so that both this project and I-66 Widening Project can benefit from a single work area. This coordination of work will ensure maximum efficiency for both projects, and will also reduce the total number of temporary impacts to the traveling public through the combination of work elements.

4.5.2 TRANSPORTATION MANAGEMENT PLAN

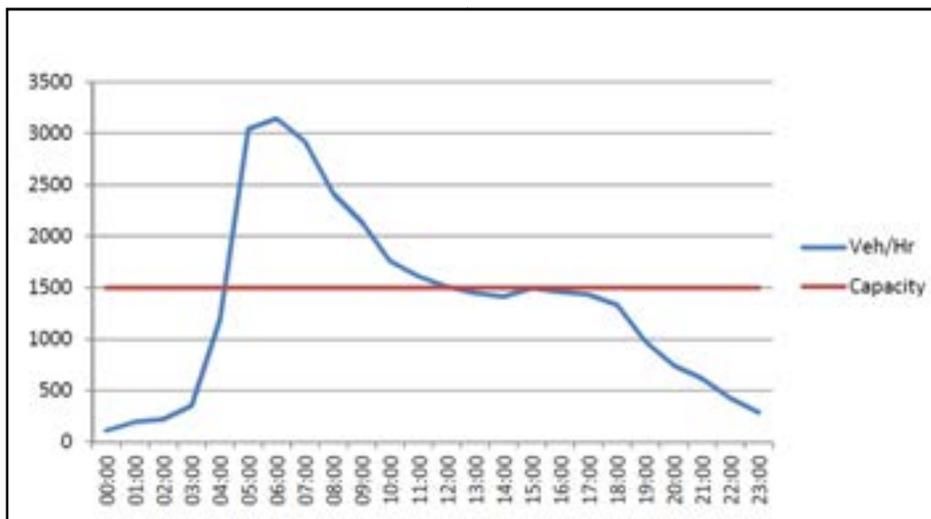
Given our Team's focus on safety, as well as our unmatched experience in the Haymarket area, we intend to provide a TMP and construction program that reduces the Projects' anticipated impacts to the traveling public and also exceeds minimum public safety requirements of the RFP. We know that setting the stage for a successful and safe project (for the traveling public, construction, inspection, and VDOT Project Staff) begins with the development of a comprehensive and accurate Transportation Management Plan (TMP). As noted in Section 2.10 of the RFP, our Team will prepare a Type C TMP in accordance with VDOT I&IM 241.5/TE-351 as well as a site-specific Temporary Traffic Control (TTC) plan for each stage of construction.

The TMP and TTC plans will be developed with a constant focus on maximizing safety for the traveling public and construction personnel while minimizing travel delays throughout construction. TTC and TMP plan development will be led by our Traffic Engineer, Jerry Mrykalo, who is Professional Traffic Operations Engineer and certified as a VDOT Work Zone Traffic Control instructor. Additionally, all of our design engineers are VDOT certified in the development of TTC and TMP plans based on successful completion of our in-house Work Zone Traffic Control Training program. These qualifications and training program exceed RFP requirements, and allow us to develop TTC and TMP plans that equally exceed safety and mobility minimum standards.

In order to achieve the goals of maximizing safety and minimizing travel delays, we will initiate design activities by collecting current 24-hour volume information for Route 15, Route 55, I-66, and the interchange ramps to and from I-66 from Route 15. This updated traffic volume information will be utilized in development of the TMP to verify that the lane closure restriction times identified in Section 2.10.2 of the RFP are appropriate for the Project area and will not result in unanticipated travel delays. We recognize that the lane closure restriction times are generally in accordance with the VDOT Northern Virginia Traffic Engineering Division requirements. However, we also recognize that this Project is located well west of the major employment centers of Northern Virginia, and as such the peak hour traffic volumes are known to occur at earlier times in the morning than are normally expected. Also, due to traffic pattern changes associated with opening of new traffic patterns at our US Route 29/Linton Hall Interchange Project, traffic flow characteristics frequently shift. The intent of the updated traffic counts will be to verify that the lane closure times are appropriate, and coincide with the hours of lowest traffic volumes. For example, our Team believes the eastbound I-66 volumes may exceed the capacity of a single lane before 5:00AM, and therefore lane closures extending beyond this time would have a significant

impact on rush hour commuters. If this is confirmed, we will work with VDOT to shift the lane closure schedule to conclude prior to 5:00AM. Detailed analysis computations will be provided, as well as graphs to easily visualize the data. Figure D below shows our 24-hour analysis results from a recent nearby project, where we verified that overnight lane closures were limited to hours in which the traffic volumes (shown with blue line) were less than the capacity of the remaining open travel lane (shown with the horizontal red line). By completing this analysis, we are able to ensure that traffic impacts to the public are minimized to the fullest extent possible, which has a tremendous safety and travel time benefits.

Figure D - 24 Hour Analysis



Shortly after beginning the design of the TMP, our Team will begin developing site-specific Temporary Traffic Control (TTC) plans for the Project. The TTC plans will detail each and every specific element required during construction of the Project. These plans will be developed for each stage of construction to identify barrier and channelization locations, safe pedestrian and bicyclist accommodations, temporary

sign locations, temporary pavement marking and marker requirements and limits, temporary drainage requirements, areas of temporary and permanent construction, and all other requirements per VDOT's I&IM-241.5 and the Manual on Uniform Traffic Control Devices (MUTCD). All turning movements will be analyzed with AutoTurn software to ensure barrier placement accommodates turning paths of the appropriate design vehicle during all stages of construction. In addition, Portable Changeable Message Sign (PCMS) device locations and messages will be included in the plans. The careful design of locations meeting sight distance requirements and concise, comprehensible message design by our traffic engineers ensures that these extremely valuable devices are utilized to the maximum benefit without providing confusing or incomplete information. Specific details of our TTC plans, including planned lane closures and lane width restrictions are as follows:

Route 15 & Route 55

- On Route 15, two (2) minimum 11' wide travel lanes plus all turn lanes will be maintained in each direction of travel during all stages of construction, with 11.5' wide travel lanes on bridges. On Route 55, the existing number of thru and turn lanes will be maintained, with minimum 11' wide travel lanes in each direction of travel during all stages of construction. Where feasible, full 12' wide travel lanes will be provided to maximize safety and large vehicle movements.
- Minimum 1' wide offsets to temporary barrier will be maintained throughout all stages of construction, and pull-off areas will be established for incident management where feasible.
- The need for the partial demolition of the northbound Route 15 bridge while carrying traffic has been eliminated by our Team's concept, thereby reducing impacts to the public compared to the RFP Conceptual Plans.
- All temporary traffic shifts will be designed to meet the full posted speeds of Route 15 and Route 55 wherever possible, exceeding the requirements of the Virginia Work Area Protection Manual and the RFP.

- Along Route 55, continuous pedestrian access will be maintained throughout construction.
- No speed reductions will be proposed for Route 15 or Route.
- No temporary detours will be proposed, and temporary lane closures will be limited to off-peak hours. No flagging operations are anticipated.
- Temporary lane closures will be in accordance with the lane closure restriction times identified in the RFP, or as further identified based on the updated traffic counts and analysis our Team will complete. Temporary lane closures are anticipated for night time paving, placement of traffic barriers, delivery of materials, and bridge construction.
- Temporary 20 minute maximum full stoppages on Route 15 and Route 55 during overnight hours are only expected for bridge girder erection, overhead sign and traffic signal work.

On I-66

- All existing thru and auxiliary lanes will be maintained in each direction of travel during all stages of construction, maintaining the existing 12' lane widths.
- Minimum 2' wide offsets to temporary barrier will be maintained throughout all stages of construction, and a paved left (median) shoulder will be maintained for incident management and vehicle breakdown.
- All temporary traffic shifts will be designed to meet the full 65 mph posted speed of I-66, exceeding the requirements of the Virginia Work Area Protection Manual and the RFP.
- No speed reductions will be proposed for I-66.
- No temporary detours or ramp closures will be proposed, and temporary lane closures will be limited to off-peak hours. No flagging operations are anticipated.
- Temporary lane closures will be in accordance with the lane closure restriction times identified in the RFP, or as further identified based on the updated traffic counts and analysis our Team will complete. Temporary lane closures are anticipated for night time paving, placement of traffic barriers, delivery of materials, and bridge and demolition and construction.
- Temporary 20 minute maximum full stoppages on I-66 during overnight hours are only expected for bridge demolition and construction, and possible overhead sign work.

On the Interchange Ramps

- Minimum 12' wide travel lane(s) will be maintained.
- Minimum 2' wide shoulders will be maintained on both sides of each interchange ramp, with full paved shoulders provided for incident management and vehicle breakdown wherever possible.
- No speed reductions will be proposed for the ramps.
- No temporary detours, lane closures, or ramp closures are anticipated. No flagging operations are anticipated.
- Temporary 20 minute maximum full stoppages on ramps during overnight hours are only expected for bridge construction, overhead sign and traffic signal work.

As mentioned above, our Team does not anticipate the need for regulatory speed reductions thru the work zone, as all geometry and lane shifts will be designed to meet standards for the existing posted speeds, and 11'-12' lane widths (per locations above) will be maintained throughout construction. Our experience based on similar past projects has found that maintaining existing posted speed limits where geometric conditions permit has multiple benefits. In addition to minimizing motorist delay, research has proven that lowering speed limits where geometric conditions do not require the reduction actually lessen safety, since large deviations between driver's speeds commonly result in increased accidents.

To further enhance our Temporary Traffic Control Plans, our Team will employ site-specific impact management strategies that exceed RFP requirements in order to maximize safety and mobility. For

example, full temporary raised pavement markers will be used to supplement lane line pavement markings for increased visibility, especially at night and during wet pavement conditions. Other strategies that will be utilized where warranted include the use of wider than normal lane lines for increased delineation of lane shifts, use of temporary transverse rumble strips to alert motorists of unusual conditions, and the use of tighter than required channelizing device spacing for increased work zone delineation and construction personnel safety.

Another important component of a successful TMP is a significant public outreach campaign. As noted in Section 4.4.1, our Team with the involvement of and assistance from VDOT, will proactively communicate with all Haymarket area citizens, community groups, public officials, fire and rescue, and Prince William County school staff who could be impacted during critical elements of construction. Advance notification will be provided prior to any significant work activity or temporary lane closures to help reduce congestion and delays through the Project site. This will be communicated through our comprehensive public outreach campaign detailed in Section 4.4.1, which will include Citizen Information Meetings, Pardon Our Dust meetings, website updates, press releases, and special meetings for specific groups/concerns (such as the pedestrians and bicyclists along Route 55). As with any large scale transportation improvement project such as this, some inconvenience is unavoidable, but our Team's goal will be to minimize these concerns for all major stakeholders. As noted above, there are several Project Stakeholders who may be impacted at various times during construction. Identification of these stakeholders in advance of construction activities will help to identify mitigation strategies for any temporary impacts. Provided below is a list of the major Project Stakeholders adjacent to the Project and how they may be impacted during construction:

- ***The Town of Haymarket & Local Businesses*** – The Town and its local businesses will be impacted during construction along Route 15 and Route 55. To minimize impacts all thru and turn lane along both roadways will remain open at all times, with temporary lane closures limited to off-peak hours. Also our design concept provides great safety benefits for pedestrians, as it allows for most of the existing sidewalk along eastbound Route 55 to remain un-impacted during construction. We will also coordinate closely with business management (such as Sheetz, CVS, and Pickle Bob's) to construct necessary improvements during the hours of least impact. All activities will be closely communicated with the town and these stakeholders in order to maintain the aesthetics and walkable benefits of historic Haymarket.
- ***Police, Fire & Rescue*** – We do not anticipate any measurable impacts to fire and rescue or police service or response, as all existing roadways and ramps will remain open at all times. Coordination will be required with the fire and rescue staff to provide advance notification of temporary lane restrictions and roadway closures. This coordination will include Station 4 (on Route 55), Station 15 (located north on Route 15) and Station 24 (located on Antioch Road/ in Dominion Valley to the north on Route 15). Coordination with Town of Haymarket Police, Prince William County Police and Virginia State Police will be required for all temporary lane closures.
- ***Schools*** – Coordination with the following school organizations will be necessary since their school boundaries encompass the Project site, and their bus routes travel on Route 15 & Route 55:
 - Prince William County Schools – several county schools and their bus routes are in proximity of the Project (Battlefield High School, Reagan Middle School, Buckland Mills Elementary School, Mountain View Elementary School, Alvey Elementary School, Tyler Elementary School, and Pace West School).
 - St. Paul's School, a private school located within the Town of Haymarket on Fayette Street.
 - Although impacts are expected to be minimal as our Team will not implement lane closures during typical school bus hours, comprehensive coordination efforts will be undertaken

with each of these school organizations to make them aware of temporary construction impacts.

- **Traveling Public** – The maintenance of all travel lanes and ramps throughout construction will limit impacts to the traveling public. In addition, our optimization of the temporary lane closure hours that will be limited to off-peak hours will further reduce these impacts. Also, keeping all work behind barriers and maximizing lane widths will also help limit delays associated with temporary lane configurations during peak hours.
- **Bicyclists** – Our Team is an active member of the Haymarket community, and we know that bicycle traffic along Route 55 is significant, especially during weekends for “group rides” towards Thoroughfare Gap. We will design our TMP and TTC plans to safely accommodate the cyclists by providing paved shoulders where possible and by installing enhanced bicycle warning signs where appropriate.
- **Haymarket Health Center** – Our Team understands the importance of maintaining full access to the hospital located on Heathcote Boulevard off of Route 15. Currently operating as a 24-hour emergency room, the newly constructed 60-bed full hospital is anticipated to be open in early 2014. Our Team will ensure that the Project is continually accessible to ambulances and all other hospital traffic.
- **Local Residences** – Homeowners and local businesses immediately adjacent to Route 55 and I-66 will be impacted temporarily with added construction noise and clearing, grading and construction activities close to their properties. Impacts will be minimized as much as possible through the reduction of temporary and permanent easement impacts, and where possible the early installation of noise barriers will provide more immediate relief of both construction and traffic noise.

In addition to these specific stakeholders, constant communication will be maintained with VDOT staff, Prince William County supervisor’s staff, and with those involved in design and construction of the adjacent I-66 Projects.

Our Team is adamant about providing and maintaining a safe work zone, and we also always look for ways to improve traffic patterns not only after construction, but during construction. On several of our recent projects, we implemented interim improvements aimed solely at improving traffic flow during construction. On this Project, we have already started on the “right foot” by introducing significant enhancements to the Project that exceed the requirements of the RFP (such as our sequencing of construction and roadway alignment adjustments to provide tremendous safety and mobility benefits to the traveling public). We look forward to designing and constructing this Project for VDOT, the local stakeholders, and interested parties, and to another successful design-build project with VDOT.

4.6 Disadvantaged Business Enterprises (DBE)

COMMITMENT TO ACHIEVING THE DBE GOAL

Shirley Contracting Company, LLC (Shirley) is committed to achieving the 18% DBE participation goal for the Project for the entire value of the contract.

As one of Virginia's largest General Contractors performing Virginia Department of Transportation work, we take pride in our 40 year history of providing opportunities to Disadvantaged Business Enterprises. Our record of compliance in meeting federal, state and local DBE goals on all of our past and present projects is an accomplishment we are proud of.

PLAN TO MEET DBE SUBCONTRACTING GOAL

Concurrent with the preparation of this Technical Proposal, we will, as part of the Price Proposal, solicit firm pricing for the work from potential DBE subcontractors and vendors. As part of the Price Proposal, we will include Form C-111 indicating how we plan to achieve the Project's DBE requirement during design and construction.

The following narrative outlines the steps that will be taken to meet this requirement during the Price Proposal preparation phase:

- Our Team will first examine the Project, the nature of the work, and our internal company DBE database to determine where we believe the opportunities for DBE participation will be available. Once we determine the areas where participation is likely, we will take the necessary steps to ensure that we communicate with and provide adequate notice of the Project opportunities to the DBE community.
- Initially, we will contact DBE firms included in our company database to inform them of the opportunity. We will include in an e-mail solicitation the scope of the Project, the construction trades we believe will be able to provide subcontracting opportunities, and notice that plans are available at our company's main office for viewing. We will establish a single point of contact for all potential DBE firms so that questions regarding the Project and potential opportunities will be directed to the contact person and answered promptly.
- In addition to e-mails to subcontractors and vendors in our database, we will continue to make follow-up telephone calls to these firms as a means of determining actual interest in the Project and to answer any questions about possible opportunities.
- We will also post the opportunity on our company website to reach a broader spectrum of contractors, vendors and other potential interested persons. Once again, the name and phone number of a contact person will be included for questions about the opportunity.
- Another method that we can utilize for soliciting interest in the Project will be to place ads in a local newspaper and other media outlets identifying the Project and the potential opportunity to supply materials and services. Ads will include a contact person and telephone number so that interested firms can make contact with us and discuss the potential opportunities on the Project.
- We will attend industry, major business organization and community group events where we will establish networking relationships to create interest in the Project and attract potential bidders. We also have had previous success soliciting assistance from various trade organizations in communicating with the DBE community.
- We will contact the VDOT Business Opportunity and Workforce Development Center (BOWD) and advise them of the Project and the opportunity for DBE participation. One of the primary goals of the BOWD Center is to provide opportunities for DBE firms to partner with prime contractors.

- Throughout the development and preparation of our Technical and Price Proposals for the Project, we will track and maintain the status of our expected DBE participation. In this manner, we were immediately and constantly aware of the need to solicit increased participation from the DBE community in order to meet the goal. As the date for submission of the Price Proposal approaches, strategies for meeting the DBE participation goals are evaluated and finalized to ensure that the goal will be met with the submission of the Price Proposal. As we will plan to show on Form C-111 to be submitted with the Price Proposal, we plan to exceed the stated DBE goal for the Project.

As an ongoing process, Shirley stays up to date with changes and modifications to applicable DBE program rules so that we are best positioned to meet or exceed the goals established for the Project. Throughout the design and construction phases of the Project, we will continually monitor the status of our Team's DBE participation. The Design-Build Project Manager will be responsible for this task, and will develop a method to do so that will be shared with VDOT on a regular basis.

4.7 Proposal Schedule

PROJECT MILESTONES

The I-66/Route 15 Interchange Reconstruction Project (the Project) Preliminary Schedule details our plan for all phases of the design-build process based on the following project Milestones (Additional Milestones can be found in the detailed Proposal Schedule Exhibit A-1):

Table 3 - Proposal Schedule and Dates of Project Milestone

MILESTONE	DATE
Notice of Intent to Award:	March 12, 2014
Notice to Proceed (Date of Commencement):	May 15, 2014
Begin Stage 1 Construction:	January 13, 2015
Begin Stage 2 Construction:	May 21, 2015
Begin Stage 3A Construction	January 12, 2016
Final Completion Date:	July 28, 2017

WORK BREAKDOWN STRUCTURE

Level 1 of the Work Breakdown Structure (WBS) groups the schedule into the phases of the design-build process as follows:

- A. **Project Milestones:** Area reserved for easy review of the Project status.
- B. **Design:** Includes preliminary engineering services, plan development, QA/QC reviews, submittal milestones, and reviews by VDOT, FHWA and other regulatory agencies and approvals of plans. This section of the schedule includes a second level WBS structure to group design activities by type of design submission including right-of-way, roadway, bridge, SWM and culvert design.
- C. **Public Involvement:** This section of the schedule includes milestones for planned public involvement meetings and updates to the Office of Public Affairs for major traffic shifts and the VDOT website.
- D. **Environmental Permitting:** Includes wetland and stream delineations and jurisdictional determination, permit management and preparation, mitigation, and permit submissions, reviews and approvals. Initial efforts will focus on the Corps of Engineers Individual Permit, Virginia Water Protection Individual Permit, VMRC Sub-Aqueous Bed Individual Permit, LD 455/VSMP Permit and the SWPPP submission.
- E. **Right-of-way Acquisition:** This section of the schedule is used to monitor the acquisition of right-of-way and easements for the Project including title searches, appraisals and appraisal reviews, offers, negotiations, and settlements. In order to prioritize groups of properties by order of need, we have included a second level WBS structure that includes separate right-of-way acquisition activities for the four quadrants of the Project. Dividing the right-of-way activities into four separate groups of parcels will enable our Team to focus our right-of-way acquisition efforts on the most schedule critical acquisitions and track these critical acquisitions to ensure on-time completion.
- F. **Utility Relocations:** The utility relocation section of the schedule includes activities for UFI meetings, preparation of preliminary engineering (PE) estimates, approval of PE estimates, utility relocation design by the utility owner, approval of the utility design, and utility

relocation construction. The utility relocations are separated into second level WBS groups by utility owner.

- G. **Construction:** Includes all components of roadway and bridge construction as well as MOT, construction access, signage, signals, electrical and drainage. The Construction section of the schedule is segmented by additional levels of WBS structure to divide the construction activities into groups of work packages that can be easily tracked to ensure on-time completion of the Project.

Below is a complete outline of the WBS Structure for the Project:

WBS Structure

WBS PATH	WBS NAME
A.	Schedule Milestones
B.	Design Phase B.B - Roadway Design B.C - Bridge Design B.C.2 - B678 - Rt 15 Over I-66 B.C.3 - B680 - Ramp E Over Rt 15 & I-66 B.C.1 -B679 - Ramp E Over Ramp A B.D - Utility Design
C.	Public Outreach
D.	Environmental Permitting
E.	Right-Of-Way Acquisition/Easements E.A - NW Quad (I66/Rt15) E.B - NE Quad (I66/Rt15) E.C - SW Quad (I66/Rt15) E.D - SE Quad (I66/Rt15) E.E - Rt 15 South of Rt 55 E.F - Along Rt 55
F.	Utility Relocations F.A - Dominion Virginia Power F.B - Verizon F.E - Fiberlight (Quest Gov't/Century Link) F.F - Comcast - Communication F.G - Washington Gas F.I - Prince William County Service Authority
G.	Construction G.A - General G.B - Administration & PIM G.1A - Stage 1 - Median Construction Rt 15 G.1A.A - General G.1A.B - Rt 15 Sta: 509+00 To 512+00 G.1A.C - Rt 15 Sta: 513+50 To 520+50 G.1A.D - Rt 15 Sta: 530+00 To 541+50 G.2 - Stage 2 G.2.A - General G.2.B - Route 15 G.2.B.1 - Rt 15 Station 502+00 To 513+00 G.2.B.2 - Rt 15 Station 513+00 To 524+00 G.2.B.3 - Rt 15 Station 526+00 To 539+00

G.2.C - Ramp B (I-66 WB Sta 136+00 To Ramp B Sta 25+00)
G.2.D - Ramp C (Ramp C Sta 12+50 To I-66 EB Sta 347+00)
G.2.E - Ramp D (I-66 EB Sta 303+00 To Ramp D Sta 22+00)
G.2.F - Ramp E
G.2.F.1 - Ramp E (Sta 10+00 To 20+50)
G.2.F.2 - Ramp E (Sta 21+00 To 24+00)
G.2.G - Rt 55
G.2.G.2 - Rt 55 EB (Sta 599+40 To 606+00)
G.2.G.1 - RT 55 WB (STA 602+50 TO 606+00)
G.3A - Stage 3a
G.3A.B - Route 15
G.3A.B.2 - Rt 15 Station 513+00 To 524+00
G.3A.B.3 - Rt 15 Station 526+00 To 539+00
G.3A.B.1 - Rt 15 Station 502+00 To 513+00
G.3A.D - Ramp C (Ramp C Sta 10+00 To Sta 12+50)
G.3A.F - Ramp E (Sta 26+50 To 31+00)
G.3A.G - Rt 55
G.3A.G.1 - Rt 55 WB (Sta 617+40 To 607+00)
G.3A.G.2 - Rt 55 EB (Sta 615+50 To 607+00)
G.3A.H - Service Road A
G.3B - Stage 3b - Ultimate Configuration/Finishes
G.3B.A - General
G.3B.B - Ramp E Tie-In (Station 31+00 to 33+00)
G.3B.C - Ramps - Surface Asphalt
G.3B.C.B - Ramp A
G.3B.C.C - Ramp B
G.3B.C.D - Ramp C
G.3B.C.E - Ramp D
G.3B.C.F - Ramp E
G.3B.D - Route 15 - Surface Asphalt
G.3B.E - Route 55 - Surface Asphalt
G.C - B678 - Rt 15 Over I-66 (Stage 1, 2 & 3A)
G.C.A - Route 15 Bridge Over I-66 - SB (Stage 1 & 2)
G.C.B - Demo Existing Route 15 Bridges Over I-66 (Stage 3A)
G.C.C - Route 15 Bridge Over I-66 - NB (Stage 3A)
G.D - B679 - Ramp E Over Ramp A (Stage 1, 2 & 3A)
G.D1 - B680 - Ramp E Over Rt 15 & I-66 (Stage 1, 2 & 3A)

CALENDARS

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

Global Calendar – All calendars are based on 8 hour work days and include the following holidays:

New Year Day Holiday from 7:00 AM December 31st until 7:00 AM the next work day following New Year Day, unless the holiday occurs on a Sunday and then the following Monday is considered the Holiday.

Memorial Day Holiday from 7:00 AM Friday prior to Memorial Day until 7:00 AM Tuesday following Memorial Day.

Easter Holiday from 7:00 AM on Good Friday until 7:00 AM the following Monday after Easter Sunday.

Independence Day Holiday from 7:00 AM July 3rd until 7:00 AM the next work day following Independence Day, unless the holiday occurs on a Sunday and then the following Monday is considered the Holiday.

Labor Day Holiday from 7:00 AM Friday prior to Labor Day until 7:00 AM Tuesday following the Labor Day.

Thanksgiving Day Holiday from 12:00 PM Wednesday prior to Thanksgiving Day until 7:00 AM Monday following Thanksgiving Day.

Christmas Day Holiday from 12:00 PM the day prior to Christmas Day until 12:00 PM the Day following.

Calendar 1 - “C00100566DB63 - I66/ROUTE 15 DB - 5 DAY WORKWEEK W/HOLIDAYS” – this calendar is based on five working days per week and is used for all design, administrative, and construction activities that are unaffected by weather.

Calendar 2 – “C00100566DB63 - I66/ROUTE 15 DB - 7 DAY WORKWEEK” – Assigned to activities that have durations based on calendar days instead of work days. For example VDOT’s 21 calendar day review duration.

Calendar 3 – “C00100566DB63 - I66/ROUTE 15 DB - 5 DAY WEATHER” – This calendar is based on working part-time from December 25 to March 15. It is assigned to activities that are anticipated to have reduced productivity during the winter months.

Calendar 4 – “C00100566DB63 - I66/ROUTE 15 DB - WINTER SD” – Assigned to activities that are anticipated to be shut down during the winter, such as asphalt paving and painting. This calendar contains no working days from December 24 of one year to March 14 of the next year.

SCHEDULE TIMING AND CRITICAL PATH

The following narrative describes key activities in the sequence of design, planning, permitting, pre-construction, and construction phase of the Project. Each of these activities can be found in the attached Proposal Schedule and schedule summary found in Exhibit A-1.

Design Phase

The design phase includes preparation, Quality Assurance/Quality Control reviews, and submission of roadway and bridge plans at multiple stages of the design process with a 21 calendar day activity for VDOT review after each submission. Also included are reviews for FHWA and other regulatory agencies necessary. The design phase also includes non-critical activities for the completion of surveys, utility designations, test pits, flood plain studies, utility relocation plans, the scope validation period and geotechnical investigations, including a 90 calendar day activity for VDOT’s review of the geotechnical report prior to submission of the final roadway and bridge plans. Our Team will begin the design phase of the Project immediately upon Notice to Proceed to get an early jump on flood plain studies, right-of-way, bridge, and roadway plans. Our Team will prepare an advanced acquisition plan set to provide for beginning the right-of-way procurement process as early as possible and mitigate any potential schedule delays. The first submission roadway plans will be provided on August 27, 2014 and the bridge B678 & B680 plans first submission on September 12, 2014. Then the next formal roadway plan submission will occur October 27, 2014 and will include the remaining right-of-way not incorporated in the advanced acquisition submission, maintenance of traffic, and erosion and sediment control plans in an effort to get an early start on the utility relocation phase and construction. The schedule anticipates final approval of all plans by January 13, 2015.

Public Outreach

The public outreach schedule includes submitting our Emergency Contact List upon Notice to Proceed,

holding Citizen Information Meetings during the design phase, public information “Pardon our Dust” meetings each March or April at the start of the construction season and prior to major traffic switches, providing updates to the Office of Public Affairs, and additional specific group meetings as necessary. The schedule includes the major milestone activities for the Public Information meetings and major traffic changes. However, there are many other public involvement activities that our Team will perform, including meeting with local businesses and affected property owners, attending meetings with home owners associations, local government representatives, and community groups, and providing information for regular updates at progress meetings and weekly lane closure plans.

Environmental Permitting

Environmental Permitting will begin upon notice of award with the completion of wetland delineations, stream assessments, and jurisdictional determinations. All environmental permitting necessary will be completed by January 6, 2015 well ahead of the planned start of construction and the utility relocations which will take place within the Project limits that are impacted by environmental permitting.

Right-of-way Acquisition

The administration of the right-of-way or easement acquisitions will start upon Notice-to-Proceed with start of title searches and appraisals for the affected properties. We have sequenced the construction so that right-of-way/temporary & permanent easements impacts necessary for construction will be minimized. We will prepare advanced acquisition plans to expedite procurement of right-of-way or easement acquisitions on the most critical properties. To effectively prioritize and track the status of these acquisitions, we have separated the Project into six groups and included a detailed schedule of right-of-way acquisition activities for each group of properties. These activities include title searches, preparation of fair market value appraisals, appraisal reviews by the independent review appraiser, VDOT review and approval of the appraisals, preparation and delivery of offers to the affected property owners, negotiations with the property owners, settlements, and relocation assistance, if necessary. The ROW/Easement acquisition is scheduled to be completed in areas necessary in advance of construction operations beginning.

Utility Relocations

To simplify and track the utility relocations on the Project, we have created a work breakdown structure that groups the utility relocation activities by utility owner. Within each utility owner group, we have included activities for holding the Utility Field Investigation (UFI) meeting, followed by preparation of the Preliminary Engineering (PE) estimates by the utility owner, approval of the PE estimate, design of the utility relocation, and construction of the relocation by area. Although we have already met with each individual utility company to discuss the proposed relocations and prior rights, the utility relocation schedule starts with formal UFI meetings in October 2014 following completion of all utility test pits. This will enable our Team to confirm and adjust our list of utility conflicts based on the field test pit data prior to holding the formal UFI meeting. We will continue this early coordination of utilities throughout the Design Phase of the Project to ensure that the Roadway Plans are coordinated with the utility relocation plans. The utility relocations are anticipated to be completed prior to impacting construction operations and avoiding delays. Below is a brief summary of a couple of the utilities within the Project and detailed out in the schedule:

Dominion Virginia Power - Dominion Power will have potential conflicts with predominately overhead lines. The overhead lines run parallel to Route 15 on the east side, along the north side of Ramp B, and along Route 55 on the south side. The OH lines along Route 15 and are expected to have potential conflicts with the road widening operations. We have developed our sequence of construction so that these potential impacts can be mitigated well ahead of stage 3 construction operations. The impacts along the

north side of Ramp B are associated with the limited access line and shouldn't have any impacts on construction of Ramp B. The OH lines along the south side of Route 55 aren't expected to be in conflict as our concept shifts the alignment of Route 55 so that the widening occurs to the north side. Dominion will begin relocations as necessary for construction and it is anticipated that should adjustments be unavoidable they will be performed prior to or concurrent with construction to avoid any delays to the Project.

Verizon - The Verizon facilities are located overhead and underground and will be adjusted or relocated to avoid any delays to construction of the Project. The overhead lines run along the north side of Route 55 and underground along the east side of Route 15. The lines will have to be relocated concurrently with our widening operations and all delay impacts will be mitigated by getting an early start on relocation.

Comcast - Comcast has facilities located along the east side of Route 15 from the intersection of Route 55 to Norfolk Southern Railroad that will be relocated as part of the widening and service road A operations.

Fiberlight - The Fiberlight facilities are located underground along the south side of Route 55 and we plan to avoid conflicts with our proposed Route 55 alignment.

Washington Gas - The Washington Gas facilities cross Route 15 at approximately station 509+00 and Route 55 at approximately station 604+00. These crossings will have to be potentially lowered to avoid possible conflicts with subgrade. Washington Gas also has this same 12" gas main located along the west side of Route 15 from station 537+00 to proposed Ramp E station 20+00 and this will have to be relocated concurrent with roadway construction in stage 2 to avoid conflicts and the potential for delays. This operation will be scheduled and occur as early as possible to mitigate any negative impacts.

Waterlines/Sewer:

Existing waterline and sanitary sewer relocations/adjustments may be required for the proposed construction to accommodate storm drainage and road widening; the associated offsets will be performed as part of the standard construction operations.

Construction

Mobilization is anticipated to begin in January 2015 upon approval of the Roadway plans with Stage 1 construction starting in February 2015. Under this stage of construction, the pavement section will be constructed in the existing median of Route 15 to provide for shifting Route 15 southbound traffic to the east into the median widening to permit Stage 2 construction activities. After completion of Stage 1 and shifting Route 15 southbound traffic to the east/median of Route 15 southbound, Stage 2 will be performed and consists of constructing the Ultimate Route 15 southbound lanes, portions of Bridge B678 (Route 15 over I-66), portions of Ramps A, B, C, D, & E, portions of Route 55, Bridge B679 (Ramp E over Ramp A), and portions of Bridge B680 (Ramp E over Route 15 & I-66). Upon completion of the newly constructed Route 15 southbound lanes, all Route 15 traffic will be shifted from existing Route 15 lanes to the west onto those newly constructed portions of Route 15 southbound, which allows for construction of Stage 3A (This switch will occur as soon as Route 15 southbound lanes and the southbound portion of Bridge B678 are completed to allow for construction of the Route 15 north bound lanes). Stage 3A consists of constructing the ultimate Route 15 northbound lanes, the remainder of Bridge B678 (Route 15 over I-66), the remainder of Bridge B680 (Ramp E over Route 15 & I-66), and the remainder of Route 55, ramp B, and ramp C. Stage 3A commences with demolition of the existing Route 15 over I-66 bridges and then construction of the remaining Bridge B678.

The final stage of construction is Stage 3B where initially work will be focused on completing the

remaining portions of Ramp B (I-66 Westbound to Route 15) and Ramp E (Route 15 Southbound to I-66 Eastbound). Upon completion of these two remaining ramps, all traffic will be shifted into the ultimate interchange lane configuration allowing for any remaining median construction, surface asphalt will be placed, permanent pavement markings, final signage, and any remaining finishes will be performed. Upon completion of the general construction elements, we will complete the punch list to achieve Final Completion by July 28, 2017 ahead of the RFP schedule requirements. For a more detailed sequence of construction, please see section 4.5.1 - sequence of construction.

Critical Path

The Project Critical Path can be tracked within the attached Proposal Schedule and can also be found summarized below:

The Critical Path of the Project starts with preparation and submission of the Roadway & Bridge Plans and design elements and then to beginning construction. Construction starts with mobilization, preparation of submittals and shop drawings, installation of Project wide maintenance of traffic signs/devices and stage 1 construction. Then moves into the stage 2 construction activities for the Route 15 Southbound widening and the Bridge construction of B678. The critical path then moves to stage 3A construction associated with Route 15 Northbound construction, demolition of the existing Route 15 bridge, remaining portions of Bridge B678 widening construction and through Bridge B680 and Ramp E. After completion of stage 3A, the critical path is in stage 3B with construction of the Ramp E remaining portions and traffic being shifted into the ultimate lane configuration. The critical path then follows surface asphalt placement, permanent pavement markings, remaining finishes and the completion of the Project punch list items for Final Completion to be achieved by July 28, 2017 ahead of the RFP schedule requirements.

Significant Assumptions:

Several of the key significant assumptions relative to productivity and critical activities that our Team has made are as follows:

- We have the resources and equipment to prosecute work in multiple areas/locations of the Project concurrently. This is a large project and in order to complete the Project on time, construction activities have to be ongoing throughout the Project area and with multiple disciplines.
- By shifting the alignment of Route 15 to the west, we can construct bridge B678 in a two phases and concurrently with the construction of bridge B-680.
- Our Team knows the Project area extremely well and has great working relationships with key material suppliers for the Project. This will enable us to get materials delivered timely and in sufficient quantities so that production is high. In addition, knowing the Project area and having operations ongoing adjacent to and in the vicinity of this Project we can plan operations extremely efficiently.
- Our proposed design concept and construction sequencing allows more time to complete some of the more typical activities associated with project delays including ROW, utility relocation and permitting.
- We will be able to sequence work concurrently with major elements of the I-66 Widening Project, reducing specific work durations, such as those required for the auxiliary lane widening on I-66 and the pavement reconstruction at the Ramp A and Ramp D gores with I-66

PROJECT CONTROLS

Through our experience delivering major design-build roadway projects ahead of schedule, Shirley Contracting has developed scheduling protocols to govern the development, implementation, progress tracking, and recovery of the CPM schedule through all of the Project phases. These methods have proven

effective as evidenced by the fact that every design-build project completed by our Team has finished either on-time or ahead of schedule.

Schedule Development

For any design-build project it is imperative that the Project Team develop a detailed CPM schedule that considers the interrelationships between all of the design-build disciplines. This is especially important on a project with extensive right-of-way and utility impacts that must be integrated into the design and construction sequencing. The Team has developed the Preliminary CPM Schedule, included as Exhibit A-1 that includes a Work Breakdown Structure (WBS) to clearly delineate the tasks of each discipline manager, including Design, Permitting, Right-of-Way, Utilities, and Construction.

Each discipline manager was responsible for producing a schedule to govern their own work and provide insight into how their schedule activities affect and are affected by activities in other disciplines. Once each manager prepared their individual schedule, schedule development meetings were held by the Design-Build Project Manager. These meetings were attended by all discipline managers to review each individual schedule and integrate them into the overall project CPM Schedule. These meetings ensure that:

- The work packages within each discipline are comprehensive enough to define the work with no activities omitted;
- The work packages are integrated within each discipline and between disciplines to generate a clearly defined project critical path, confirm that the critical path makes sense, and that the schedule shows that the Project will complete on-time or ahead of schedule;
- Each discipline manager understands the schedules of the other disciplines and how their work inter-relates with the other disciplines;
- Each discipline manager understands how his work affects the critical path of the Project and the priorities of the Design-Build Project Manager and the other discipline managers; and
- The schedule meets the requirements of the Contract.

These meetings have enabled the Team to create a detailed Preliminary Schedule that has been jointly prepared by and agreed to by all of the discipline managers, providing realistic expectations of the schedule of work to be completed by all team members and third parties.

Throughout the design phase of the Project as more detailed plans are developed and utility conflicts are verified through test pitting, these meetings will continue to further develop the Preliminary Schedule into the more detailed Baseline CPM Schedule. This schedule can then be utilized by all team members to plan and track the progress of their work. It will be submitted to VDOT for review and approval and utilized during the planning phases for utilities, permitting, right-of-way, design, and subcontractor/supplier scope and purchasing. Specific milestone dates from the CPM schedule will be written into subcontracts and purchase orders, making them contractually responsible for meeting schedule deadlines.

Procedures for Monitoring and Reporting Schedule Progress to Ensure Timely Project Completion

The key to effectively monitoring schedule progress is maintaining efficient communication between the discipline managers, resulting in constant coordination and schedule feedback. From the NTP date through the completion of design activities, our Team, at a minimum will hold bi-weekly Design Coordination Meetings that are run by the Design-Build Project Manager and attended by all of the discipline managers. Design Coordination Meetings have been a crucial tool on other design-build projects by facilitating face-to-face communication between the discipline managers. For each Design Coordination Meeting, the Design-Build Project Manager will review the CPM Schedule and identify all activities that were scheduled for completion the previous week or are planned for the next two weeks. During the meeting

the Project Team discusses the status of progress since the last meeting with actual dates for completed activities; critical completion dates for future activities; the addition or deletion of schedule activities as the design evolves (for example the identification of a new utility impact or the ability to design around a planned utility relocation); the impact of revised schedule dates on other activities and disciplines; identification of ways to advance the schedule ahead of the planned completion or mitigate schedule delays; and general design review, constructability, and determination of means and methods.

After each bi-weekly meeting, the Design-Build Project Manager and/or Construction Manager will update the CPM schedule and forward copies of an updated “look-ahead” schedule to each of the discipline managers identifying the critical dates agreed to during the bi-weekly design meeting. This process continues throughout the design, permitting, and right-of-way phases to ensure that there is no slippage to the start of the utility relocation and construction phases of the Project.

During the utility relocation and construction phases of the Project, the Design-Build Project Manager, Construction Manager, Superintendent, Designer of Record, QA Manager, QC Manager, and VDOT will continue to meet bi-weekly for a Construction Progress Meeting to coordinate necessary QA, QC, Independent Assurance (IA) and Independent Verification (IV) inspections. At each meeting the Construction Manager and Superintendent will review the work performed during the previous week and outline the schedule activities that will be performed during the following two weeks.

An additional technique that our Team uses to monitor construction progress is the “Daily Shift Cost Report” (DSCR). At the end of each day, the construction field personnel compare the quantity of work, and the cost to do so, completed that day with the budgeted production and cost. Not only does this analysis provide an early indicator of cost concerns, but it also instantly highlights potential issues with the schedule by focusing on production rates. Religiously completing and reviewing the DSCR’s allows the Construction Team to make immediate “real-time” adjustments to work crews, equipment, trucking, subcontractor resources, and material deliveries to adjust production rates in order to maintain the Project schedule. Our Team will also review and adjust the durations of future schedule activities based on the DSCR production rates to help identify and mitigate schedule concerns for the later phases of the Project. In addition to bi-weekly schedule meetings with the VDOT, our Team will also prepare and submit monthly schedule updates for review and approval by VDOT, including a narrative of the schedule modifications, updated activities, project issues affecting the schedule, and a description of the critical path with updated schedule milestones. These daily, weekly, and monthly reviews of production rates, activity durations, and overall schedule status will enable our Team to identify and mitigate potential schedule delays to ensure early completion of the Project.

Procedures for Rescheduling Activities and Schedule Recovery

If during the course of the Project, delays to the Project critical path are encountered, we will complete a Time Impact Analysis (TIA), re-sequence the schedule, and prepare a schedule recovery plan to reclaim lost time. This plan may include increasing work shifts, adding crews and resources to construct critical path activities concurrently, and changing MOT schemes or modifying the design to remove activities from the critical path. If it is early in the Project at the time the delay is encountered, schedule recovery may require adjustments by any or all of discipline managers including, Design, Permitting, Right-of-Way, Utility Relocation, and Construction. However, if all other design-build disciplines have completed their tasks, re-sequencing the construction schedule by the Construction Manager will be the primary focus in order to mitigate the delay.

Baseline CPM Development

Our Team will prepare and submit a cost and resource loaded, detailed Baseline CPM Schedule for VDOT's review and approval in accordance with the Contract Documents, Part 3, Section 11.1.2. Our Team will update the Proposal Schedule monthly until the Baseline Schedule is approved by VDOT.

MITIGATION OF MAJOR DELAY RISKS

Timely Review and Approval of Submittals

Upon Notice of Award, our Team will prepare a submittal schedule identifying all submittals that will be required for the Project. This schedule will identify the individual responsible for preparing the submittal, the anticipated submittal date, the parties responsible for reviewing and approving, the anticipated review durations, and a list of the individuals that must receive a copy of the approved submittal. At a minimum, the following submittals will be included:

- Design Submissions
- Permits
- QA/QC Plan
- CPM Schedule and Updates
- MOT and TMP Plans
- Materials Documentation, including Source of Supply and Shop Drawings

Submittals deemed critical to the success of the Project including design and permitting submissions and major materials submissions (such as structural steel shop drawings) will be included in the Project CPM Schedule where the progress can be monitored concurrently with the affected construction activity.

Each submittal will include a transmittal cover sheet identifying the submittal's priority level. For submittals between the contractor and design firm, normal priority submittals will be returned within four weeks, high priority submittals within two weeks and urgent submittals within three days. This also allows the Team to prioritize multiple submittals that are turned in concurrently. For submittals to government agencies and utilities we will include adequate review timeframes in the CPM Schedule, including a minimum of 21 days for review by VDOT and longer durations for approval of environmental permits and utility submissions as applicable.

We will also maintain a submittal log showing the status of all submittals. The log will be updated with the submission and return of each submittal and will show the submission date, anticipated response date, priority, and status. The submittal log will be reviewed at the weekly Design Coordination, Owner Progress, and Construction Progress meetings and can easily be sorted to distribute lists of active and overdue submittals. Issues affecting the timely completion of submittal reviews will be discussed with the responsible party and a plan for resolving them will be agreed to.

This process, along with diligent assessment of the CPM schedule, will ensure that timely review of submittals will be constantly monitored and managed to ensure that no construction activities are delayed by the submittal process.

Utility Relocations

Some of the biggest risks to a design-build schedule involve public/private utility companies who do not have a vested interest in the Project and are not necessarily compelled to complete their work within the scheduled time constraints. On the Project, this risk is spread among several utility companies with the coordination required between those utility companies. To mitigate the risk, we have started our planning and coordination process for these utilities by meeting with each affected utility and discussing the

Project, the utilities impacts, potential relocation options, and discussing ways to accelerate the utility relocations after award of the Project.

These discussions have been facilitated by the preexisting relationships that we have developed through other design-build projects in Virginia. This early coordination has enabled us to identify the following opportunities to advance the utility relocations and minimize the risk for utility delays after Notice to Proceed:

- We have identified utility corridors, and easements that can be easily added to the right-of-way plans early in the design phase to advance the utility easement acquisitions.
- We have agreed to include the environmental impacts of the utility relocations in our Joint Permit Application to avoid potential delays resulting from utilities acquisition of a separate permit.
- We have identified utilities that will allow our Team to design their utility relocations to minimize the risk of delay or coordination issues resulting from a third party design.
- We have initiated discussions with the utility companies to allow our Team to use its own subcontractors to install the utility infrastructure where possible.

This early personal contact with each utility will enable us to manage their issues/concerns and provide the potential to accelerate utility relocation activities on the Project.

Our Team's pre-proposal preparation, proven experience in all phases of design-build, extensive project controls, schedule management and recovery techniques will serve to ensure that the Project will complete ahead of schedule. Over the years, our Team has earned a solid professional reputation for meeting our commitments, completing projects ahead of schedule and under budget, performing quality work in a safe work environment, and establishing a problem-solving atmosphere and partnership with the Owner. This is a result of our extensive experience, quality people, and corporate commitment. The Project is a challenging and exciting project for our Team and is one that we will bring this same level of commitment to for the benefit of VDOT and the public.

Exhibit A-1 - Proposal Schedule

C00100566DB63 - I-66/ROUTE INTERCHANGE RECONSTRUCTION D/B PROPOSAL SCHEDULE

SHIRLEY CONTRACTING COMPANY, LLC

21-Jan-14 14:27

Activity ID	Activity Name	Original Duration	Start	Finish	Qtr 2, 2014		Qtr 3, 2014		Qtr 4, 2014		Qtr 1, 2015		Qtr 2, 2015		Qtr 3, 2015		Qtr 4, 2015		Qtr 1, 2016		Qtr 2, 2016		Qtr 3, 2016		Qtr 4, 2016		Qtr 1, 2017		Qtr 2, 2017		Qtr 3, 2017				
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul				
I-66 / RT 15 INTERCHANGE DESIGN BUILD PROJECT CURRENT					853	16-Apr-14	28-Jul-17																												
SCHEDULE MILESTONES					853	16-Apr-14	28-Jul-17																												
A1000	APPROVAL FOR AWARD (4/16/14)	0	16-Apr-14		APPROVAL FOR AWARD (4/16/14)																														
A1020	D/B CONTRACT EXECUTION (5/14/14)	0	14-May-14		◆ D/B CONTRACT EXECUTION (5/14/14)																														
A1040	NOTICE TO PROCEED (5/15/14)	0	15-May-14		◆ NOTICE TO PROCEED (5/15/14)																														
A1060	BEGIN STAGE 1 CONSTRUCTION	0	13-Jan-15		◆ BEGIN STAGE 1 CONSTRUCTION																														
A1070	SCOPE VALIDATION PERIOD (120 DAYS)	120	15-May-14	11-Sep-14	SCOPE VALIDATION PERIOD (120 DAYS)																														
A1080	BEGIN STAGE 2 CONSTRUCTION	0	21-May-15		◆ BEGIN STAGE 2 CONSTRUCTION																														
A1090	RT 15 TRAFFIC SWITCH TO ULT. SB LANES	0		12-Jan-16	◆ RT 15 TRAFFIC SWITCH TO ULT. SB LANES																														
A1100	BEGIN STAGE 3A CONSTRUCTION	0	12-Jan-16		◆ BEGIN STAGE 3A CONSTRUCTION																														
A1120	BEGIN STAGE 3B CONSTRUCTION	0	28-Mar-17		◆ BEGIN STAGE 3B CONSTRUCTION																														
A1240	FINAL PUNCHLIST	35	24-Jun-17	28-Jul-17																															
A1260	FINAL COMPLETION	0	28-Jul-17																																
DESIGN PHASE					172	15-May-14	16-Jan-15	16-Jan-15, DESIGN PHASE																											
ROADWAY DESIGN					168	15-May-14	13-Jan-15	13-Jan-15, ROADWAY DESIGN																											
BA1000	NOTIFICATION OF LANDOWNERS	15	15-May-14	29-May-14	NOTIFICATION OF LANDOWNERS																														
BA1020	SUPPLEMENTAL BASE MAPPING/FIELD SURVEY	20	30-May-14	18-Jun-14	SUPPLEMENTAL BASE MAPPING/FIELD SURVEY																														
BA1040	UTILITY DESIGNATIONS	60	09-Jul-14	06-Sep-14	UTILITY DESIGNATIONS																														
BA1060	UTILITY TEST PITS	45	07-Sep-14	21-Oct-14	UTILITY TEST PITS																														
BA1680	PREPARE/SUBMIT BASELINE CPM SCHEDULE	90	15-May-14	12-Aug-14	PREPARE/SUBMIT BASELINE CPM SCHEDULE																														
BA1700	VDOT REVIEW/APPROVE BASELINE CPM SCHEDULE	21	13-Aug-14	02-Sep-14	VDOT REVIEW/APPROVE BASELINE CPM SCHEDULE																														
BB1600	FINAL GEOTECHNICAL INVESTIGATION	85	04-Jun-14	27-Aug-14	FINAL GEOTECHNICAL INVESTIGATION																														
BB1620	VDOT/FHWA REVIEWS FINAL GEOTECHNICAL REPORTS	90	28-Aug-14	25-Nov-14	VDOT/FHWA REVIEWS FINAL GEOTECHNICAL REPORTS																														
BB1800	PREPARE ADVANCED ACQUISITION PLANS	75	19-Jun-14	01-Sep-14	PREPARE ADVANCED ACQUISITION PLANS																														
BB1820	QA/QC ADVANCED ACQUISITION PLANS	5	02-Sep-14	06-Sep-14	QA/QC ADVANCED ACQUISITION PLANS																														
BB1840	SUBMIT ADVANCED ACQUISITION PLANS	0		06-Sep-14	◆ SUBMIT ADVANCED ACQUISITION PLANS																														
BB1860	VDOT/FHWA REVIEW/COMMENT ADVANCED ACQUISITION PLANS	21	07-Sep-14	27-Sep-14	VDOT/FHWA REVIEW/COMMENT ADVANCED ACQUISITION PLANS																														
BB1880	APPROVE ADVANCED ACQUISITION PLANS	0		27-Sep-14	◆ APPROVE ADVANCED ACQUISITION PLANS																														
BB2000	PREPARE ROADWAY PLANS (1ST SUBMISSION)	75	09-Jun-14	22-Aug-14	PREPARE ROADWAY PLANS (1ST SUBMISSION)																														
BB2020	DESIGN QA/QC (1ST SUBMISSION)	5	23-Aug-14	27-Aug-14	DESIGN QA/QC (1ST SUBMISSION)																														
BB2040	SUBMIT ROADWAY PLANS (1ST SUBMISSION)	0		27-Aug-14	◆ SUBMIT ROADWAY PLANS (1ST SUBMISSION)																														
BB2060	VDOT/FHWA REVIEW/COMMENT ROADWAY PLANS (1ST SUBMISSION)	21	28-Aug-14	17-Sep-14	VDOT/FHWA REVIEW/COMMENT ROADWAY PLANS (1ST SUBMISSION)																														
BB2080	PREPARE ROADWAY PLANS (2ND SUBMISSION)	30	18-Sep-14	17-Oct-14	PREPARE ROADWAY PLANS (2ND SUBMISSION)																														
BB2100	DESIGN QA/QC (2ND SUBMISSION)	5	18-Oct-14	22-Oct-14	DESIGN QA/QC (2ND SUBMISSION)																														
BB2110	PREPARE ROADWAY PLANS (2ND SUBMISSION)	30	28-Sep-14	27-Oct-14	PREPARE ROADWAY PLANS (2ND SUBMISSION)																														
BB2120	SUBMIT ROADWAY PLANS (2ND SUBMISSION)	0		27-Oct-14	◆ SUBMIT ROADWAY PLANS (2ND SUBMISSION)																														
BB2140	VDOT/FHWA REVIEW/COMMENT ROADWAY PLANS (2ND SUBMISSION)	21	28-Oct-14	17-Nov-14	VDOT/FHWA REVIEW/COMMENT ROADWAY PLANS (2ND SUBMISSION)																														
BB2160	PREPARE FINAL ROADWAY PLANS	30	18-Nov-14	17-Dec-14	PREPARE FINAL ROADWAY PLANS																														
BB2180	DESIGN FINAL QA/QC PLANS	5	18-Dec-14	22-Dec-14	DESIGN FINAL QA/QC PLANS																														
BB2200	SUBMIT FINAL ROADWAY PLANS	0		22-Dec-14	◆ SUBMIT FINAL ROADWAY PLANS																														
BB2220	VDOT/FHWA REVIEW/COMMENT FINAL ROADWAY PLANS	21	23-Dec-14	12-Jan-15	VDOT/FHWA REVIEW/COMMENT FINAL ROADWAY PLANS																														
BB2240	FINAL ROADWAY PLANS APPROVED	0	13-Jan-15	13-Jan-15	FINAL ROADWAY PLANS APPROVED																														
BRIDGE DESIGN					126	19-Jun-14	17-Dec-14	17-Dec-14, BRIDGE DESIGN																											
B678 - RT 15 OVER I-66					126	19-Jun-14	17-Dec-14	17-Dec-14, B678 - RT 15 OVER I-66																											
BC3000	PREPARE/SUBMIT PRELIMINARY DESIGN (TS&L) - BRIDGE B-678	15	19-Jun-14	03-Jul-14	PREPARE/SUBMIT PRELIMINARY DESIGN (TS&L) - BRIDGE B-678																														
BC3020	VDOT/FHWA REVIEW/COMMENT BRIDGE PRELIMINARY DESIGN	21	04-Jul-14	24-Jul-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PRELIMINARY DESIGN																														
BC3040	PREPARE BRIDGE PLANS (1ST SUBMISSION)	45	25-Jul-14	07-Sep-14	PREPARE BRIDGE PLANS (1ST SUBMISSION)																														
BC3060	DESIGN QA/QC (1ST SUBMISSION)	5	08-Sep-14	12-Sep-14	DESIGN QA/QC (1ST SUBMISSION)																														
BC3080	SUBMIT BRIDGE PLANS (1ST SUBMISSION)	0		12-Sep-14	◆ SUBMIT BRIDGE PLANS (1ST SUBMISSION)																														
BC3100	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (1ST SUBMISSION)	21	13-Sep-14	03-Oct-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (1ST SUBMISSION)																														
BC3120	PREPARE FINAL BRIDGE PLANS	30	04-Oct-14	02-Nov-14	PREPARE FINAL BRIDGE PLANS																														
BC3140	DESIGN QA/QC (FINAL SUBMISSION)	5	03-Nov-14	07-Nov-14	DESIGN QA/QC (FINAL SUBMISSION)																														
BC3160	SUBMIT FINAL BRIDGE PLANS	0		25-Nov-14	◆ SUBMIT FINAL BRIDGE PLANS																														
BC3180	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (FINAL SUBMISSION)	21	26-Nov-14	16-Dec-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (FINAL SUBMISSION)																														
BC3200	FINAL PLANS APPROVED	0	17-Dec-14	17-Dec-14	FINAL PLANS APPROVED																														
B680 - RAMP E OVER RT 15 & I-66					126	19-Jun-14	17-Dec-14	17-Dec-14, B680 - RAMP E OVER RT 15 & I-66																											
BC3220	PREPARE/SUBMIT PRELIMINARY DESIGN (TS&L) - BRIDGE B-680	15	19-Jun-14	03-Jul-14	PREPARE/SUBMIT PRELIMINARY DESIGN (TS&L) - BRIDGE B-680																														
BC3240	VDOT/FHWA REVIEW/COMMENT BRIDGE PRELIMINARY DESIGN	21	04-Jul-14	24-Jul-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PRELIMINARY DESIGN																														
BC3260	PREPARE BRIDGE PLANS (1ST SUBMISSION)	45	25-Jul-14	07-Sep-14	PREPARE BRIDGE PLANS (1ST SUBMISSION)																														
BC3280	DESIGN QA/QC (1ST SUBMISSION)	5	08-Sep-14	12-Sep-14	DESIGN QA/QC (1ST SUBMISSION)																														
BC3300	SUBMIT BRIDGE PLANS (1ST SUBMISSION)	0		12-Sep-14	◆ SUBMIT BRIDGE PLANS (1ST SUBMISSION)																														
BC3320	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (1ST SUBMISSION)	21	13-Sep-14	03-Oct-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (1ST SUBMISSION)																														
BC3340	PREPARE FINAL BRIDGE PLANS	30	04-Oct-14	02-Nov-14	PREPARE FINAL BRIDGE PLANS																														
BC3360	DESIGN QA/QC (FINAL SUBMISSION)	5	03-Nov-14	07-Nov-14	DESIGN QA/QC (FINAL SUBMISSION)																														
BC3380	SUBMIT FINAL BRIDGE PLANS	0		25-Nov-14	◆ SUBMIT FINAL BRIDGE PLANS																														
BC3400	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (FINAL SUBMISSION)	21	26-Nov-14	16-Dec-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (FINAL SUBMISSION)																														
BC3420	FINAL PLANS APPROVED	0	17-Dec-14	17-Dec-14	FINAL PLANS APPROVED																														
B679 - RAMP E OVER RAMP A					126	19-Jun-14	17-Dec-14	17-Dec-14, B679 - RAMP E OVER RAMP A																											
BC3010	PREPARE/SUBMIT PRELIMINARY DESIGN (TS&L) - BRIDGE B-679	15	19-Jun-14	03-Jul-14	PREPARE/SUBMIT PRELIMINARY DESIGN (TS&L) - BRIDGE B-679																														
BC3030	VDOT/FHWA REVIEW/COMMENT BRIDGE PRELIMINARY DESIGN	21	04-Jul-14	24-Jul-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PRELIMINARY DESIGN																														
BC3050	PREPARE BRIDGE PLANS (1ST SUBMISSION)	60	25-Jul-14	22-Sep-14	PREPARE BRIDGE PLANS (1ST SUBMISSION)																														
BC3070	DESIGN QA/QC (1ST SUBMISSION)	5	23-Sep-14	27-Sep-14	DESIGN QA/QC (1ST SUBMISSION)																														
BC3090	SUBMIT BRIDGE PLANS (1ST SUBMISSION)	0		27-Sep-14	◆ SUBMIT BRIDGE PLANS (1ST SUBMISSION)																														
BC3110	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (1ST SUBMISSION)	21	28-Sep-14	18-Oct-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (1ST SUBMISSION)																														
BC3130	PREPARE FINAL BRIDGE PLANS	30	19-Oct-14	17-Nov-14	PREPARE FINAL BRIDGE PLANS																														
BC3150	DESIGN QA/QC (FINAL SUBMISSION)	5	18-Nov-14	22-Nov-14	DESIGN QA/QC (FINAL SUBMISSION)																														
BC3170	SUBMIT FINAL BRIDGE PLANS	0		25-Nov-14	◆ SUBMIT FINAL BRIDGE PLANS																														
BC3190	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (FINAL SUBMISSION)	21	26-Nov-14	16-Dec-14	VDOT/FHWA REVIEW/COMMENT BRIDGE PLANS (FINAL SUBMISSION)																														
BC3210	FINAL PLANS APPROVED	0	17-Dec-14	17-Dec-14	FINAL PLANS APPROVED																														
UTILITY DESIGN					61	22-Oct-14	16-Jan-15	16-Jan-15, UTILITY DESIGN																											
BD4000	PREPARE/QA/QC/SUBMIT PWCSA RELOCATION PLANS	30	22-Oct-14	20-Nov-14	PREPARE/QA/QC/SUBMIT PWCSA RELOCATION PLANS																														
BD4020	PWCSA REVIEW/COMMENT	21	21-Nov-14	11-Dec-14	PWCSA REVIEW/COMMENT																														

▶ Actual Work
 ▶ Critical Remaining Work
 ▶ Summary
▶ Remaining Work
 ◆ Milestone

Exhibit A-1 - Proposal Schedule

C00100566DB63 - I-66/ROUTE INTERCHANGE RECONSTRUCTION D/B PROPOSAL SCHEDULE

SHIRLEY CONTRACTING COMPANY, LLC

21-Jan-14 14:27

Activity ID	Activity Name	Original Duration	Start	Finish	SHIRLEY CONTRACTING COMPANY, LLC																											
					Qtr 2, 2014	Qtr 3, 2014	Qtr 4, 2014	Qtr 1, 2015	Qtr 2, 2015	Qtr 3, 2015	Qtr 4, 2015	Qtr 1, 2016	Qtr 2, 2016	Qtr 3, 2016	Qtr 4, 2016	Qtr 1, 2017	Qtr 2, 2017	Qtr 3, 2017														
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
BD4040	PREPARE/OA-QC/SUBMIT PWCSA RELOCATION PLANS - FINAL	15	12-Dec-14	26-Dec-14	PREPARE/OA-QC/SUBMIT PWCSA RELOCATION PLANS - FINAL																											
BD4060	PWCSA REVIEW/APPROVE WATER RELOCATION PLANS - FINAL	21	27-Dec-14	16-Jan-15	PWCSA REVIEW/APPROVE WATER RELOCATION PLANS - FINAL																											
PUBLIC OUTREACH					23-Jun-15																											
C1000	PROVIDE EMERGENCY CONTACT LIST	1	15-May-14	15-May-14	PROVIDE EMERGENCY CONTACT LIST																											
C1005	PROVIDE LIST OF AFFECTED STAKEHOLDERS	1	15-May-14	15-May-14	PROVIDE LIST OF AFFECTED STAKEHOLDERS																											
C1010	CITIZEN INFORMATION MEETING	5	16-May-14	20-May-14	CITIZEN INFORMATION MEETING																											
C1020	PRECONSTRUCTION PUBLIC INFORMATION MEETING	10	21-May-14	30-May-14	PRECONSTRUCTION PUBLIC INFORMATION MEETING																											
C1040	HOLD QUARTERLY "PARDON OUR DUST" MEETINGS	886	20-Jan-15	23-Jun-17	HOLD QUARTERLY "PARDON OUR DUST" MEETINGS																											
C1060	SPECIFIC GROUPS/ADDITIONAL MEETINGS AS NECESSARY	886	20-Jan-15	23-Jun-17	SPECIFIC GROUPS/ADDITIONAL MEETINGS AS NECESSARY																											
ENVIRONMENTAL PERMITTING					06-Jan-15, ENVIRONMENTAL PERMITTING																											
D1000	DISTRIBUTE ACCESS LETTERS	2	15-May-14	16-May-14	DISTRIBUTE ACCESS LETTERS																											
D1020	PROPERTY ACCESS HOLD	15	17-May-14	31-May-14	PROPERTY ACCESS HOLD																											
D1080	WETLAND DELINEATIONS, SURVEYS, & JURISDICTIONAL DETERMINATION	40	01-Jun-14	10-Jul-14	WETLAND DELINEATIONS, SURVEYS, & JURISDICTIONAL DETERMINATION																											
D1100	SUBMIT "JOINT PERMIT APPLICATION"	0	11-Jul-14		SUBMIT "JOINT PERMIT APPLICATION"																											
D1120	"CORPS OF ENGINEERS & DEQ REVIEW AND APPROVE GENERAL PERMIT	180	11-Jul-14	06-Jan-15	"CORPS OF ENGINEERS & DEQ REVIEW AND APPROVE GENERAL PERMIT																											
D1140	LD-445 FORMS - PREPARE TO BE SUBMITTED WITH 60% PLANS	5	11-Jul-14	09-Aug-14	LD-445 FORMS - PREPARE TO BE SUBMITTED WITH 60% PLANS																											
D1160	LD-445 FORMS - VDOT PROCESS AND SEND TO DCR	21	10-Aug-14	30-Aug-14	LD-445 FORMS - VDOT PROCESS AND SEND TO DCR																											
D1180	LD-445 FORMS - DCR REVIEW AND APPROVE	15	31-Aug-14	14-Sep-14	LD-445 FORMS - DCR REVIEW AND APPROVE																											
D1200	LEAD AND ASBESTOS SURVEYS AND TESTING	90	01-Jun-14	29-Aug-14	LEAD AND ASBESTOS SURVEYS AND TESTING																											
RIGHT OF WAY ACQUISITION/EASEMENTS					23-Oct-15, RIGHT OF WAY ACQUISITION/EASEMENTS																											
E1000	ACQUISITION AND RELOCATION PLAN	5	15-May-14	19-May-14	ACQUISITION AND RELOCATION PLAN																											
E1020	VDOT R/A ACQUISITION AND RELOCATION PLAN (HOLD PT)	21	20-May-14	09-Jun-14	VDOT R/A ACQUISITION AND RELOCATION PLAN (HOLD PT)																											
NW QUAD (I66 / RT15)					06-Jul-15, NW QUAD (I66 / RT15)																											
EA1000	Advanced Acquisition Plans Approved	0	28-Sep-14		Advanced Acquisition Plans Approved																											
EA1020	Complete 60 Yr Title Exam	30	28-Sep-14	27-Oct-14	Complete 60 Yr Title Exam																											
EA1040	Complete Appraisal	40	28-Oct-14	06-Dec-14	Complete Appraisal																											
EA1060	Review Appraiser Completes Review	10	07-Dec-14	16-Dec-14	Review Appraiser Completes Review																											
EA1080	Submit Appraisal to VDOT (RUMS)	5	17-Dec-14	21-Dec-14	Submit Appraisal to VDOT (RUMS)																											
EA1100	VDOT Approves Appraisal	21	22-Dec-14	11-Jan-15	VDOT Approves Appraisal																											
EA1120	Prepare Offer Package	5	22-Dec-14	26-Dec-14	Prepare Offer Package																											
EA1140	Negotiator Make Initial Contact / Present Offer	10	12-Jan-15	21-Jan-15	Negotiator Make Initial Contact / Present Offer																											
EA1160	Negotiations	40	22-Jan-15	02-Mar-15	Negotiations																											
EA1180	Send Notice of Filing Certif. to Property Owner	3	03-Mar-15	05-Mar-15	Send Notice of Filing Certif. to Property Owner																											
EA1200	Prepare / Finalize Plat	4	03-Mar-15	06-Mar-15	Prepare / Finalize Plat																											
EA1220	Prepare Certificate Package	5	03-Mar-15	07-Mar-15	Prepare Certificate Package																											
EA1240	Submit Certificate Package to VDOT	0	08-Mar-15		Submit Certificate Package to VDOT																											
EA1260	VDOT Reviews / Issues Certificate & Check	21	08-Mar-15	28-Mar-15	VDOT Reviews / Issues Certificate & Check																											
EA1280	Design Builder Files Certificate @ Court house	2	29-Mar-15	30-Mar-15	Design Builder Files Certificate @ Court house																											
EA1300	Obtain Signed Option	5	03-Mar-15	07-Mar-15	Obtain Signed Option																											
EA1320	Option / Settlement Docs Submitted to VDOT	5	08-Mar-15	12-Mar-15	Option / Settlement Docs Submitted to VDOT																											
EA1340	VDOT Reviews Settlement Documents	21	13-Mar-15	02-Apr-15	VDOT Reviews Settlement Documents																											
EA1360	Settlement Documents to Settlement Attorney	2	03-Apr-15	04-Apr-15	Settlement Documents to Settlement Attorney																											
EA1380	Obtain release of Liens	60	05-Apr-15	03-Jun-15	Obtain release of Liens																											
EA1400	Notice to VDOT that all Liens Are Cleared	1	04-Jun-15	04-Jun-15	Notice to VDOT that all Liens Are Cleared																											
EA1420	VDOT Issues Settlement Check	21	05-Jun-15	25-Jun-15	VDOT Issues Settlement Check																											
EA1440	Settlement Atty. Holds Settlement / Records	10	26-Jun-15	05-Jul-15	Settlement Atty. Holds Settlement / Records																											
EA1460	Property Access for Construction - If By Option - VDOT HOLD POINT	0	0	07-Mar-15	Property Access for Construction - If By Option - VDOT HOLD POINT																											
EA1480	Property Access for Constr. - If By Certificate - VDOT HOLD POINT	0	0	30-Mar-15	Property Access for Constr. - If By Certificate - VDOT HOLD POINT																											
EA1500	Property Access for Utilities - If By Certificate - VDOT HOLD POINT	0	0	30-Mar-15	Property Access for Utilities - If By Certificate - VDOT HOLD POINT																											
EA1520	Property Access for Utilities - If By Settlement - VDOT HOLD POINT	0	0	05-Jul-15	Property Access for Utilities - If By Settlement - VDOT HOLD POINT																											
EA1530	ROW COMPLETE NW QUAD (I66 / RT 15)	0	0	06-Jul-15	ROW COMPLETE NW QUAD (I66 / RT 15)																											
NE QUAD (I66 / RT15)					23-Oct-15, NE QUAD (I66 / RT15)																											
EB1000	2nd Submission Plans Submitted	0	28-Oct-14		2nd Submission Plans Submitted																											
EB1020	Complete 60 Yr Title Exam	30	28-Oct-14	26-Nov-14	Complete 60 Yr Title Exam																											
EB1040	Complete Appraisal	40	15-Feb-15	26-Mar-15	Complete Appraisal																											
EB1060	Review Appraiser Completes Review	10	27-Mar-15	05-Apr-15	Review Appraiser Completes Review																											
EB1080	Submit Appraisal to VDOT (RUMS)	5	06-Apr-15	10-Apr-15	Submit Appraisal to VDOT (RUMS)																											
EB1100	VDOT Approves Appraisal	21	11-Apr-15	01-May-15	VDOT Approves Appraisal																											
EB1120	Prepare Offer Package	5	11-Apr-15	15-Apr-15	Prepare Offer Package																											
EB1140	Negotiator Make Initial Contact / Present Offer	10	02-May-15	11-May-15	Negotiator Make Initial Contact / Present Offer																											
EB1160	Negotiations	40	12-May-15	20-Jun-15	Negotiations																											
EB1180	Send Notice of Filing Certif. to Property Owner	3	21-Jun-15	23-Jun-15	Send Notice of Filing Certif. to Property Owner																											
EB1200	Prepare / Finalize Plat	4	21-Jun-15	24-Jun-15	Prepare / Finalize Plat																											
EB1220	Prepare Certificate Package	5	21-Jun-15	25-Jun-15	Prepare Certificate Package																											
EB1240	Submit Certificate Package to VDOT	0	26-Jun-15		Submit Certificate Package to VDOT																											
EB1260	VDOT Reviews / Issues Certificate & Check	21	26-Jun-15	16-Jul-15	VDOT Reviews / Issues Certificate & Check																											
EB1280	Design Builder Files Certificate @ Court house	2	17-Jul-15	18-Jul-15	Design Builder Files Certificate @ Court house																											
EB1300	Obtain Signed Option	5	21-Jun-15	25-Jun-15	Obtain Signed Option																											
EB1320	Option / Settlement Docs Submitted to VDOT	5	26-Jun-15	30-Jun-15	Option / Settlement Docs Submitted to VDOT																											
EB1340	VDOT Reviews Settlement Documents	21	01-Jul-15	21-Jul-15	VDOT Reviews Settlement Documents																											
EB1360	Settlement Documents to Settlement Attorney	2	22-Jul-15	23-Jul-15	Settlement Documents to Settlement Attorney																											
EB1380	Obtain release of Liens	60	24-Jul-15	21-Sep-15	Obtain release of Liens																											
EB1400	Notice to VDOT that all Liens Are Cleared	1	22-Sep-15	22-Sep-15	Notice to VDOT that all Liens Are Cleared																											
EB1420	VDOT Issues Settlement Check	21	23-Sep-15	13-Oct-15	VDOT Issues Settlement Check																											
EB1440	Settlement Atty. Holds Settlement / Records	10	14-Oct-15	23-Oct-15	Settlement Atty. Holds Settlement / Records																											
EB1460	Property Access for Construction - If By Option - VDOT HOLD POINT	0	0	25-Jun-15	Property Access for Construction - If By Option - VDOT HOLD POINT																											
EB1480	Property Access for Constr. - If By Certificate - VDOT HOLD POINT	0	0	18-Jul-15	Property Access for Constr. - If By Certificate - VDOT HOLD POINT																											
EB1500	Property Access for Utilities - If By Certificate - VDOT HOLD POINT	0	0	18-Jul-15	Property Access for Utilities - If By Certificate - VDOT HOLD POINT																											
EB1520	Property Access for Utilities - If By Settlement - VDOT HOLD POINT	0	0	23-Oct-15	Property Access for Utilities - If By Settlement - VDOT HOLD POINT																											
EB1530	ROW COMPLETE NE QUAD (I66 / RT 15)	0	0	23-Oct-15	ROW COMPLETE NE QUAD (I66 / RT 15)																											
SW QUAD (I66 / RT15)					06-Jul-15, SW QUAD (I66 / RT15)																											
EC1000	Advanced Acquisition Plans Approved	0	28-Sep-14		Advanced Acquisition Plans Approved																											
EC1020	Complete 60 Yr Title Exam	30	28-Sep-14	27-Oct-14	Complete 60 Yr Title Exam																											

▶ Actual Work
 ▬ Critical Remaining Work
 ▬ Summary
▬ Remaining Work
 ◆ Milestone

Exhibit A-1 - Proposal Schedule

C00100566DB63 - I-66/ROUTE INTERCHANGE RECONSTRUCTION D/B PROPOSAL SCHEDULE

SHIRLEY CONTRACTING COMPANY, LLC

21-Jan-14 14:27

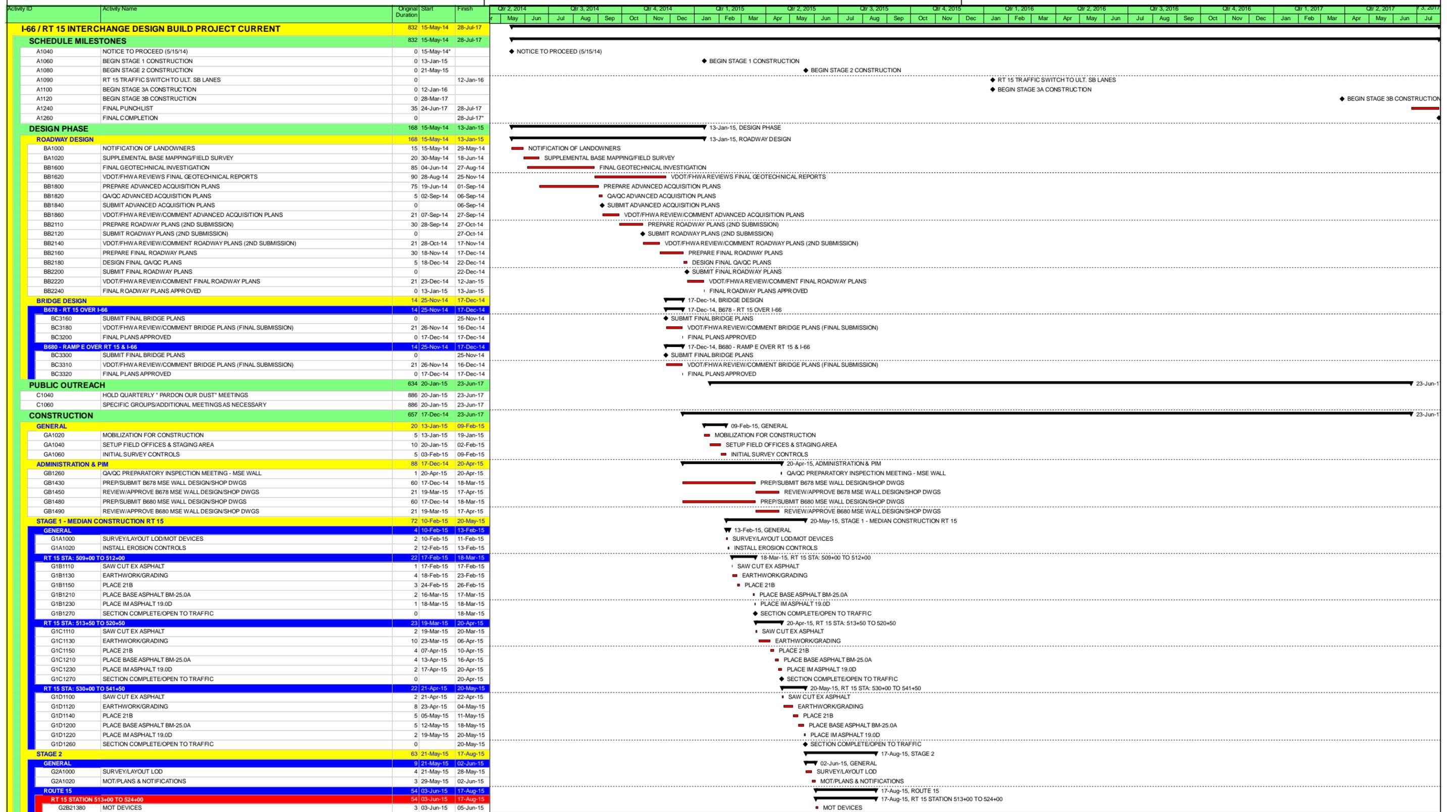
Activity ID	Activity Name	Original Duration	Start	Finish	Qtr 2, 2014		Qtr 3, 2014		Qtr 4, 2014		Qtr 1, 2015		Qtr 2, 2015		Qtr 3, 2015		Qtr 4, 2015		Qtr 1, 2016		Qtr 2, 2016		Qtr 3, 2016		Qtr 4, 2016		Qtr 1, 2017		Qtr 2, 2017		Qtr 3, 2017					
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul					
GAB1020	ABUT A - STRUCTURE EARTHWORK	5	30-Mar-15	06-Apr-15																																
GAB1040	ABUT A - PILE	8	07-Apr-15	16-Apr-15																																
GAB1060	ABUT A - MSE WALL	15	21-Apr-15	11-May-15																																
GAB1080	ABUT A - F/R/P/S PILE CAP	8	12-May-15	21-May-15																																
GAB1100	ABUT A - F/R/P/S BACKWALL	8	22-May-15	03-Jun-15																																
GAB1120	PIER 1 - EXCAVATE/SOE FOOTING	12	30-Mar-15	14-Apr-15																																
GAB1140	PIER 1 - F/R/P/S PIER FOOTING	8	15-Apr-15	24-Apr-15																																
GAB1160	PIER 1 - F/R/P/S PIER COLUMN	10	27-Apr-15	08-May-15																																
GAB1180	PIER 1 - BACKFILL PIER FOOTING	4	11-May-15	14-May-15																																
GAB1200	PIER 1 - F/R/P/S PIER CAP	15	15-May-15	05-Jun-15																																
GAB1220	ABUT B - STRUCTURE EARTHWORK	5	04-Jun-15	10-Jun-15																																
GAB1240	ABUT B - PILE	8	11-Jun-15	22-Jun-15																																
GAB1260	ABUT B - MSE WALL	15	23-Jun-15	14-Jul-15																																
GAB1280	ABUT B - F/R/P/S PILE CAP	8	15-Jul-15	24-Jul-15																																
GAB1300	ABUT B - F/R/P/S BACKWALL	8	27-Jul-15	05-Aug-15																																
GAB1320	FAB/DELIVER BEAMS	65	30-Mar-15	29-Jun-15																																
GAB1340	ERECT BEAMS	12	18-Aug-15	02-Sep-15																																
GAB1360	INSTALL DECKING	12	03-Sep-15	21-Sep-15																																
GAB1380	INSTALL DECK REINFORCING STEEL	8	22-Sep-15	01-Oct-15																																
GAB1400	POUR/CURE BRIDGE DECK	15	02-Oct-15	22-Oct-15																																
GAB1420	ABUT A - APPROACH SLAB/SLEEPER SLAB	10	23-Oct-15	05-Nov-15																																
GAB1440	ABUT B - APPROACH SLAB/SLEEPER SLAB	10	06-Nov-15	19-Nov-15																																
GAB1460	RAILING/PAPRAPET/FENCING	18	23-Oct-15	17-Nov-15																																
GAB1480	BRIDGE FINISHES	15	20-Nov-15	14-Dec-15																																
GAB1500	PREPARE/SUBMIT LOAD RATING FOR TEMP TRAFFIC	3	23-Oct-15	25-Oct-15																																
GAB1520	VDOT ACCEPT FOR TEMPORARY TRAFFIC (HOLD PT)	28	15-Dec-15	11-Jan-16																																
GAB1540	BRIDGE COMPLETE	0		11-Jan-16																																
DEMO EXISTING ROUTE 15 BRIDGES OVER I-66 (STAGE 3A)					361	17-Dec-14	05-May-16																													
GBB1560	PREPARE BRIDGE DEMO PLAN & HAZARD PLAN	15	17-Dec-14	14-Jan-15																																
GBB1580	INSTALL MOT/SAFETY PROTECTION SYSTEM	15	13-Jan-16	22-Feb-16																																
GBB1600	DEMO/REMOVE/DISPOSE EX. DECK SLAB	7	24-Feb-16	15-Mar-16																																
GBB1620	DISASSEMBLE/DE-ERECT BEAMS	15	16-Mar-16	05-Apr-16																																
GBB1640	DISPOSE OF BEAMS	2	06-Apr-16	07-Apr-16																																
GBB1660	DEMO/DISPOSE OF SUBSTRUCTURE	15	08-Apr-16	28-Apr-16																																
GBB1680	DEMO FINAL CLEANUP	5	29-Apr-16	05-May-16																																
GBB1700	DEMO EX BRIDGE COMPLETE	0		05-May-16																																
ROUTE 15 BRIDGE OVER I-66 - NB (STAGE 3A)					482	30-Mar-15	31-Jan-17																													
GCB1030	ABUT A - STRUCTURE EARTHWORK	5	06-May-16	12-May-16																																
GCB1050	ABUT A - PILE	7	13-May-16	23-May-16																																
GCB1070	ABUT A - MSE WALL	15	24-May-16	14-Jun-16																																
GCB1090	ABUT A - F/R/P/S PILE CAP	8	15-Jun-16	24-Jun-16																																
GCB1110	ABUT A - F/R/P/S BACKWALL	8	27-Jun-16	07-Jul-16																																
GCB1130	PIER 1 - EXCAVATE/SOE FOOTING	12	06-May-16	23-May-16																																
GCB1150	PIER 1 - F/R/P/S PIER FOOTING	8	24-May-16	02-Jun-16																																
GCB1170	PIER 1 - F/R/P/S PIER COLUMN	10	03-Jun-16	16-Jun-16																																
GCB1190	PIER 1 - BACKFILL PIER FOOTING	4	17-Jun-16	22-Jun-16																																
GCB1210	PIER 1 - F/R/P/S PIER CAP	15	23-Jun-16	14-Jul-16																																
GCB1230	ABUT B - STRUCTURE EARTHWORK	5	08-Jul-16	14-Jul-16																																
GCB1250	ABUT B - PILE	7	15-Jul-16	25-Jul-16																																
GCB1270	ABUT B - MSE WALL	15	26-Jul-16	15-Aug-16																																
GCB1290	ABUT B - F/R/P/S PILE CAP	8	16-Aug-16	25-Aug-16																																
GCB1310	ABUT B - F/R/P/S BACKWALL	8	26-Aug-16	06-Sep-16																																
GCB1330	FAB/DELIVER BEAMS	65	30-Mar-15	29-Jun-15																																
GCB1350	ERECT BEAMS	12	07-Sep-16	22-Sep-16																																
GCB1370	INSTALL DECKING	12	23-Sep-16	10-Oct-16																																
GCB1390	INSTALL DECK REINFORCING STEEL	8	11-Oct-16	20-Oct-16																																
GCB1410	POUR/CURE BRIDGE DECK	15	21-Oct-16	10-Nov-16																																
GCB1430	ABUT A - APPROACH SLAB/SLEEPER SLAB	6	11-Nov-16	18-Nov-16																																
GCB1450	ABUT B - APPROACH SLAB/SLEEPER SLAB	6	21-Nov-16	01-Dec-16																																
GCB1470	RAILING/PAPRAPET/FENCING	18	11-Nov-16	09-Dec-16																																
GCB1490	BRIDGE FINISHES	15	12-Dec-16	03-Jan-17																																
GCB1510	PREPARE/SUBMIT LOAD RATING FOR TEMP TRAFFIC	3	11-Nov-16	13-Nov-16																																
GCB1530	VDOT ACCEPT FOR TEMPORARY TRAFFIC (HOLD PT)	28	04-Jan-17	31-Jan-17																																

Exhibit A-2 - Critical Path

C00100566DB63 - I-66/ROUTE INTERCHANGE RECONSTRUCTION D/B PROPOSAL SCHEDULE

SHIRLEY CONTRACTING COMPANY, LLC

21-Jan-14 14:27



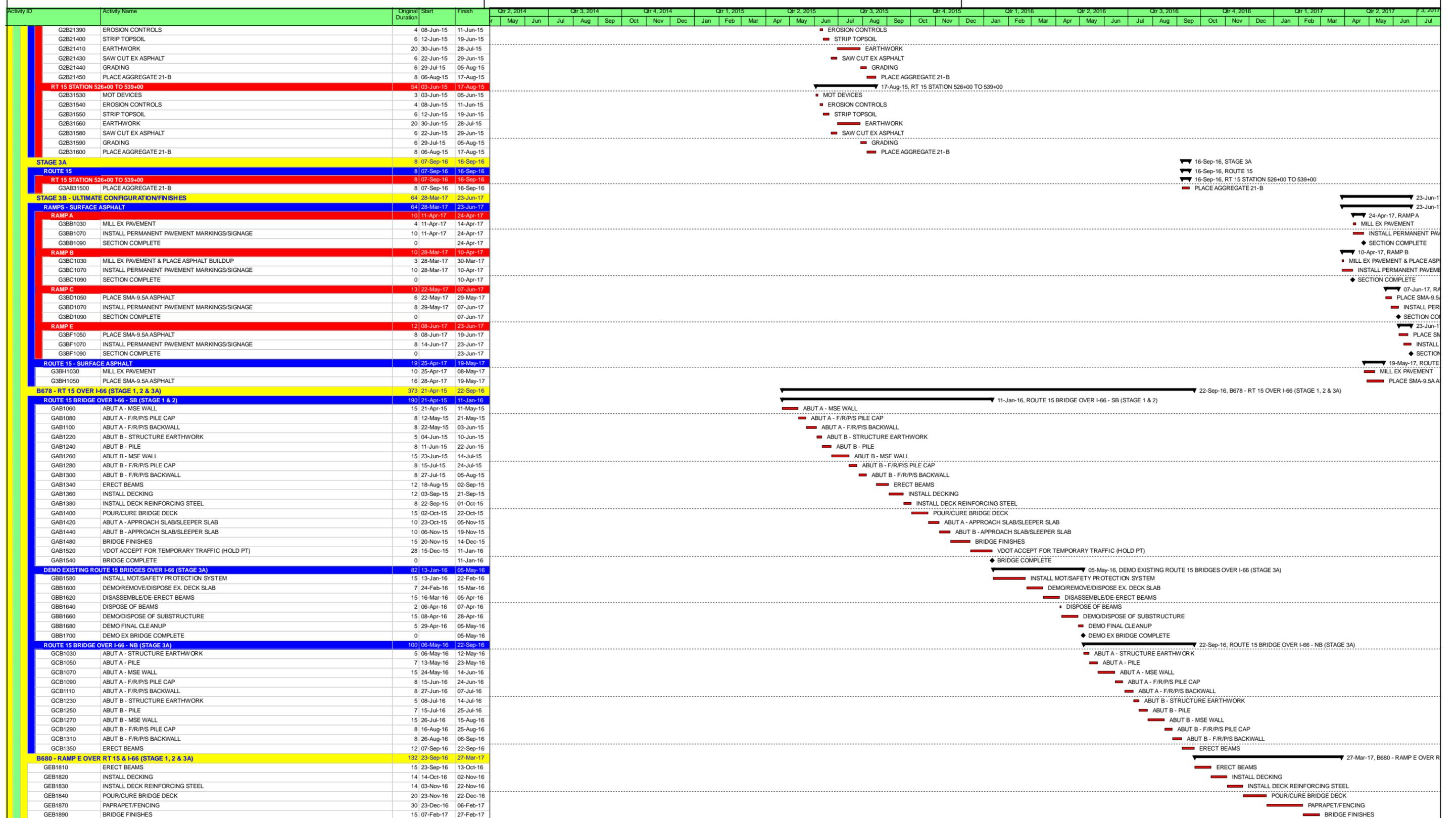
▶ Actual Work
 ▬ Critical Remaining Work
 ▬ Summary
 ▬ Remaining Work
 ◆ Milestone

Exhibit A-2 - Critical Path

C00100566DB63 - I-66/ROUTE INTERCHANGE RECONSTRUCTION D/B PROPOSAL SCHEDULE

SHIRLEY CONTRACTING COMPANY, LLC

21-Jan-14 14:27



Actual Work Remaining Work Critical Remaining Work Milestone

ATTACHMENT 4.0.1.1

INTERSTATE 66/ ROUTE 15 INTERCHANGE RECONSTRUCTION TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

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

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Technical Proposal Checklist and Contents	Attachment 4.0.1.1	Section 4.0.1.1	no	Appendix
Acknowledgement of RFP, Revisions, and/or Addenda	Attachment 3.6 (Form C-78-RFP)	Sections 3.6, 4.0.1.1	no	Appendix
Letter of Submittal	NA	Sections 4.1		1-2
Letter of Submittal on Offeror's letterhead	NA	Section 4.1.1	yes	1-2
Offeror's Full Legal Name and Address	NA	Section 4.1.1	yes	1
Authorized representative's original signature	NA	Section 4.1.1	yes	2
Declaration of intent	NA	Section 4.1.2	yes	1
120 day declaration	NA	Section 4.1.3	yes	1
Offeror's Point of Contact Information	NA	Section 4.1.4	yes	1
Principal Officer information	NA	Section 4.1.5	yes	1
Final Completion Date	NA	Section 4.1.6	yes	2
Proposal Payment Agreement or Waiver of Proposal Payment	Attachment 9.3.1 or 9.3.2	Section 4.1.7	no	2
Certification Regarding Debarment Forms	Attachment 11.8.6(a) Attachment 11.8.6(b)	Section 4.1.8	no	2
Written Statement of Compliance	NA	Section 4.1.9	yes	2
Offeror's Qualifications	NA	Section 4.2		3

ATTACHMENT 4.0.1.1

INTERSTATE 66/ ROUTE 15 INTERCHANGE RECONSTRUCTION TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Confirmation that the information provided in the SOQ submittal remains true and accurate or indicates that any requested changes were previously approved by VDOT	NA	Section 4.2.1	yes	3
Organizational chart with any updates since the SOQ submittal clearly identified	NA	Section 4.2.2	yes	3
Revised narrative when organizational chart includes updates since the SOQ submittal	NA	Section 4.2.2	yes	3
Design Concept	NA	Section 4.3		4--16
Conceptual Roadway Plans and Description	NA	Section 4.3.1	yes	5
Conceptual Structural Plans and Description	NA	Section 4.3.2	yes	14
Project Approach	NA	Section 4.4		17-23
Project Coordination and Public Outreach	NA	Section 4.4.1	yes	17-23
Construction of Project	NA	Section 4.5		24-35
Sequence of Construction	NA	Section 4.5.1	yes	24
Transportation Management Plan	NA	Section 4.5.2	yes	31
Disadvantaged Business Enterprises	NA	Section 4.6		36-37
Written statement of percent DBE participation	NA	Section 4.6	yes	36
DBE subcontracting narrative	NA	Section 4.6	yes	36-37

ATTACHMENT 4.0.1.1

INTERSTATE 66/ ROUTE 15 INTERCHANGE RECONSTRUCTION TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Proposal Schedule	NA	Section 4.7		
Proposal Schedule	NA	Section 4.7	no	N/A
Proposal Schedule Narrative	NA	Section 4.7	no	N/A
Proposal Schedule in electronic format (CD-ROM)	NA	Section 4.7	no	N/A

Attachment No. 3.6 FORM C-78

ATTACHMENT 3.6

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

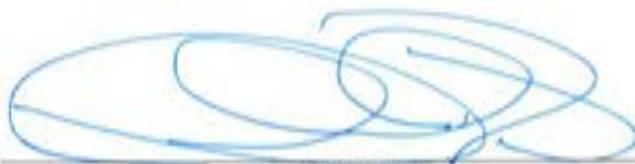
RFP NO. C00100566DB63
PROJECT NO.: 0066-076-074,P101, R201, C501, B676, B677, B680, B678, B679

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:

1. Cover letter of September 24, 2013 – RFP
(Date)
2. Cover letter of Addendum No. 1 – December 20, 2013
(Date)
3. Cover letter of _____
(Date)



SIGNATURE

1/23/14

DATE

Michael E. Post president/CEO/Manager

PRINTED NAME AND TITLE

ATTACHMENT 9.3.1
PROPOSAL PAYMENT AGREEMENT

THIS PROPOSAL PAYMENT AGREEMENT (this "Agreement") is made and entered into as of this ____ day of _____, 20¹⁴, by and between the Virginia Department of Transportation ("VDOT"), and Shirley Contracting Co., LLC ("Offeror").

WITNESSETH:

WHEREAS, Offeror is one of the entities who submitted Statements of Qualifications ("SOQs"), to the Virginia Department of Transportation ("VDOT"), pursuant to VDOT's ~~May 8, 2012~~~~December 20, 2014~~ Request for Qualifications ("RFQ") and was invited to submit proposals in response to a Request for Proposals ("RFP") for the Interstate 66/~~Route 15 Interchange Reconstruction Widening~~, Project No. 0066-076-~~074003~~, P101, R201, C501, B6784, B6795, B680 ("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 forty thousand and 00/100 Dollars (\$40,000.00) ("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: _____

[Insert Offeror's Name] Shirley Contracting Co., LLC

By:  _____

Name: Michael E. Post _____

Title: President/CEO/Manager _____

ATTACHMENT 11.8.6(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

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

1/23/14

Date

President/CEO/Manager

Title

Shirley Contracting Company, LLC

Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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.

Dave Mahoney 1/17/14 Executive Vice President
Signature Date Title

Dewberry Consultants, LLC
Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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.

	01/16/14	First Executive VP
Signature	Date	Title

EBA Engineering, Inc.
Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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.

	January 21, 2014	Principal Engineer
Signature	Date	Title

Engineering & Materials Technologies, Inc. (E.M. Tech)
Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

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

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


Signature _____ Date 1/17/14 Title President

GeoConcepts Engineering, Inc.
Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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.

M. G. Sullivan 1-16-14 DEPT. MGR.
Signature Date Title

So-Deep, Inc.
Name of Firm

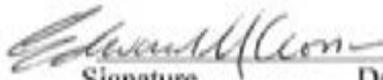
ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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	1/16/14 Date	Vice President Title
--	-----------------	-------------------------

Quantum Spatial, Inc.
Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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.

 1/15/2014
Signature Date

President
Title

Diversified Property Services, Inc.
Name of Firm

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

Project No.: 0066-076-074, P101, R201, C501, B676, B677, B680, B678, B679

- 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.

RP [Signature] 1-16-14 Settlement Officer
Signature Date Title

Old Dominion Settlements, Inc., T/A Key Title.
Name of Firm



**Critical Infrastructure Information (CII)
Sensitive Security Information (SSI)
Individual Non-Disclosure Agreement**



Code of Virginia §36-105.3 and §44-146.22 and 49 CFR Part 1520 stipulates instituting procedures to ensure the safe storage and secure handling of information that should be protected and not disclosed. VDOT CII/SSI includes such information and is not subject to disclosure under FOIA (reference Code of Virginia §2.2-3705.2).

Disclosure of CII/SSI in any manner that permits interception by unauthorized persons is prohibited. CII/SSI may not be released to persons without a need-to-know except with written permission from VDOT (see *Handling CII/SSI* on page 3). CII/SSI includes information marked as such or other information relating to VDOT security or protected systems (see *Guide to Identifying Possible CII* on page 4).

All documents and materials provided are the sole and exclusive property of VDOT. They may not be modified, reproduced, republished, redistributed or presented for sale, completely or in part, and doing so may result in severe civil and criminal penalties. All documents and materials provided are only to be used in conjunction with contract or project # 0066-076-074

As an employee of (or contractor to) Shirley Contracting Company, LLC I understand that:

1. Certain information which I will receive from Virginia Department of Transportation (VDOT) may contain CII/SSI.
2. I may learn of or have access to some or all of this information through a computer system or through my employment activities.
3. CII/SSI is valuable and sensitive and is protected by law and by strict VDOT policies. The intent of these laws and policies is to assure that CII/SSI will remain confidential - that is, it will be used only as necessary to accomplish VDOT's mission.
4. I have no right or ownership interest in any CII/SSI referred to in this Agreement.
5. Willful violation of this agreement may subject me to discipline which might include, but is not limited to, termination of employment or further VDOT related work and to legal liability.
6. I am obligated to protect this information from unauthorized disclosure in accordance with the terms of this agreement.
7. Unauthorized disclosure of CII/SSI could compromise safety and security of persons and is prohibited.
8. My execution of this agreement shall not nullify or affect in any manner any other agreement, non-disclosure or otherwise, which I have executed or may execute with VDOT or the Commonwealth of Virginia.
9. My obligations with respect to the confidentiality and security of all CII/SSI disclosed to me shall survive the termination of any agreement or relationship with VDOT.
10. I am required to conduct myself in a strict conformance to applicable laws and VDOT policies governing CII/SSI (see *Handling CII/SSI* on page 3).
11. VDOT may at any time revoke my authorization allowing access to CII/SSI.

Accordingly, as a condition of and in consideration of my access to CII/SSI, I agree that:

1. I will only access CII/SSI for which I have a need-to-know
2. I will use any CII/SSI that I obtain only as needed by me to perform my legitimate VDOT related duties.
3. I will not in any way divulge, copy, release, sell, loan, review, alter or destroy any CII/SSI except as properly authorized within the scope of my professional VDOT activities

Last Name, First name:



**Critical Infrastructure Information (CII)
Sensitive Security Information (SSI)
Individual Non-Disclosure Agreement**



(Retain this page and the next for reference)

Handling CII/SSI

You are responsible for safeguarding Critical Infrastructure Information/Sensitive Security Information (CII/SSI) in your custody or under your control.

The extent of protection afforded CII/SSI shall be sufficient to reasonably foreclose the possibility of its loss or compromise.

The terms of this clause (*Handling CII/SSI*), including this paragraph, must be included in any dissemination of any document, in whole or in part, that contains CII/SSI.

Protection - CII/SSI shall be protected at all times, either by appropriate storage or having it under the personal observation and control of a person authorized to receive it. Each person who works with protected CII/SSI is personally responsible for taking proper precautions to ensure that unauthorized persons do not gain access to it.

Use and Storage - During working hours, reasonable steps shall be taken to minimize the risks of access to CII/SSI by unauthorized personnel. After working hours, CII/SSI shall be secured in a secure container, such as a locked desk, file cabinet or facility where contract security is provided.

Reproduction - Documents or material containing CII/SSI may be reproduced to the minimum extent necessary consistent with the need to carry out official duties provided that the reproduced material is marked and protected in the same manner as the original material.

Disposal - Material containing CII/SSI shall be disposed of by any method that prevents unauthorized retrieval (e.g. shredding, burning, returning to original source, etc.).

Transmission - CII/SSI shall be transmitted only by VDOT courier, US first class, express, certified or registered mail, or through secure electronic means.



**Critical Infrastructure Information (CII)
Sensitive Security Information (SSI)
Individual Non-Disclosure Agreement**



Things to consider regarding the need to protect CII/SSI...

- What impact could the information have if it was inadvertently transferred to an unintended audience?
- Does the information provide details concerning security procedures and capabilities?
- Could someone use the information to target personnel, facilities or operations?
- How could someone intent on causing harm misuse the information?
- Could the use of this information be dangerous if combined with other publicly available information?

Before looking at the Guide, answer the following:

Is the information customarily public knowledge? (Information that is accessible to the general public if there has been no deliberate attempt to keep it hidden or secret.)	
Does the general public have a need-to-know? (Access to, or knowledge or possession of, specific information required to carry out official duties) (Note: Contractors should be considered employees, not general public.)	
If "yes" to either, then it is not CII/SSI otherwise, continue to the guide.	X

Guide to Identifying Possible CII/SSI		Y/N
If the item under consideration shows, describes or is listed below, it might be CII/SSI.		
1	<p>Information, the disclosure of which would jeopardize the safety or security of any person or structure, including engineering and construction drawings and plans that reveal:</p> <ul style="list-style-type: none"> • Critical structural components • Ventilation systems • Elevators • Mandatory building emergency equipment or systems <ul style="list-style-type: none"> • Security equipment and systems • Fire protection equipment • Telecommunications equipment and systems • Electrical systems • Other utility equipment and systems <p><i>(COV § 2 2-3705.2 (2))</i></p>	
2	<p>Documentation or other information that describes the design, function, operation or access control features of any security system, manual or automated, used to control access to or use of any automated data processing or telecommunications system.</p> <p><i>(COV § 2.2-3705 2 (3))</i></p>	
3	<p>Plans and information to prevent or respond to terrorist activity, the disclosure of which would jeopardize the safety of any person, including:</p> <ul style="list-style-type: none"> • Critical infrastructure sector or structural components • Vulnerability assessments <ul style="list-style-type: none"> • Operational, procedural, transportation, and tactical planning or training manuals • Staff meeting minutes or other records <p>Engineering or architectural records or portions of, that reveals the location or operation of:</p> <ul style="list-style-type: none"> • Security equipment and systems • Ventilation equipment and systems • Emergency equipment and systems • Utility equipment and systems <ul style="list-style-type: none"> • Elevator equipment and systems • Fire protection equipment and systems • Electrical equipment and systems • Telecommunications equipment and systems <p>The same categories of records submitted to us for the purpose of antiterrorism response planning if accompanied, in writing, a statement that:</p> <ul style="list-style-type: none"> • Invokes the protection of §2.2-3705.2 • Specifically identifies the records or portions thereof which are to be protected • States why the protection of such records from public disclosure is necessary <p><i>(COV § 2.2-3705.2 (4))</i></p>	
4	<p>Information including (drawings, manuals, or other records) which reveals:</p> <ul style="list-style-type: none"> • Surveillance techniques • Personnel deployments <ul style="list-style-type: none"> • Alarm or security systems or technologies • Operational and transportation plans or protocols <p><i>(COV § 2.2-3705.2 (6))</i></p>	
5	<p>Information concerning threats against transportation.</p> <p><i>(USC 49 CFR 1520 (5))</i></p>	

RESPONSE TO REQUEST FOR PROPOSALS

Interstate 66/Route 15 Interchange Reconstruction

A DESIGN-BUILD PROJECT

FROM: APPROXIMATELY 0.4 MILES WEST OF ROUTE 15

TO: APPROXIMATELY 0.6 MILES EAST OF ROUTE 15

PRINCE WILLIAM COUNTY, VIRGINIA



State Project No.: 0066-076-074

Federal Project No.: IM-066-1(341)

Contract ID Number: C00100566DB63

Volume II: Design Concept

SUBMITTED TO:



SUBMITTED BY:



IN ASSOCIATION WITH:

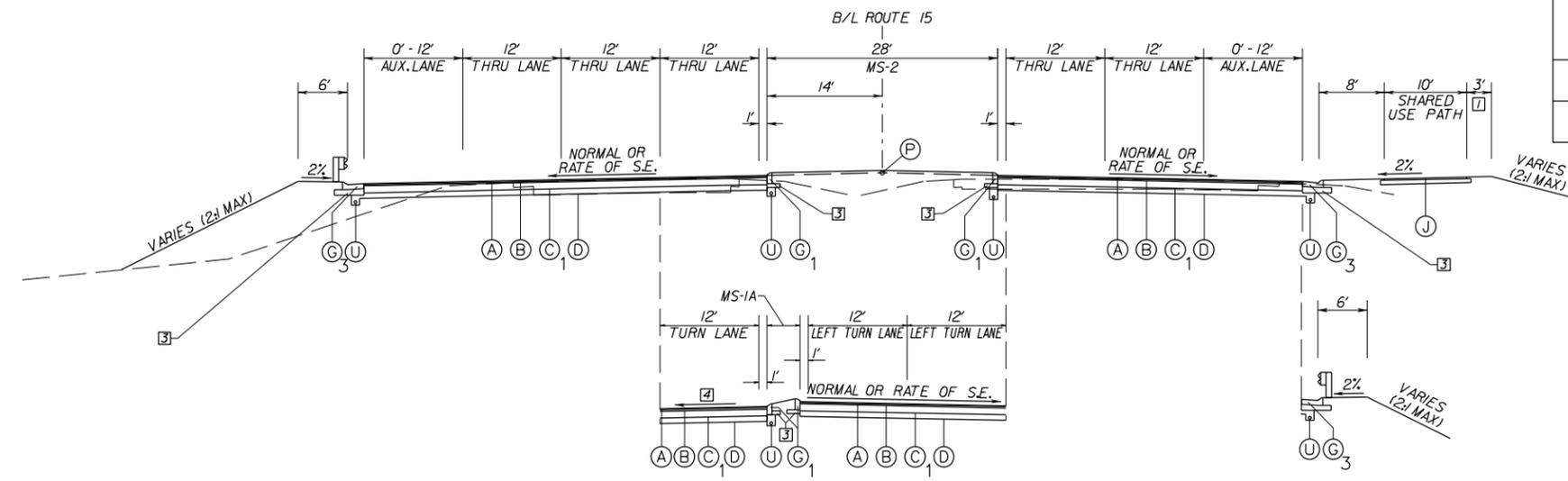


TYPICAL SECTIONS

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	2A(1)

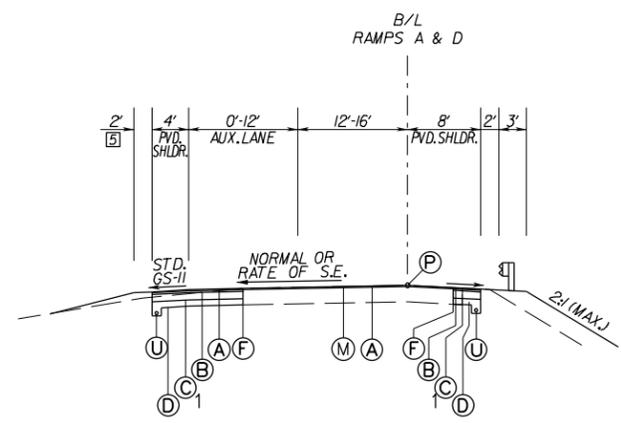
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC
 Fairfax, Virginia
 ROADWAY ENGINEER

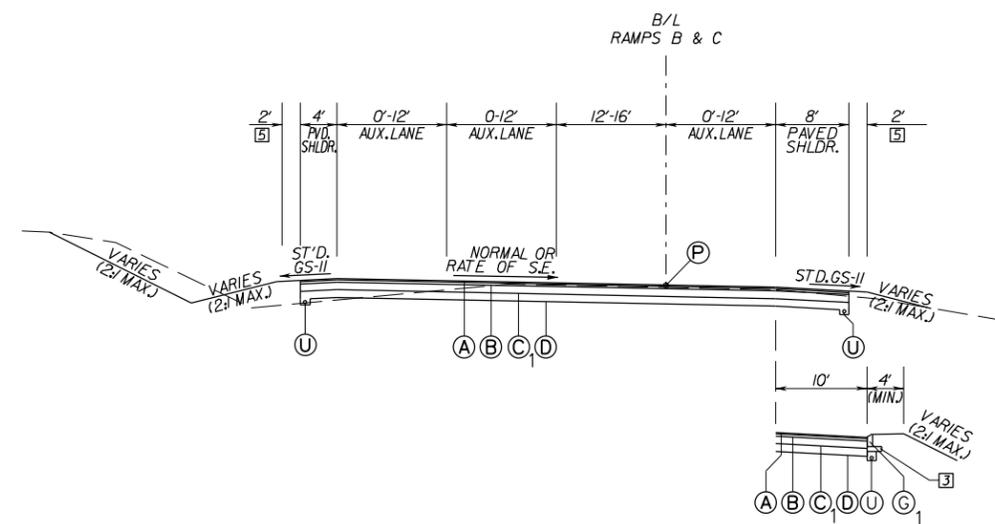


* Mill & Overlay of Route 15 required between stations 501+96.92 to 514+00.00 and 537+00.00 to 541+51.20.

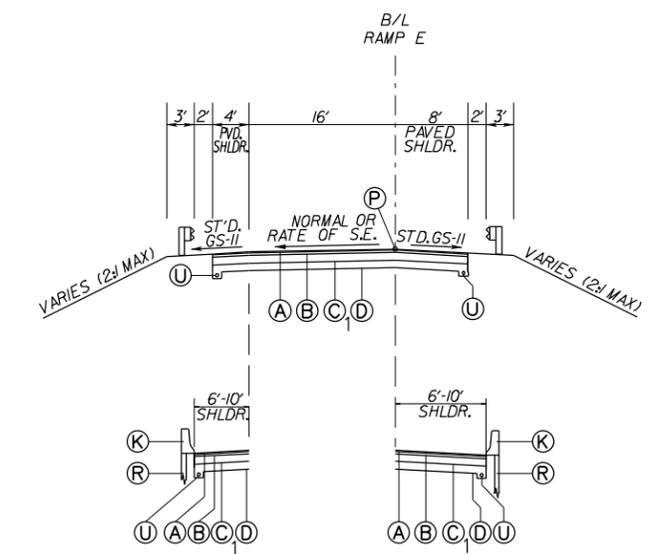
ROUTE 15



RAMPS A & D



RAMPS B & C

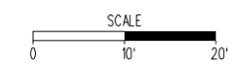


RAMP E

- NOTES:
- 1 Width to be Increased to 5' where fill heights exceed 4'.
 - 2 Not Used
 - 3 Provide 6' of Plain Aggregate Material, Type I, Size 21B beneath all curb and gutter and gutter for a distance of 1' from the back of curb.
 - 4 Normal or Rate of S.E.
 - 5 Shoulder width to be increased additional 3' when guardrail is required.

LEGEND

- | | | |
|---|---|---|
| (A) 1.5" Asphalt Concrete, Type SMA-9.5, PG 76-22 (estimated at 181.5 lbs/sy) | (D) 10" Aggregate Base Material, Type I, Size No. 21B, connected to a standard UD-4 edgdrain located beneath the outer edge of the paved shoulder or beneath curb and gutter. | (I) 4" Aggregate Base Material, Type I, Size No. 21B extended 4" on either side of the surface. |
| (A ₁) 1.5" Asphalt Concrete, Type SM-9.5D (estimated at 181.5 lbs/sy) | (F) Full Depth Saw Cut | (J) 2" Asphalt Concrete, Type SM-9.5A at 240 lbs./sy placed above 6" Plain Aggregate, Type I, Size No. 21B extended 6" on either side of the surface. |
| (B) 2" Asphalt Concrete, Type IM-19.0D (estimated at 244 lbs/sy) | (G) Curb, St'd. CG-2 | (K) Concrete Barrier, Std. MB-7F |
| (B ₁) 2" Asphalt Concrete, Type IM-19.0A (estimated at 244 lbs/sy) | (G ₁) Curb, St'd. CG-3 | (M) Mill Existing Pavement 1.5" |
| (B ₂) 3" Asphalt Concrete, Type IM-19.0D (estimated at 366 lbs/sy) | (G ₂) Curb and Gutter, St'd. CG-6 | (P) Profile Grade Line, Point of Rotation |
| (C) 7" Asphalt Concrete, Type BM-25.0A | (G ₃) Curb and Gutter, St'd. CG-7 | (R) Retaining Wall - See Plan for Locations |
| (C ₁) 10" Asphalt Concrete, Type BM-25.0A | (H) 4" Hyrdraulic Cement Concrete, Class A3 | (U) Underdrain, St'd. UD-4 |
| (C ₂) 10" Asphalt Concrete, Type BM-19.0A | | |
| (D) 8" Aggregate Base Material, Type I, Size No. 21B connected to a standard UD-4 edgdrain located beneath curb and gutter or beneath the outside edge of paved shoulder. | | |

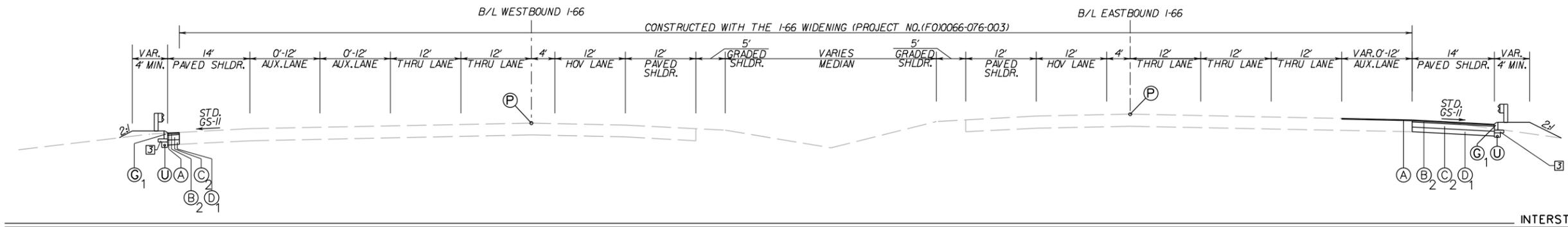


TYPICAL SECTIONS

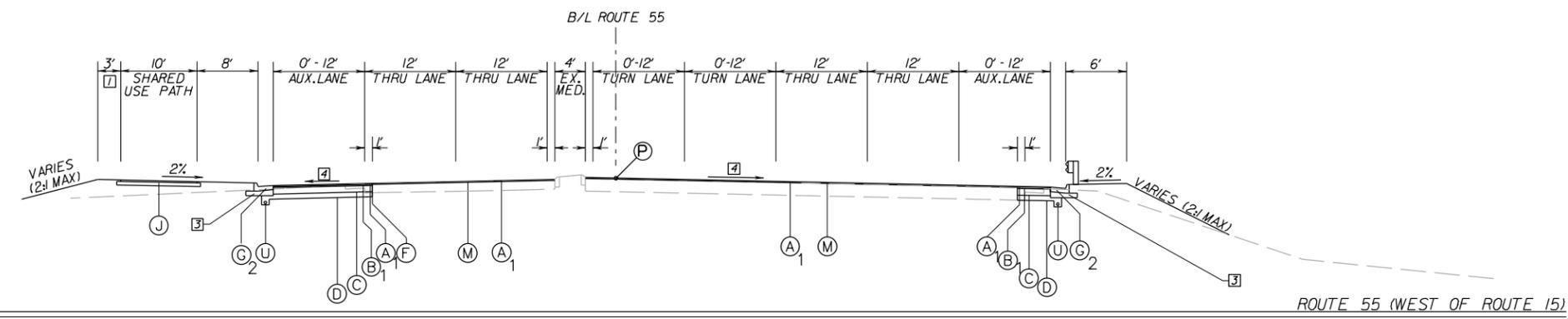
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	2A(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

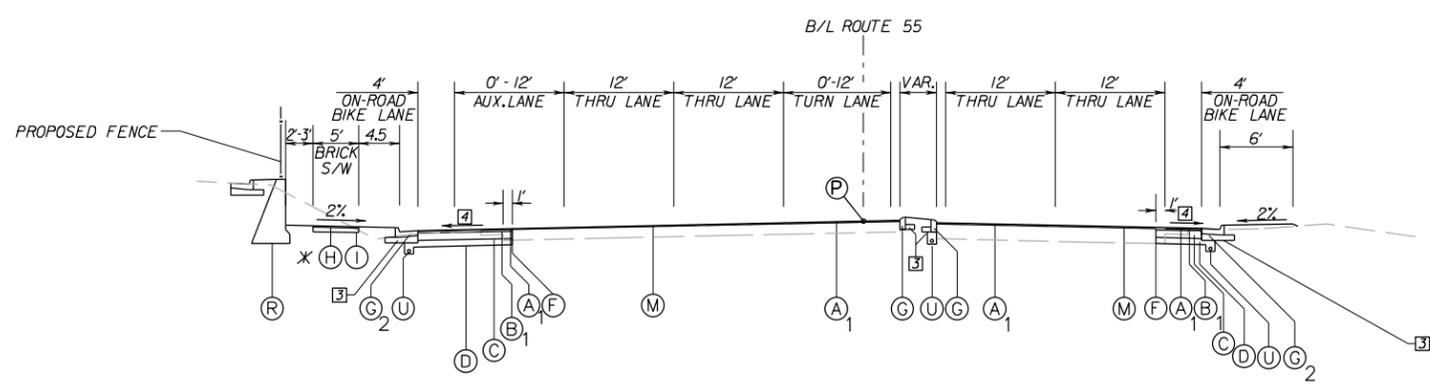
Dewberry Consultants LLC
 Fairfax, Virginia
 ROADWAY ENGINEER



INTERSTATE 66



ROUTE 55 (WEST OF ROUTE 15)



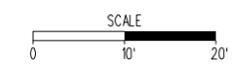
ROUTE 55 (EAST OF ROUTE 15)

X Refer to Sidewalk Details shown on Sheet 2A(3).

- NOTES:
- 1 Not Used
 - 2 Not Used
 - 3 Provide 6" of Plain Aggregate Material, Type I, Size 21B beneath all curb and gutter and gutter for a distance of 1' from the back of curb.
 - 4 Normal or Rate of S.E.
 - 5 Not Used

LEGEND

- | | | |
|--|---|---|
| (A) 1.5" Asphalt Concrete, Type SMA-9.5, PG 76-22 (estimated at 181.5 lbs/sy) | (D) 10" Aggregate Base Material, Type I, Size No. 21B, connected to a standard UD-4 edg drain located beneath the outer edge of the paved shoulder or shoulders or beneath curb and gutter. | (I) 4" Aggregate Base Material, Type I, Size No. 21B extended 4" on either side of the surface. |
| (A ₁) 1.5" Asphalt Concrete, Type SM-9.5D (estimated at 181.5 lbs/sy) | (F) Full Depth Saw Cut | (J) 2" Asphalt Concrete, Type SM-9.5A at 240 lbs./sy placed above 6" Plain Aggregate, Type I, Size No. 21B extended 6" on either side of the surface. |
| (B) 2" Asphalt Concrete, Type IM-19.0D (estimated at 244 lbs/sy) | (G) Curb, S'd, CG-2 | (K) Concrete Barrier, Std. MB-7F |
| (B ₁) 2" Asphalt Concrete, Type IM-19.0A (estimated at 244 lbs/sy) | (G ₁) Curb, S'd, CG-3 | (M) Mill Existing Pavement 1.5" |
| (B ₂) 3" Asphalt Concrete, Type IM-19.0D (estimated at 366 lbs/sy) | (G ₂) Curb and Gutter, S'd, CG-6 | (P) Profile Grade Line, Point of Rotation |
| (C) 7" Asphalt Concrete, Type BM-25.0A | (G ₃) Curb and Gutter, S'd, CG-7 | (R) Retaining Wall - See Plan For Locations |
| (C ₁) 10" Asphalt Concrete, Type BM-25.0A | (H) 4" Hydraulic Cement Concrete, Class A3 | (U) Underdrain, S'd, UD-4 |
| (C ₂) 10" Asphalt Concrete, Type BM-19.0A | | |
| (D) 8" Aggregate Base Material, Type I, Size No. 21B connected to a standard UD-4 edg drain located beneath curb and gutter or beneath the outside edge of paved shoulder. | | |



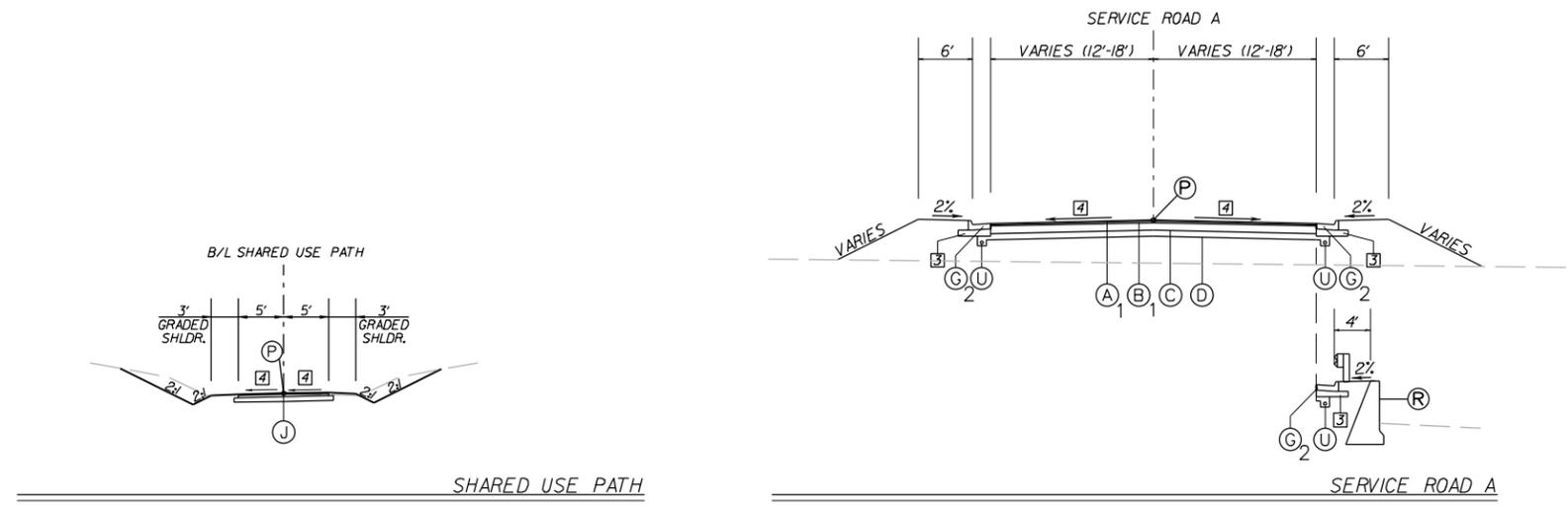
PROJECT MANAGER *Ms. Christiana Briganti-Dunn, P.E.* - VDOT, NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE _____
 DESIGN BY *Dewberry Consultants LLC* - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE _____

TYPICAL SECTIONS

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	2A(3)

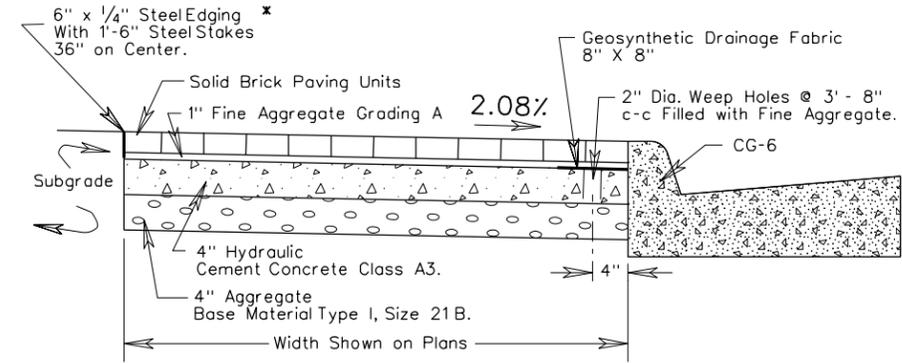
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC
 Fairfax, Virginia
 ROADWAY ENGINEER



SIDEWALK DETAILS

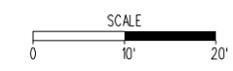
SOLID BRICK PAVING UNITS



LEGEND

- | | | |
|--|---|---|
| (A) 1.5" Asphalt Concrete, Type SMA-9.5, PG 76-22 (estimated at 181.5 lbs/sy) | (D) 10" Aggregate Base Material, Type I, Size No. 21B, connected to a standard UD-4 edgedrain located beneath the outer edge of the paved shoulder or shoulders or beneath curb and gutter. | (I) 4" Aggregate Base Material, Type I, Size No. 21B extended 4" on either side of the surface. |
| (A ₁) 1.5" Asphalt Concrete, Type SM-9.5D (estimated at 181.5 lbs/sy) | (D ₁) 10" Aggregate Base Material, Type I, Size No. 21B, connected to a standard UD-4 edgedrain located beneath the outer edge of the paved shoulder or shoulders or beneath curb and gutter. | (J) 2" Asphalt Concrete, Type SM-9.5A at 240 lbs./sy placed above 6" Plain Aggregate, Type I, Size No. 21B extended 6" on either side of the surface. |
| (B) 2" Asphalt Concrete, Type IM-19.0D (estimated at 244 lbs/sy) | (F) Full Depth Saw Cut | (K) Concrete Barrier, Std. MB-7F |
| (B ₁) 2" Asphalt Concrete, Type IM-19.0A (estimated at 244 lbs/sy) | (G) Curb, S'd. CG-2 | (M) Mill Existing Pavement 1.5" |
| (B ₂) 3" Asphalt Concrete, Type IM-19.0D (estimated at 366 lbs/sy) | (G ₁) Curb, S'd. CG-3 | (P) Profile Grade Line, Point of Rotation |
| (C) 7" Asphalt Concrete, Type BM-25.0A | (G ₂) Curb and Gutter, S'd. CG-6 | (R) Retaining Wall - See Plan for Locations |
| (C ₁) 10" Asphalt Concrete, Type BM-25.0A | (G ₃) Curb and Gutter, S'd. CG-7 | (U) Underdrain, S'd. UD-4 |
| (C ₂) 10" Asphalt Concrete, Type BM-19.0A | (H) 4" Hydraulic Cement Concrete, Class A3 | |
| (D) 8" Aggregate Base Material, Type I, Size No. 21B connected to a standard UD-4 edgedrain located beneath curb and gutter or beneath the outside edge of paved shoulder. | | |

- NOTES:
- 1 Not Used
 - 2 Not Used
 - 3 Provide 6" of Plain Aggregate Material, Type I, Size 21B beneath all curb and curb and gutter for a distance of 1' from the back of curb.
 - 4 Normal or Rate of S.E.
 - 5 Not Used



PROJECT 0066-076-074 SHEET NO. 2A(3)

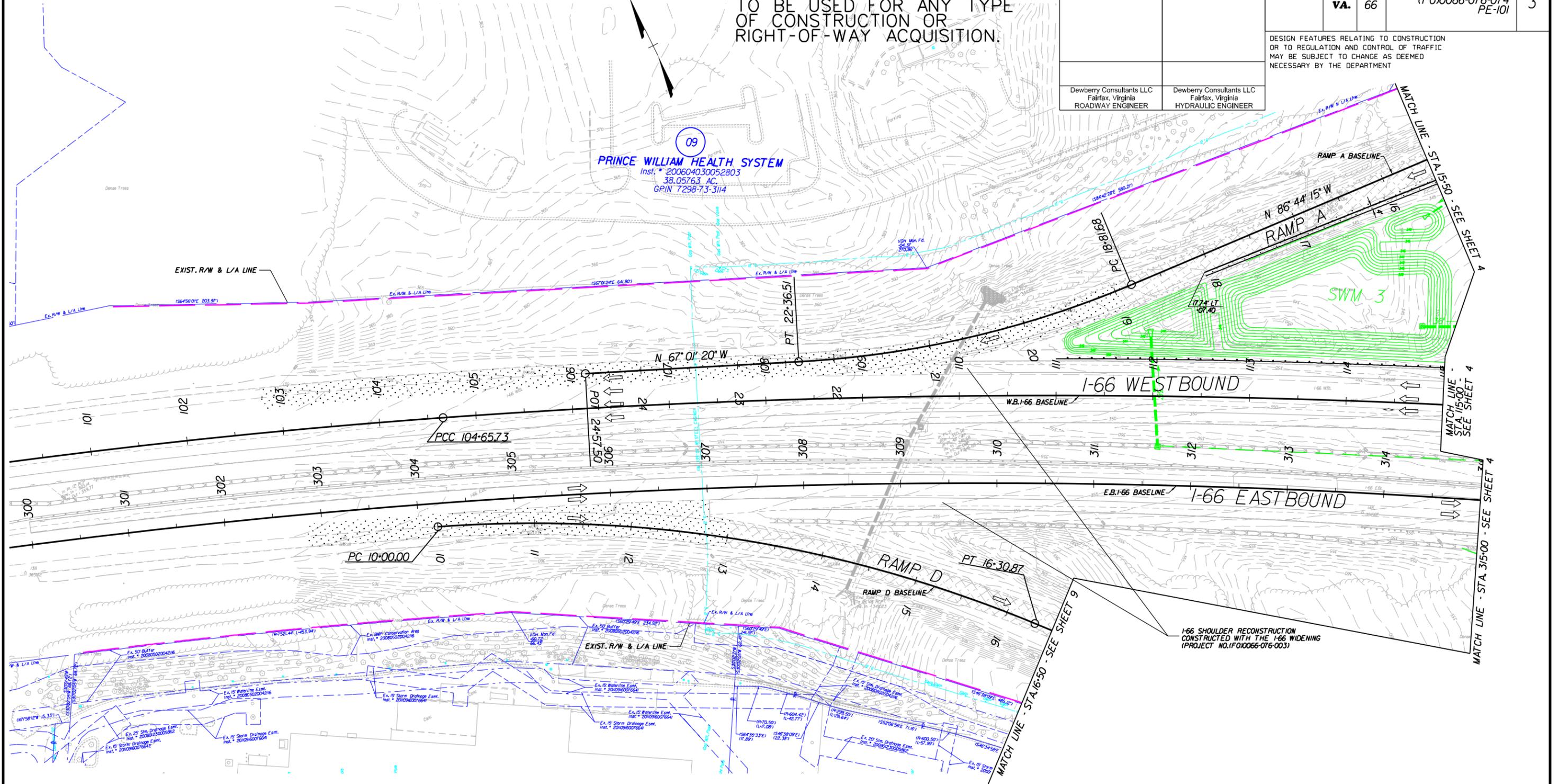
PROJECT MANAGER *Ms. Christiana Briganti-Dunn, P.E.*, VDOT NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE _____
 DESIGN BY *Dewberry Consultants LLC* - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE _____

THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

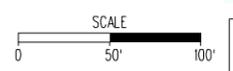
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	3

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER	Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER
---	---



- Denotes Proposed Right-of-Way per RFP Documents
- - - Denotes Proposed Permanent Drainage Easement per RFP Documents
- - - Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay



PROJECT 0066-076-074	SHEET NO. 3
-------------------------	----------------

PROJECT MANAGER Ms. Christiana Briganti-Dunn, P.E., VDOT NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE _____
 DESIGN BY Dewberry Consultants LLC - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE _____

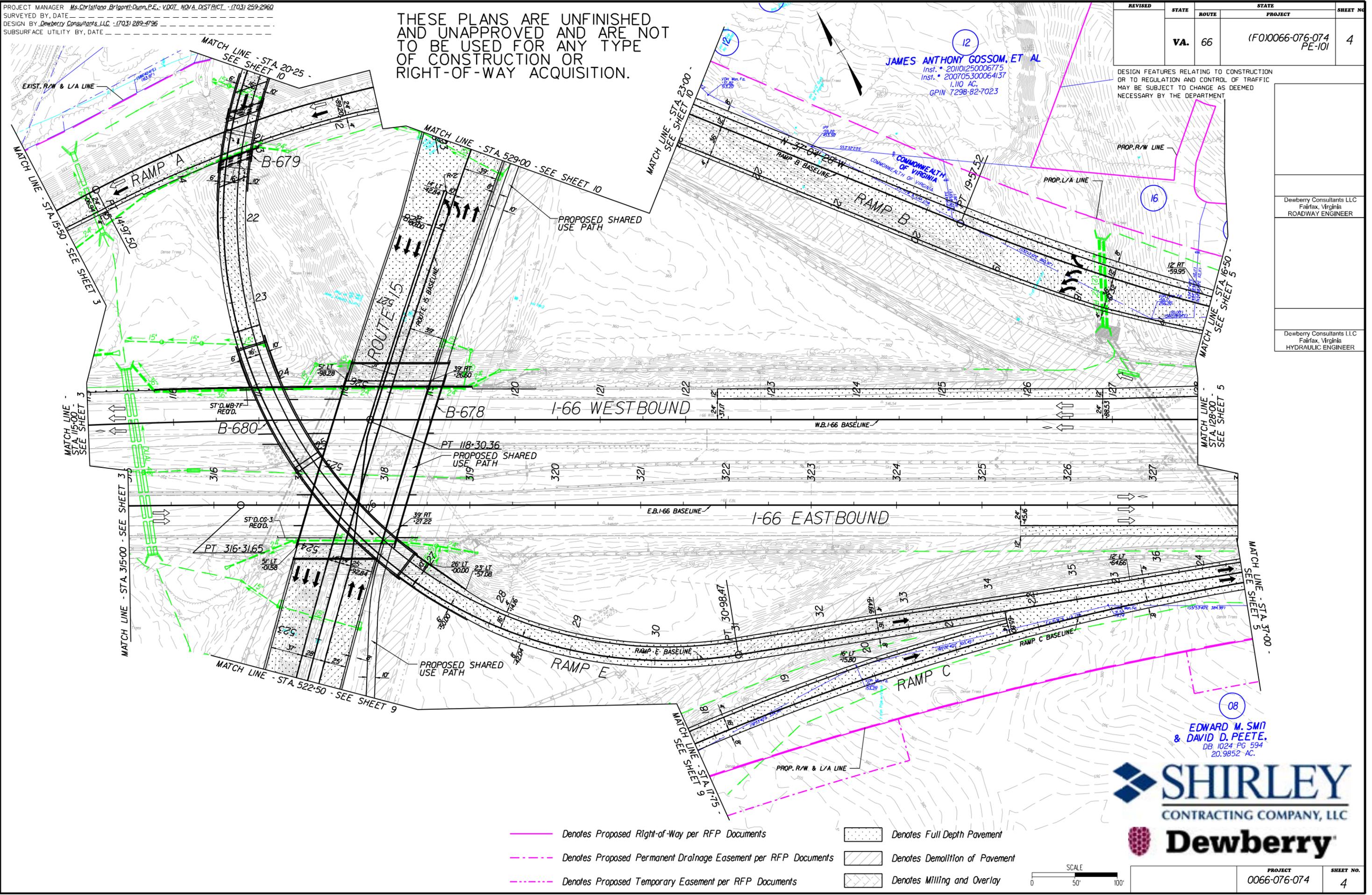
THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	4

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC
 Fairfax, Virginia
 ROADWAY ENGINEER

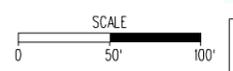
Dewberry Consultants LLC
 Fairfax, Virginia
 HYDRAULIC ENGINEER



JAMES ANTHONY GOSSOM, ET AL
 Inst. # 201101250006775
 Inst. # 200705300064137
 1.110 AC.
 GPIN 7298-82-7023

EDWARD M. SMIT & DAVID D. PEETE,
 DB 1024 PG 594
 20.9852-AC.

- Denotes Proposed Right-of-Way per RFP Documents
- - - - - Denotes Proposed Permanent Drainage Easement per RFP Documents
- · - · - Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay



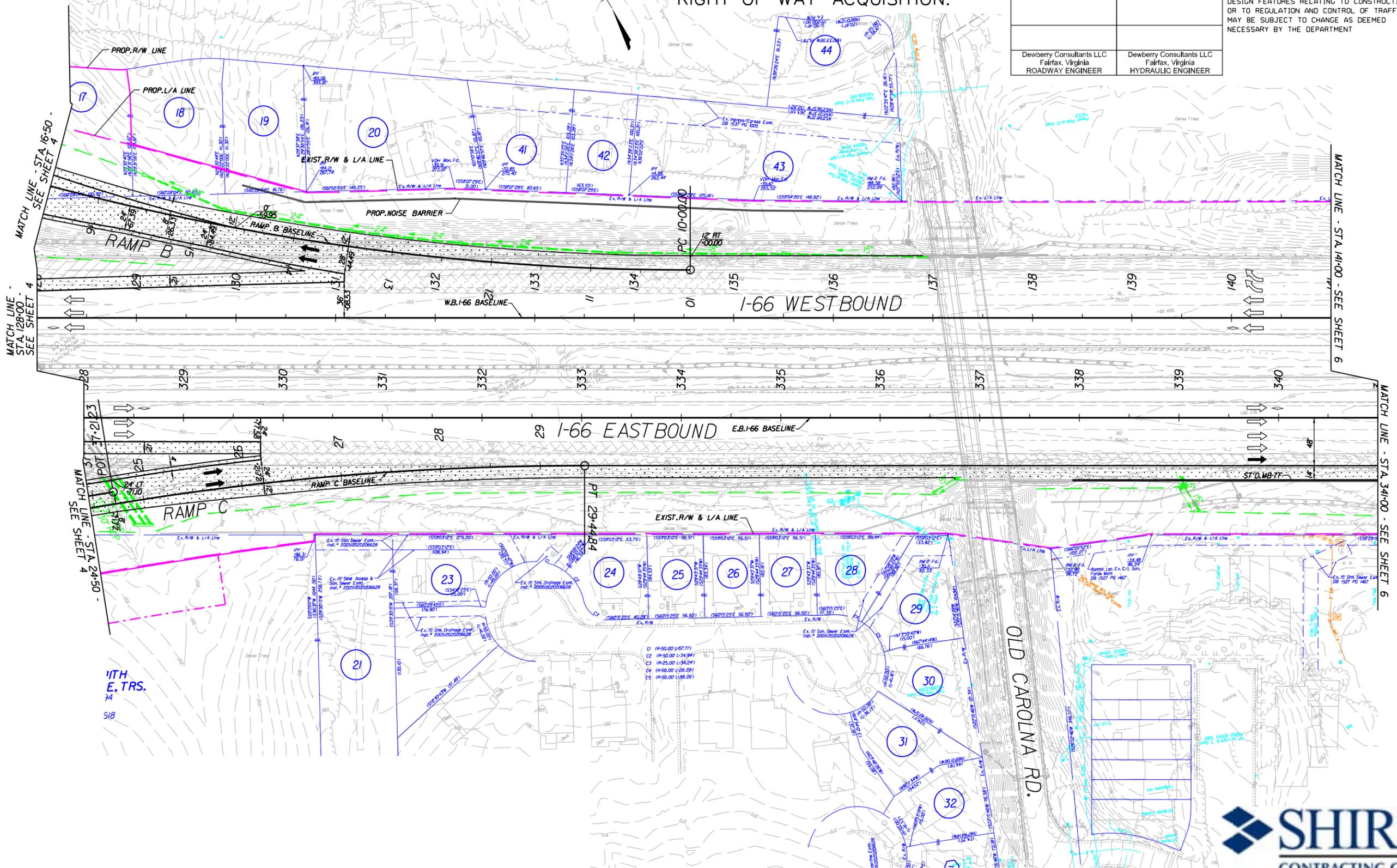
PROJECT	SHEET NO.
0066-076-074	4

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR RIGHT-OF-WAY ACQUISITION.

REVISED	STATE	ROUTE	STATE PROJECT		SHEET NO.
			PROJECT		
	VA.	66	(F0)0066-076-074	PE-101	5

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER	Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER
---	---



- Denotes Proposed Right-of-Way per RFP Documents
- Denotes Full Depth Pavement
- - - - Denotes Proposed Permanent Drainage Easement per RFP Documents
- Denotes Demolition of Pavement
- · - · - Denotes Proposed Temporary Easement per RFP Documents
- Denotes Milling and Overlay

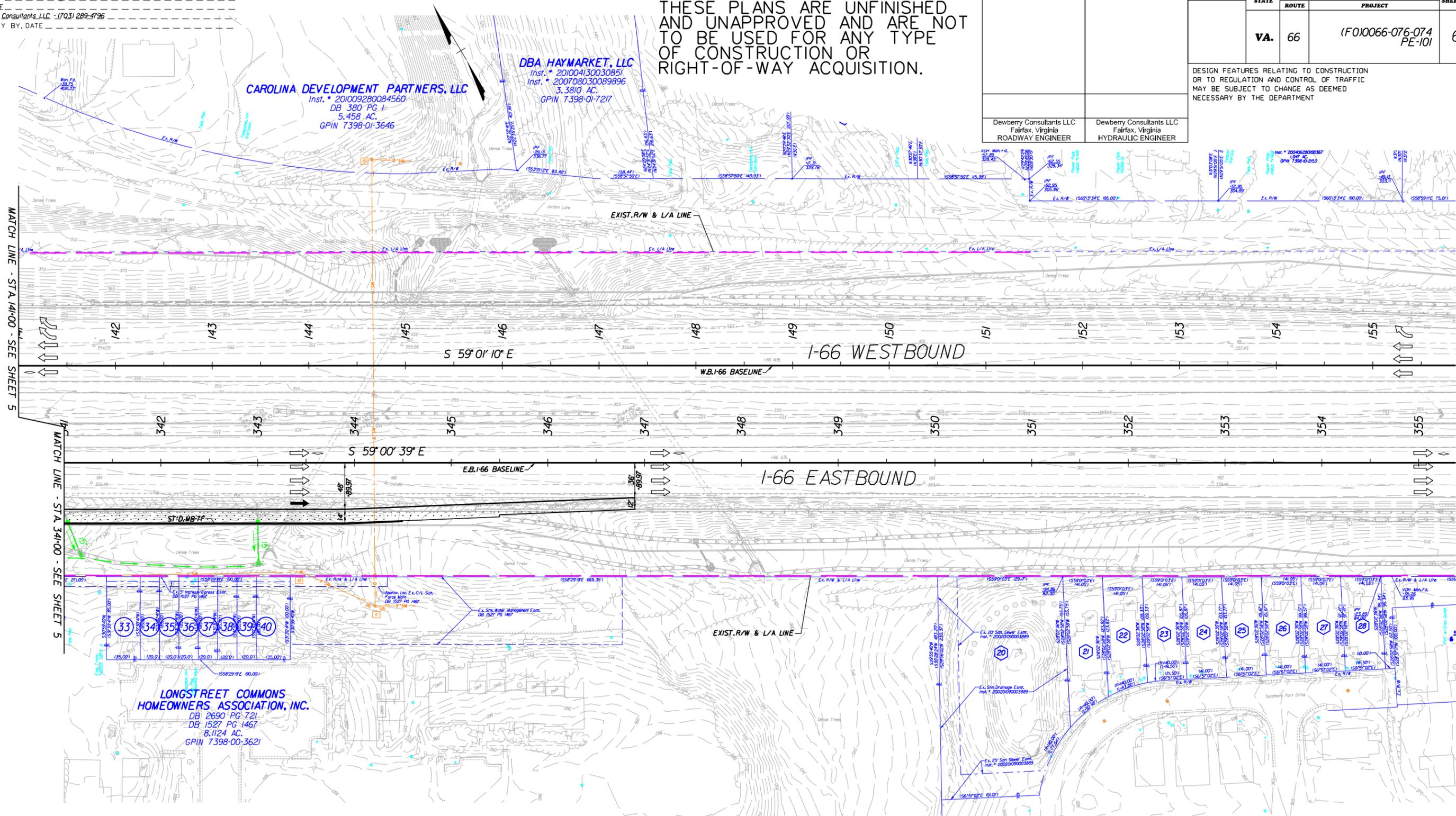


THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	6

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

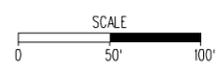
Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER	Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER
---	---



MATCH LINE - STA. 14+00 - SEE SHEET 5

MATCH LINE - STA. 34+00 - SEE SHEET 5

- Denotes Proposed Right-of-Way per RFP Documents
- - - - - Denotes Proposed Permanent Drainage Easement per RFP Documents
- · - · - Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay

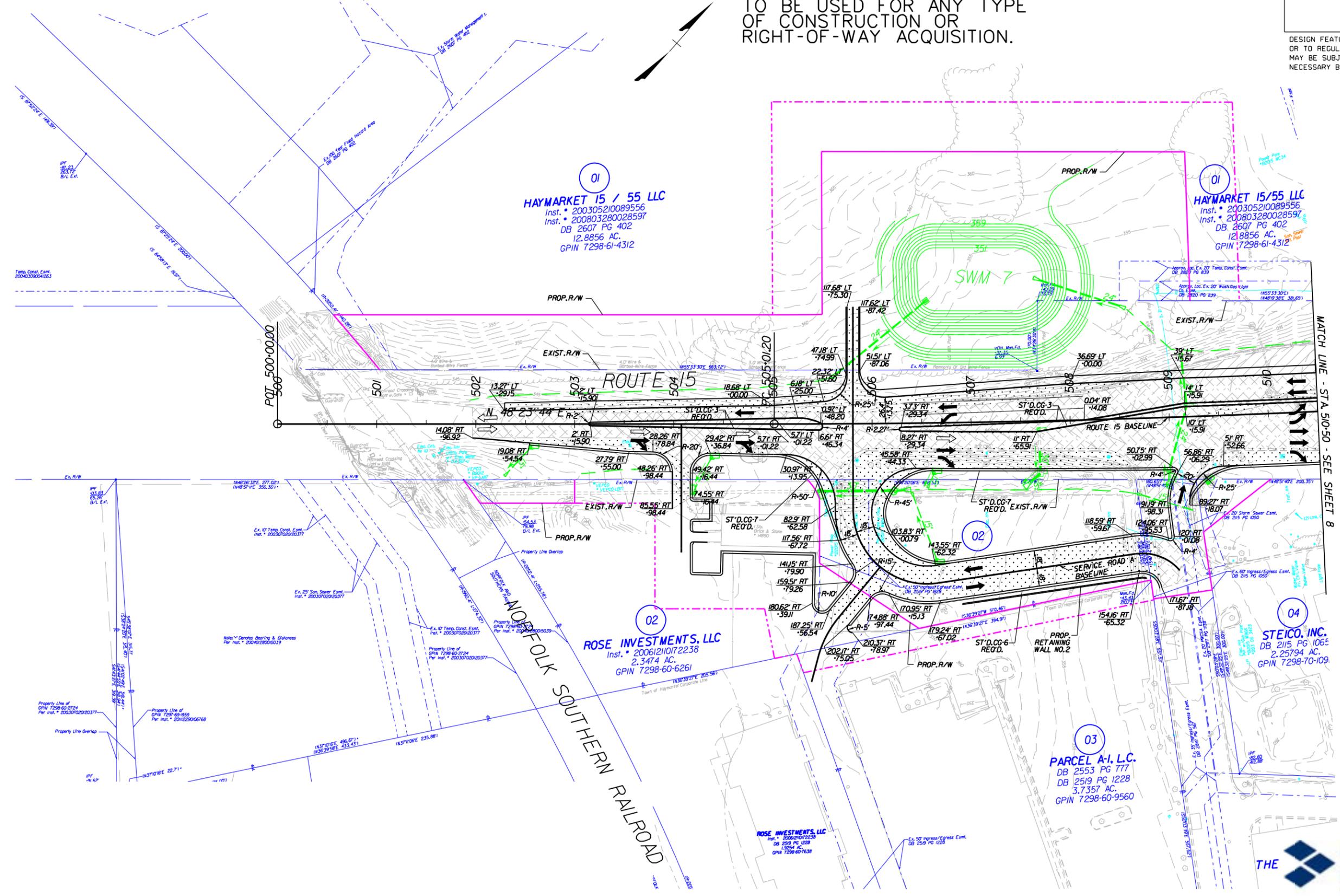


THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
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 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

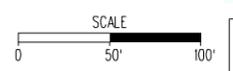
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	7

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER
Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER



- Denotes Proposed Right-of-Way per RFP Documents
- Denotes Proposed Permanent Drainage Easement per RFP Documents
- Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay




SHIRLEY
 CONTRACTING COMPANY, LLC

Dewberry

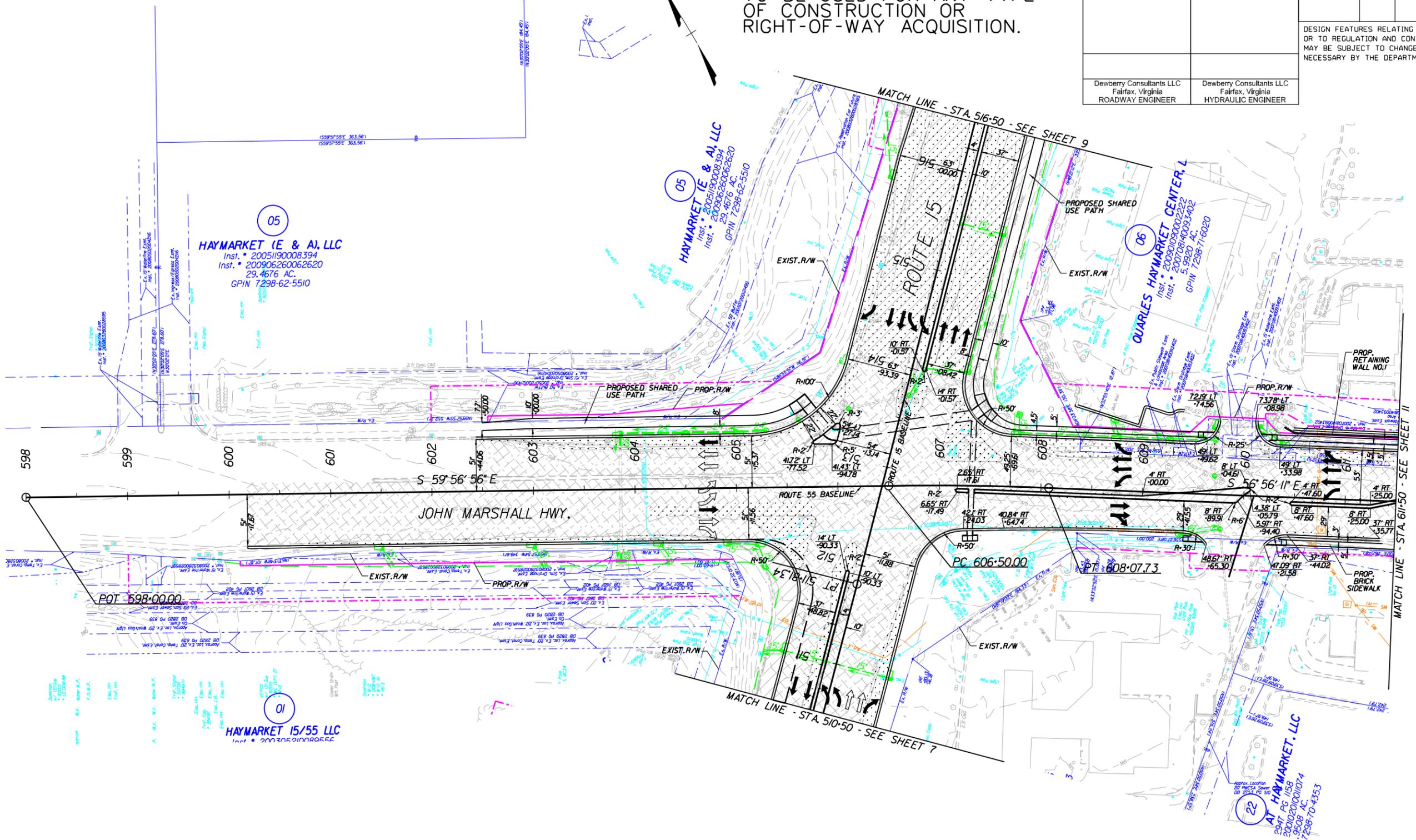
PROJECT MANAGER Ms. Christiana Briganti-Dunn, P.E., VDOT NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE _____
 DESIGN BY Dewberry Consultants LLC - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE _____

THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

REVISED	STATE	STATE PROJECT		SHEET NO.
		ROUTE	PROJECT	
	VA.	66	(F0)0066-076-074 PE-101	8

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER	Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER
---	---



01
HAYMARKET 15/55 LLC
 Inst. # 200305210008556

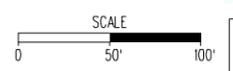
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HAYMARKET (E & A) LLC
 Inst. # 20051190008394
 Inst. # 200906260062620
 29.4676 AC.
 GPIN 7298-62-5510

05
HAYMARKET (E & A) LLC
 Inst. # 20051190008394
 Inst. # 200906260062620
 29.4676 AC.
 GPIN 7298-62-5510

06
QUARLES HAYMARKET CENTER, L
 Inst. # 200201090002222
 Inst. # 200708140093402
 5.9920 AC.
 GPIN 7298-T1-6020

22
AT HAYMARKET, LLC
 2947 PG 1158
 20010201001074
 -9508 AC.
 7298-70-4353

- Denotes Proposed Right-of-Way per RFP Documents
- Denotes Proposed Permanent Drainage Easement per RFP Documents
- Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay



PROJECT 0066-076-074	SHEET NO. 8
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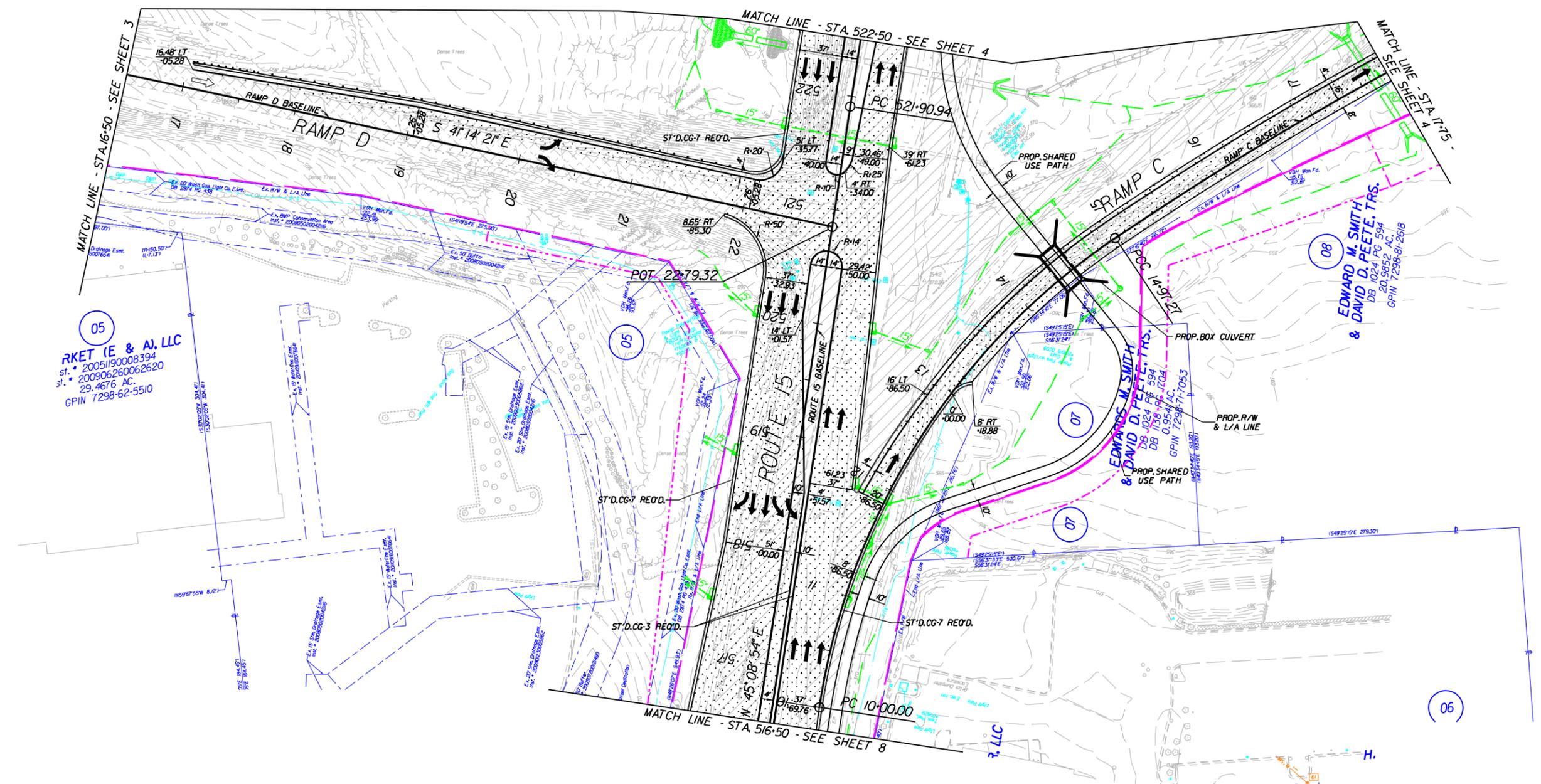
PROJECT MANAGER *Ms. Christiana Briganti-Dunn, P.E.*, VDOT NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE _____
 DESIGN BY *Dewberry Consultants LLC* - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE _____

THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	66	(F0)0066-076-074 PE-101	9

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

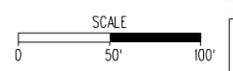
Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER	Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER
---	---



05
RKET IE & AJ, LLC
 sf. • 20051190008394
 st. • 200906260062620
 29,467.6 AC.
 GPIN 7298-62-5510

08
**EDWARD H. SMITH
 & DAVID D. PEETE, TRS.**
 DB 1024 PC 594
 DB 136 PC 1704
 GPIN 7298-71-7053

- Denotes Proposed Right-of-Way per RFP Documents
- - - Denotes Proposed Permanent Drainage Easement per RFP Documents
- - - - - Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay



PROJECT
0066-076-074

SHEET NO.
9

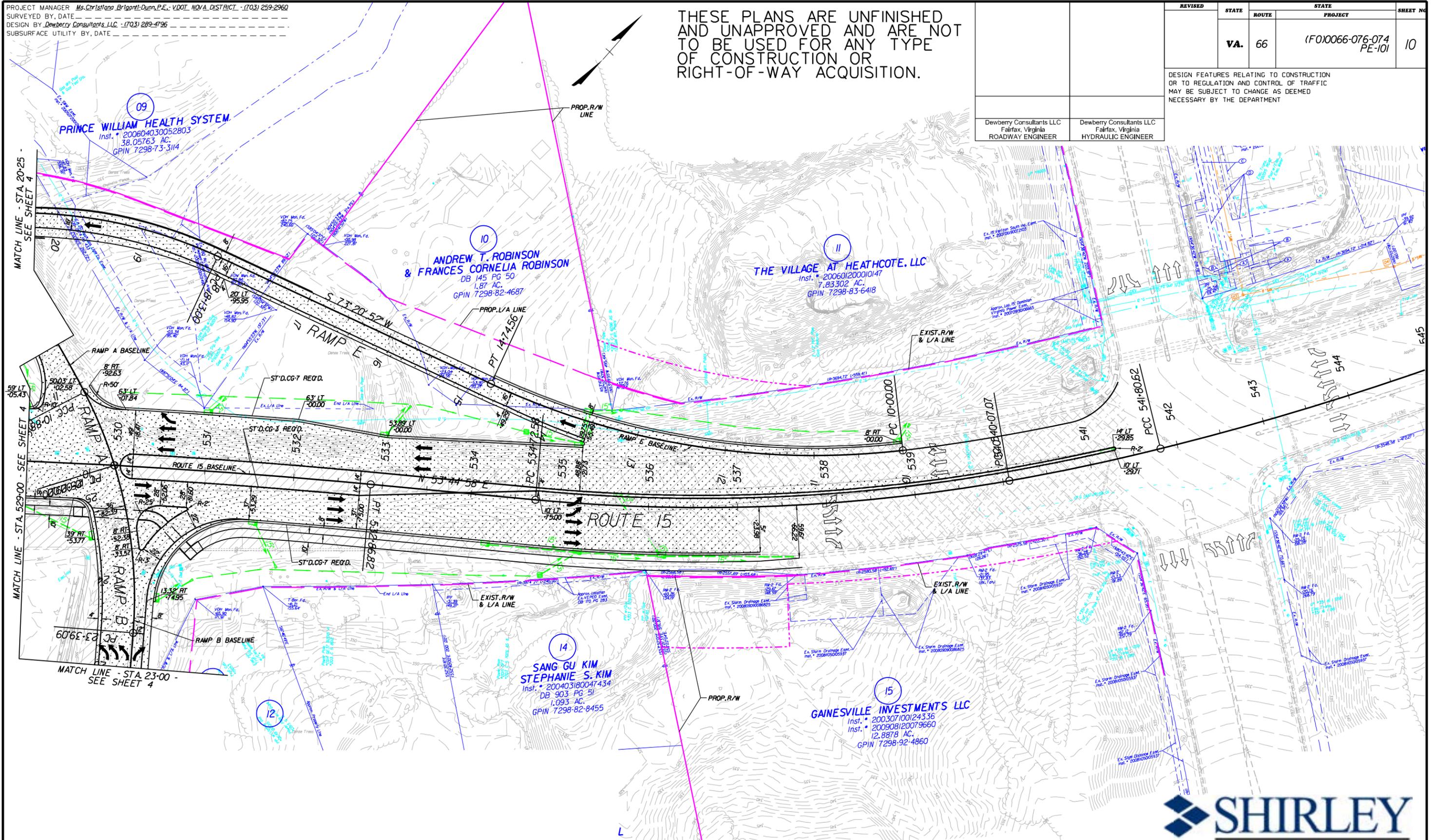
PROJECT MANAGER Ms. Christiana Briganti-Dunn, P.E., VDOT NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE
 DESIGN BY Dewberry Consultants LLC - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE

THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR ANY TYPE
 OF CONSTRUCTION OR
 RIGHT-OF-WAY ACQUISITION.

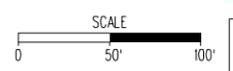
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(F0)0066-076-074 PE-101	10

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER	Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER
---	---



- Denotes Proposed Right-of-Way per RFP Documents
- - - - - Denotes Proposed Permanent Drainage Easement per RFP Documents
- · - · - Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay

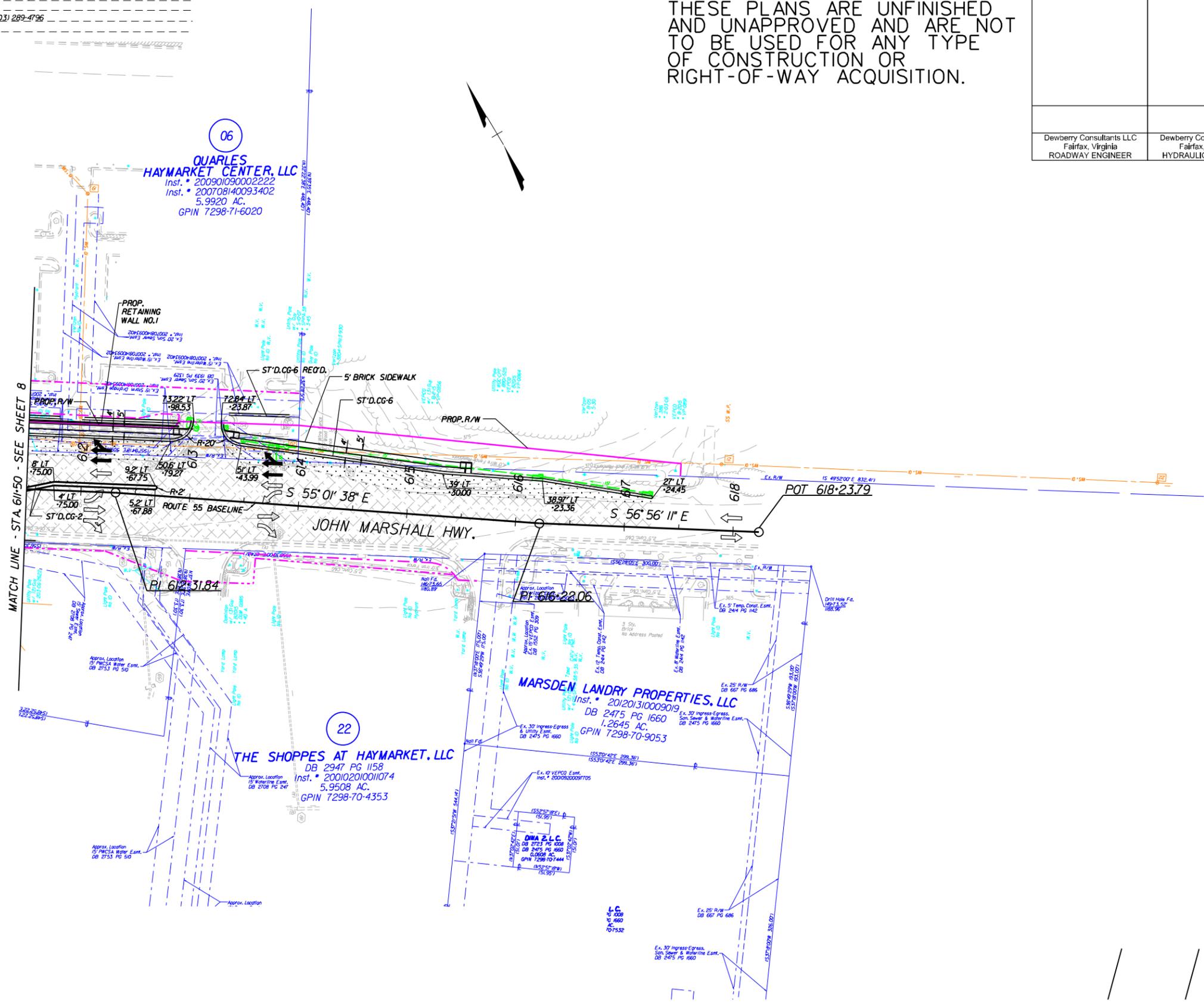


PROJECT 0066-076-074
 SHEET NO. 10

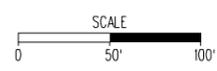
PROJECT MANAGER Ms. Christiana Briganti-Dunn, P.E., VDOT NOVA DISTRICT - (703) 259-2960
 SURVEYED BY, DATE _____
 DESIGN BY Dewberry Consultants LLC - (703) 289-4796
 SUBSURFACE UTILITY BY, DATE _____

THESE PLANS ARE UNFINISHED
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 RIGHT-OF-WAY ACQUISITION.

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	66	(F0)0066-076-074 PE-101	//
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
Dewberry Consultants LLC Fairfax, Virginia ROADWAY ENGINEER		Dewberry Consultants LLC Fairfax, Virginia HYDRAULIC ENGINEER		

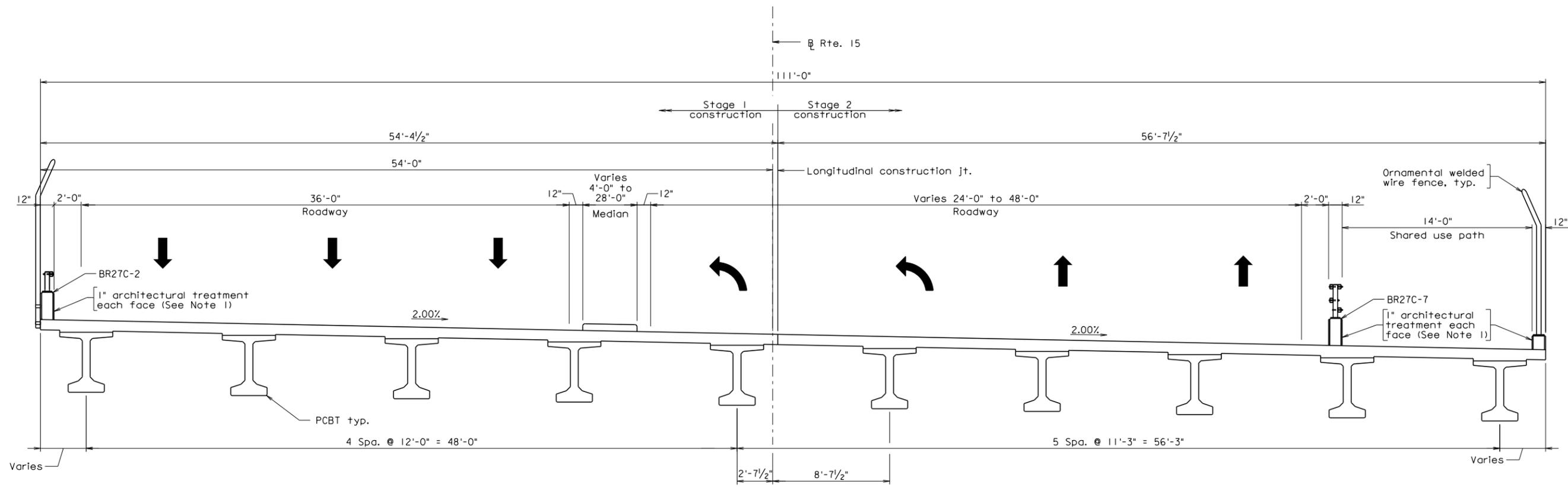


- Denotes Proposed Right-of-Way per RFP Documents
- Denotes Proposed Permanent Drainage Easement per RFP Documents
- Denotes Proposed Temporary Easement per RFP Documents
- Denotes Full Depth Pavement
- Denotes Demolition of Pavement
- Denotes Milling and Overlay



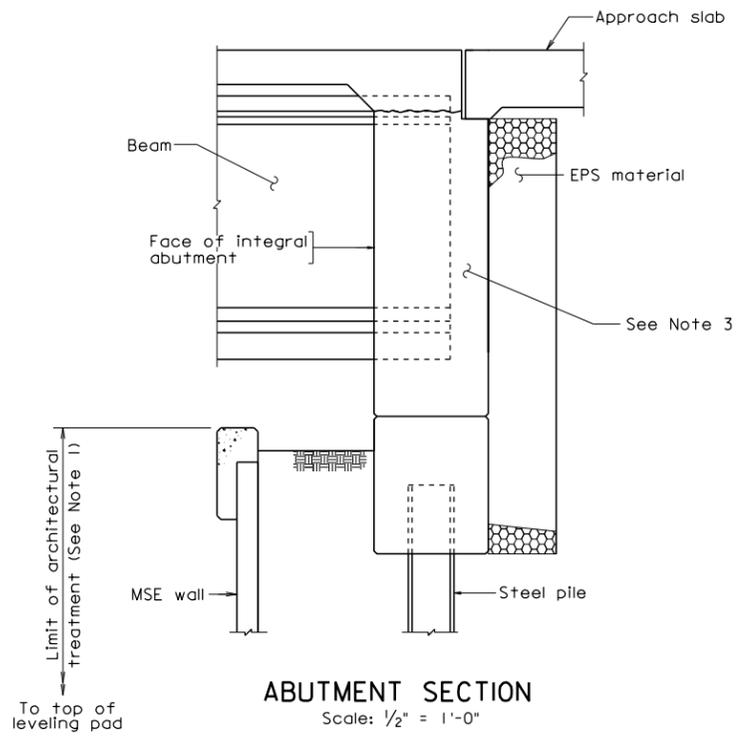
PROJECT 0066-076-074
 SHEET NO. //

STATE	FEDERAL AID		STATE		SHEET NO.
ROUTE	PROJECT		ROUTE	PROJECT	
VA.			15	0066-076-074, B678	2

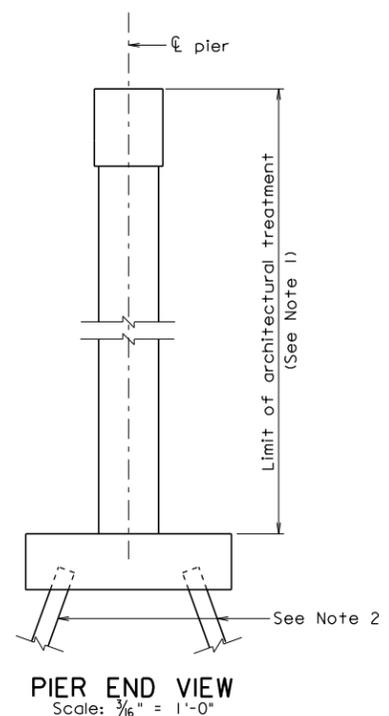


TRANSVERSE SECTION (PROPOSED)

Note: All dimensions are radial to Rte. 15.
Scale: 1/4" = 1'-0"



ABUTMENT SECTION
Scale: 1/2" = 1'-0"



PIER END VIEW
Scale: 3/16" = 1'-0"

- Notes:
1. Areas indicated as relieving architectural treatment will receive a finish in accordance with the Special Provision for architectural finish included in RFP Information Package.
 2. Foundation type will be determined during final design after the final geotechnical investigation has been completed. Foundation type may include drilled shafts, steel piles or spread footings.
 3. MSE wall will wrap around the end of the abutments and step up to the finished grade elevation, which will hide this face of the abutments. MSE wall will have architectural treatment.



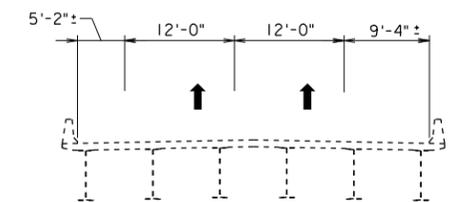
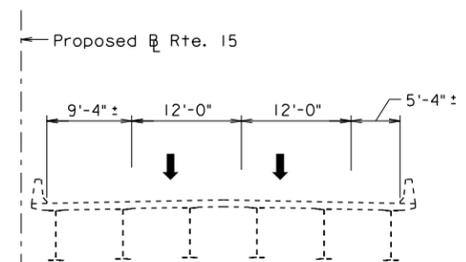
CONCEPTUAL PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

			COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION		
			STRUCTURE AND BRIDGE DIVISION		
			RTE. 15 OVER I-66 TRANSVERSE SECTION AND SUBSTRUCTURE DETAILS		
No.	Description	Date	Designed: MAA	Date	Plan No.
			Drawn: MAA	Jan. 2014	293-90
			Checked: JDD		2 of 3
Revisions					

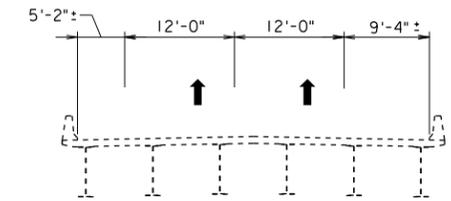
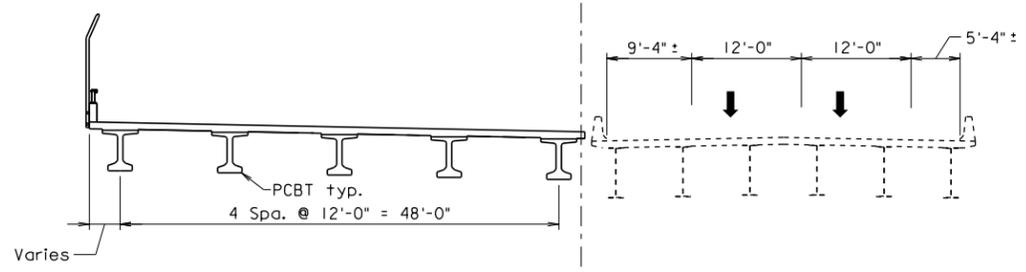
B678 RTE 15 OVER I66 SECTIONS.dgn

STATE		FEDERAL AID		STATE		SHEET NO.
ROUTE		PROJECT		ROUTE		PROJECT
VA.				15		0066-076-074, B678
						3

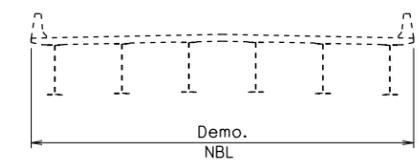
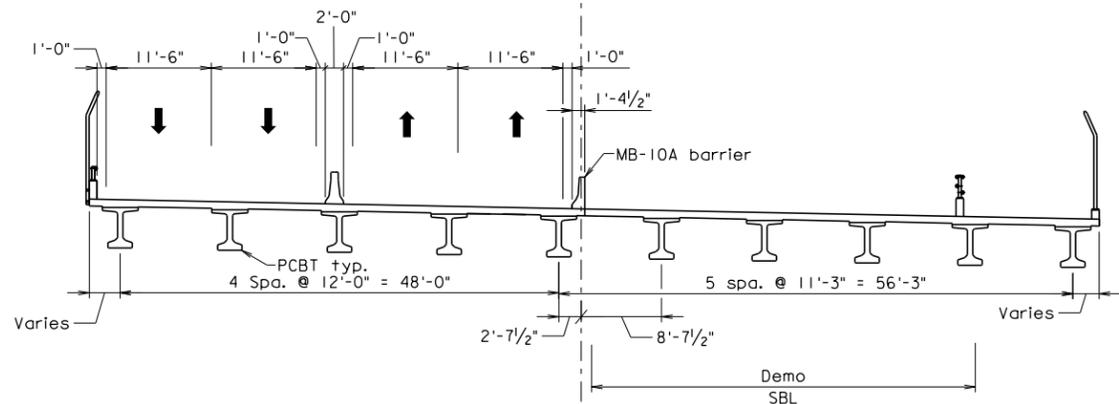
EXISTING CONDITION



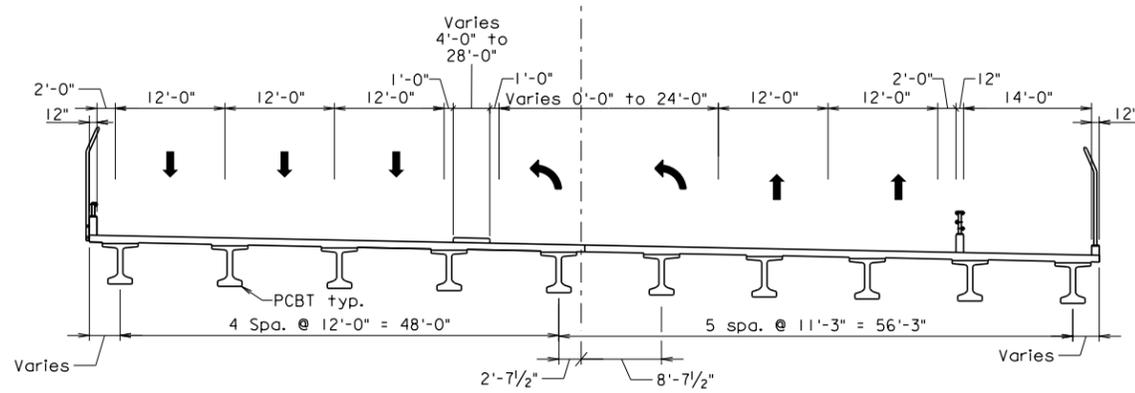
PHASE 1 BRIDGE CONSTRUCTION
(STAGE 2 CONSTRUCTION)



PHASE 2 BRIDGE CONSTRUCTION
(STAGE 3A CONSTRUCTION)



FINAL BRIDGE CONFIGURATION



CONCEPTUAL PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

B678 RTE 15 OVER I66 PHASING.dgn

			COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
			STRUCTURE AND BRIDGE DIVISION			
			RTE. 15 OVER I-66 BRIDGE CONSTRUCTION SEQUENCE			
No.	Description	Date	Designed: MAA	Date	Plan No.	Sheet No.
			Drawn: MAA	Jan. 2014	293-90	3 of 3
			Checked: MAA			
Revisions						

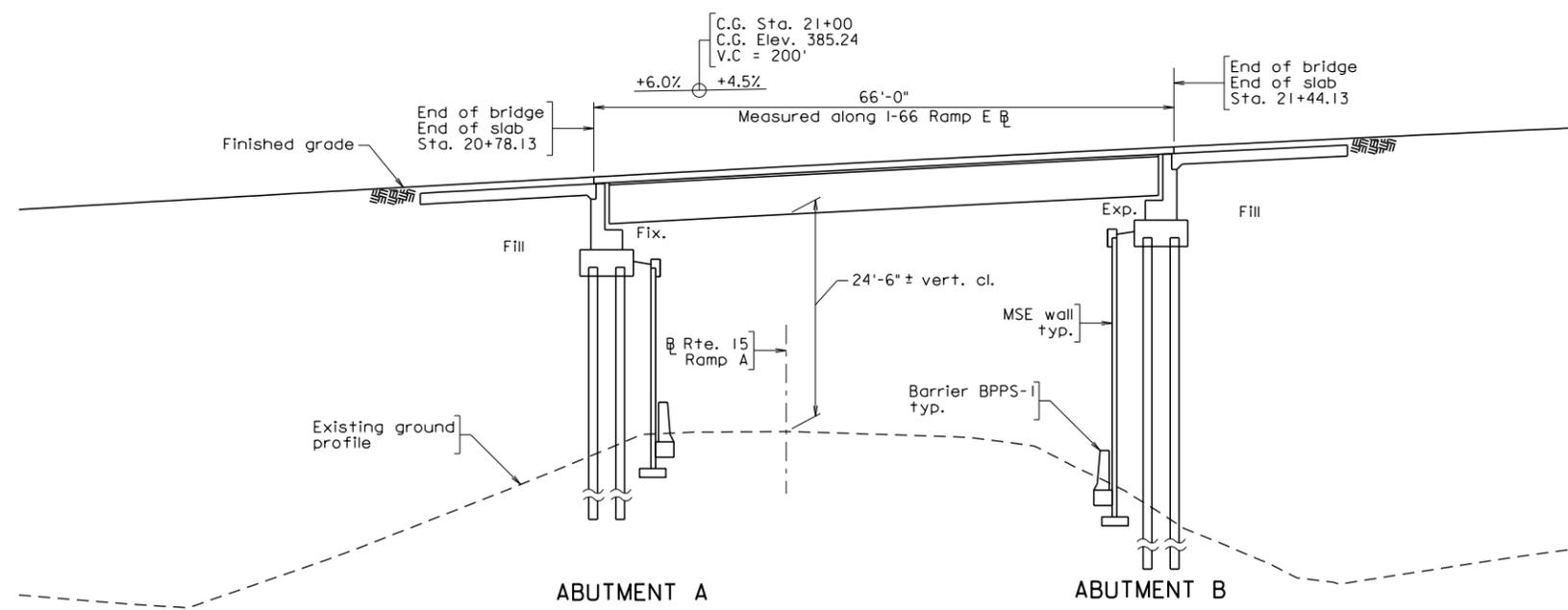
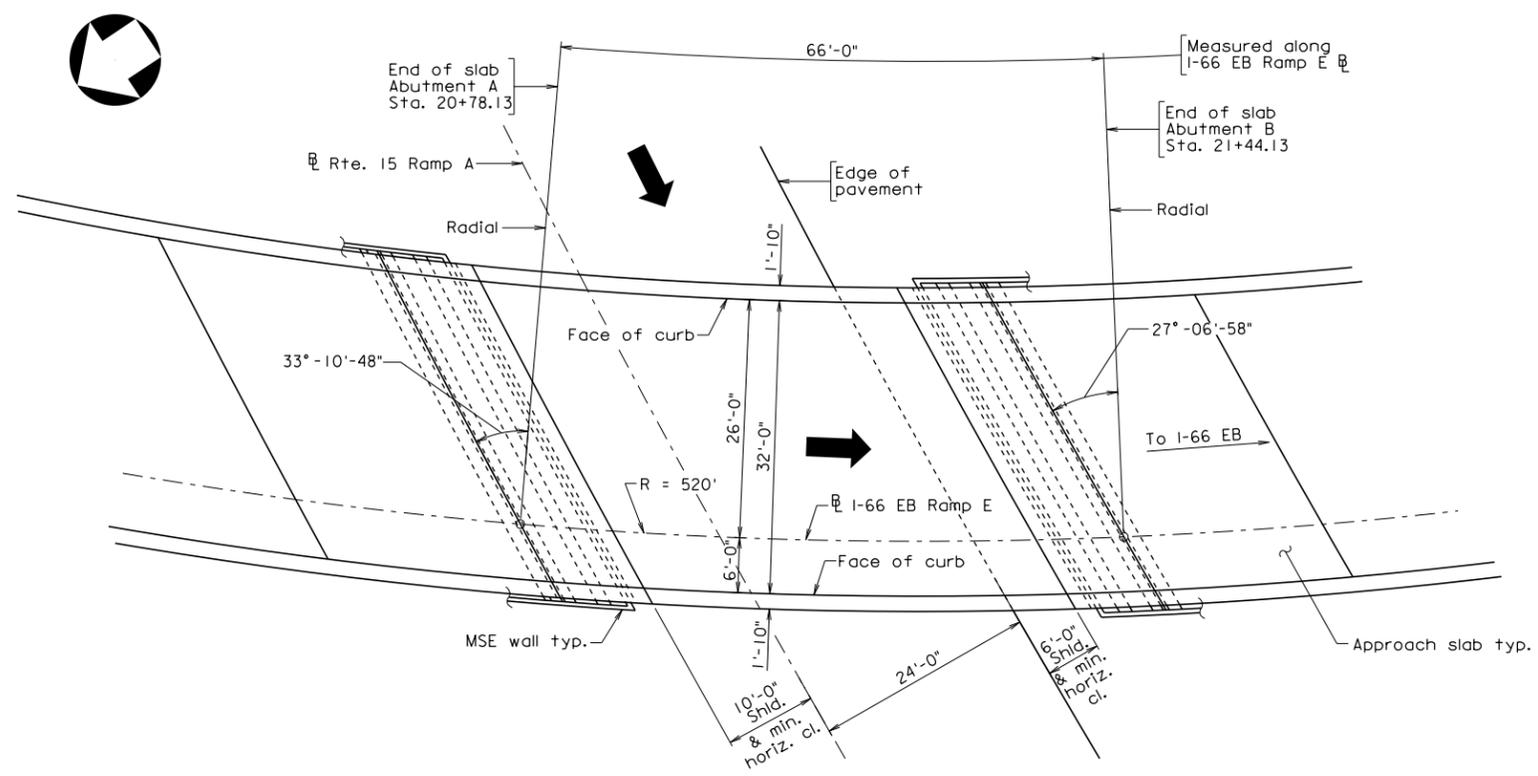
STATE	FEDERAL AID	STATE	SHEET NO.
VA.	PROJECT	ROUTE	PROJECT
		66	0066-076-074, B679
NBIS Number: 00000000030012		UPC No.	100566
Federal Oversight Code: N/A		FHWA Construction and Scour Code: X971-SN	

DESIGN EXCEPTION(S):

None.

GENERAL NOTES:

- Widths: 32'-0" face-to-face of curbs.
 - Span layout: 66'-0" continuous steel rolled beams.
 - Capacity: HL-93 loading.
 - Specifications:
 - Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007.
 - Design: AASHTO LRFD Bridge Design Specifications, 6th Edition, 2012; and VDOT Modifications.
 - Standards: Virginia Department of Transportation Road and Bridge Standards, 2008.
- These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.



CONCEPTUAL PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON

I-66 RAMP E OVER ROUTE 15 RAMP A
PRINCE WILLIAM CO. - INT. I-66 AND RTE. 15
PROJ. 0066-076-074, B679

Recommended for Approval: _____ Date _____
State Structure and Bridge Engineer

Approved: _____ Date _____
Chief Engineer

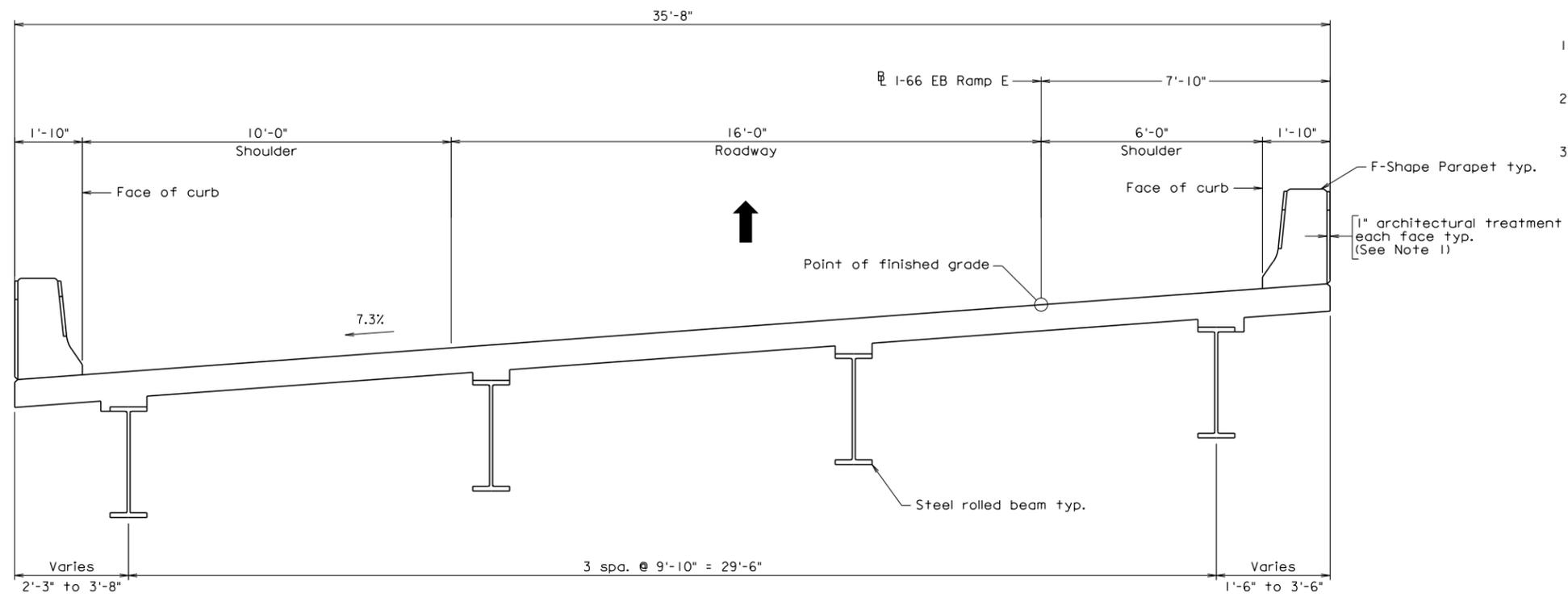
Date: JAN 23, 2014 293-91
© 2014, Commonwealth of Virginia Sheet 1 of 2

No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

PLANS BY:	Dewberry
COORDINATED:	
SUPERVISED:	James D. Davidson
DESIGNED:	Micrael A. Alemu
DRAWN:	Micrael A. Alemu
CHECKED:	James D. Davidson

B679_RAMP E OVER RAMP A_CPE.dgn

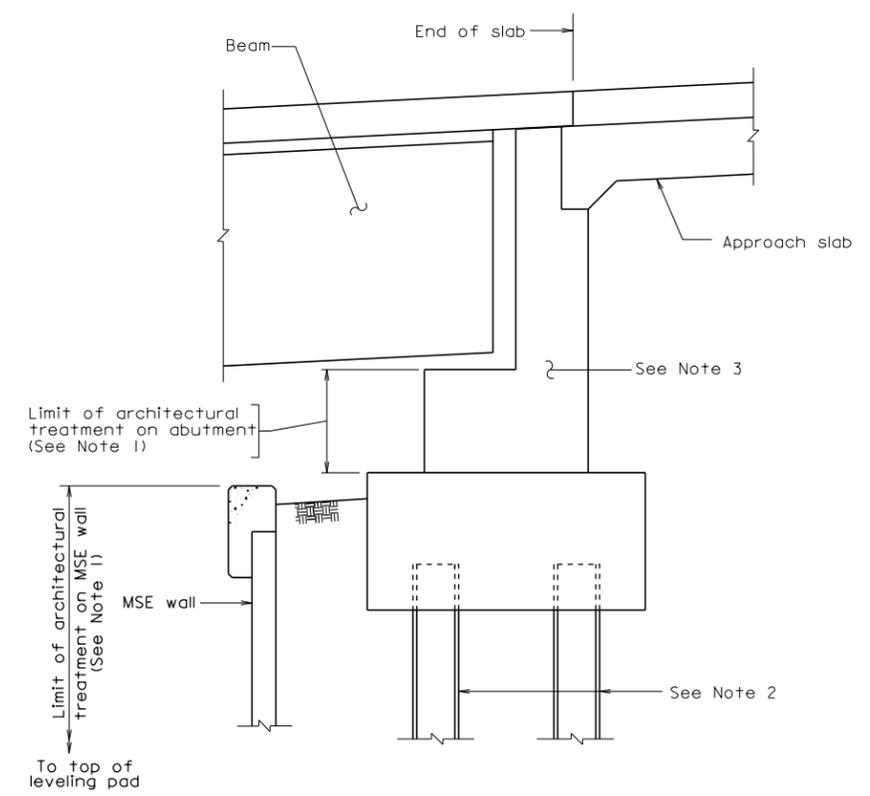
STATE	FEDERAL AID		STATE		SHEET
ROUTE	PROJECT		ROUTE	PROJECT	NO.
VA.			66	0066-076-074, B679	2



TRANSVERSE SECTION

Note: All dimensions are radial to \varnothing I-66 EB Ramp E

- Notes:
1. Areas indicated as receiving architectural treatment will receive a finish in accordance with the Special Provision for architectural finish included in RFP Information Package.
 2. Foundation type will be determined during final design after the final geotechnical investigation has been completed. Foundation type may include drilled shafts or steel piles.
 3. MSE wall will wrap around the end of the abutments and step up to the finished grade elevation, which will hide this face of the abutments. MSE wall will have architectural treatment.



ABUTMENT SECTION



CONCEPTUAL PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION STRUCTURE AND BRIDGE DIVISION					
RAMP E OVER RAMP A TRANSVERSE SECTION AND SUBSTRUCTURE DETAILS					
No.	Description	Date	Designed: MAA.....	Date	Plan No.
			Drawn: MAA.....	Jan. 2014	293-91
			Checked: JDD.....		2 of 2
Revisions					

B679_RAMP E OVER RAMP A_SECTIONS.dgn

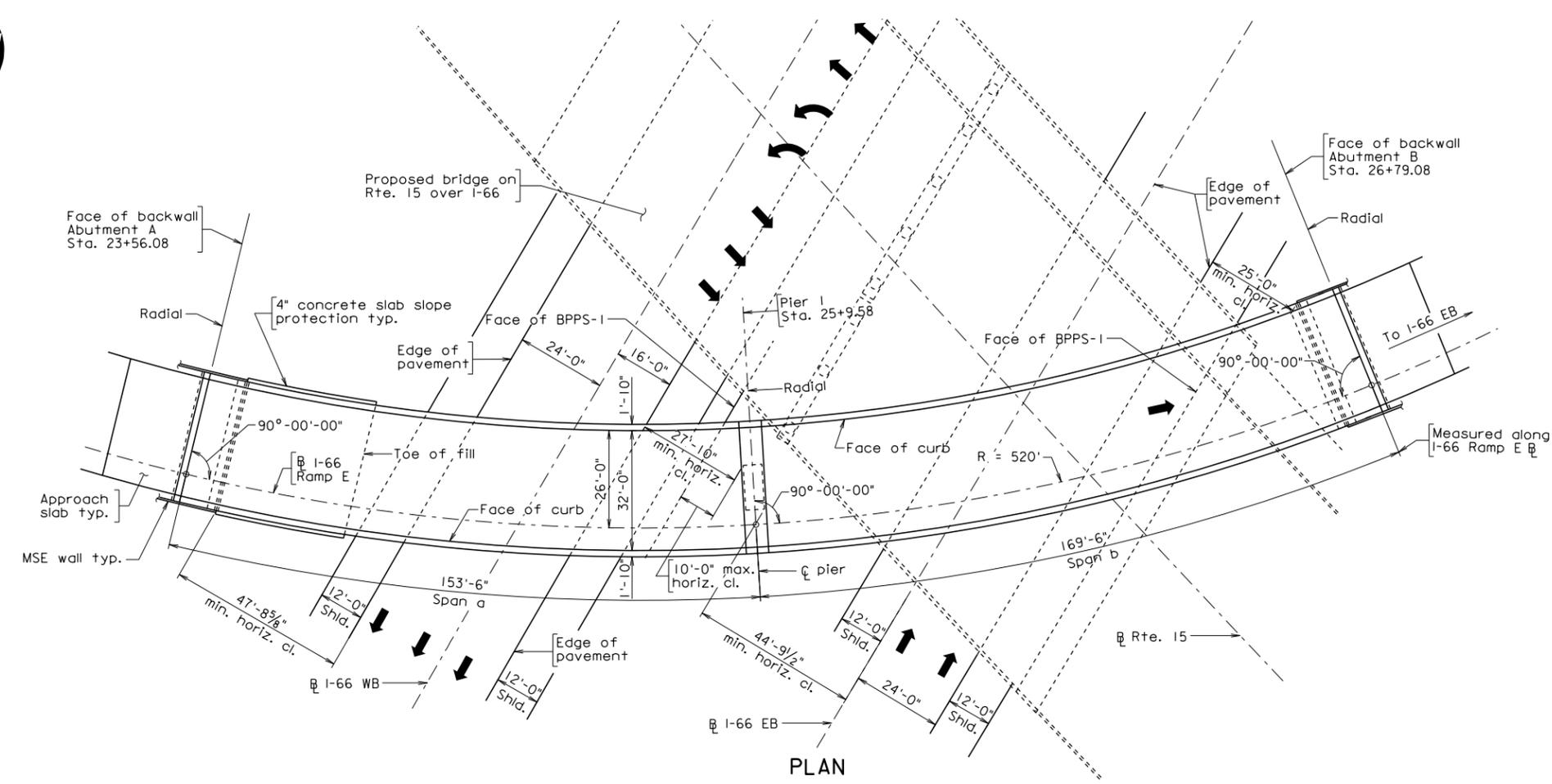


STATE	FEDERAL AID	STATE	SHEET NO.
VA.	PROJECT	66	0066-076-074, B680
NBIS Number: 00000000030046		UPC No.	100566
Federal Oversight Code: F0		FHWA Construction and Scour Code: X771-SN	

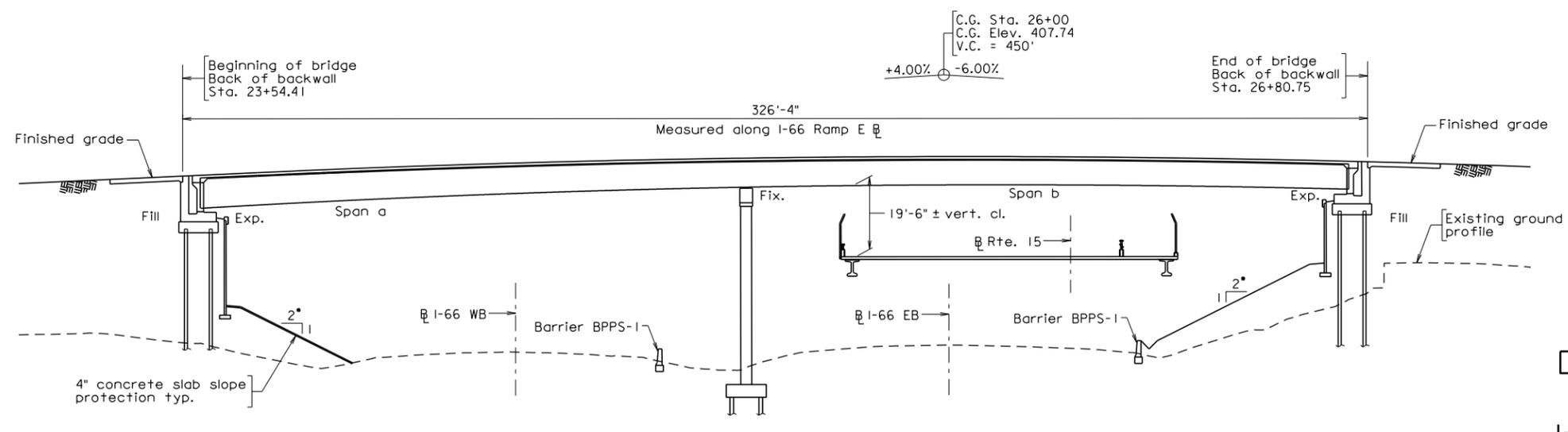
DESIGN EXCEPTION(S):
None.

GENERAL NOTES:

- Widths: 32'-0" face-to-face of curbs.
 - Span layout: 153'-6" - 169'-6" continuous steel plate girder.
 - Capacity: HL-93 loading.
 - Specifications:
 - Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007.
 - Design: AASHTO LRFD Bridge Design Specifications, 6th Edition, 2012; and VDOT Modifications.
 - Standards: Virginia Department of Transportation Road and Bridge Standards, 2008.
- These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.



PLAN



DEVELOPED SECTION ALONG RTE. 15



CONCEPTUAL PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON
I-66 RAMP E OVER ROUTE 15 AND I-66
PRINCE WILLIAM CO. - INT. I-66 AND RTE. 15
PROJ. 0066-076-074, B680

Recommended for Approval: _____
State Structure and Bridge Engineer Date

Approved: _____
Chief Engineer Date

Date: JAN. 23, 2014 © 2014, Commonwealth of Virginia Sheet 1 of 2

294-26

PLANS BY:	Dewberry
COORDINATED:	
SUPERVISED:	James D. Davidson
DESIGNED:	Micrael A. Alemu
DRAWN:	Micrael A. Alemu
CHECKED:	James D. Davidson

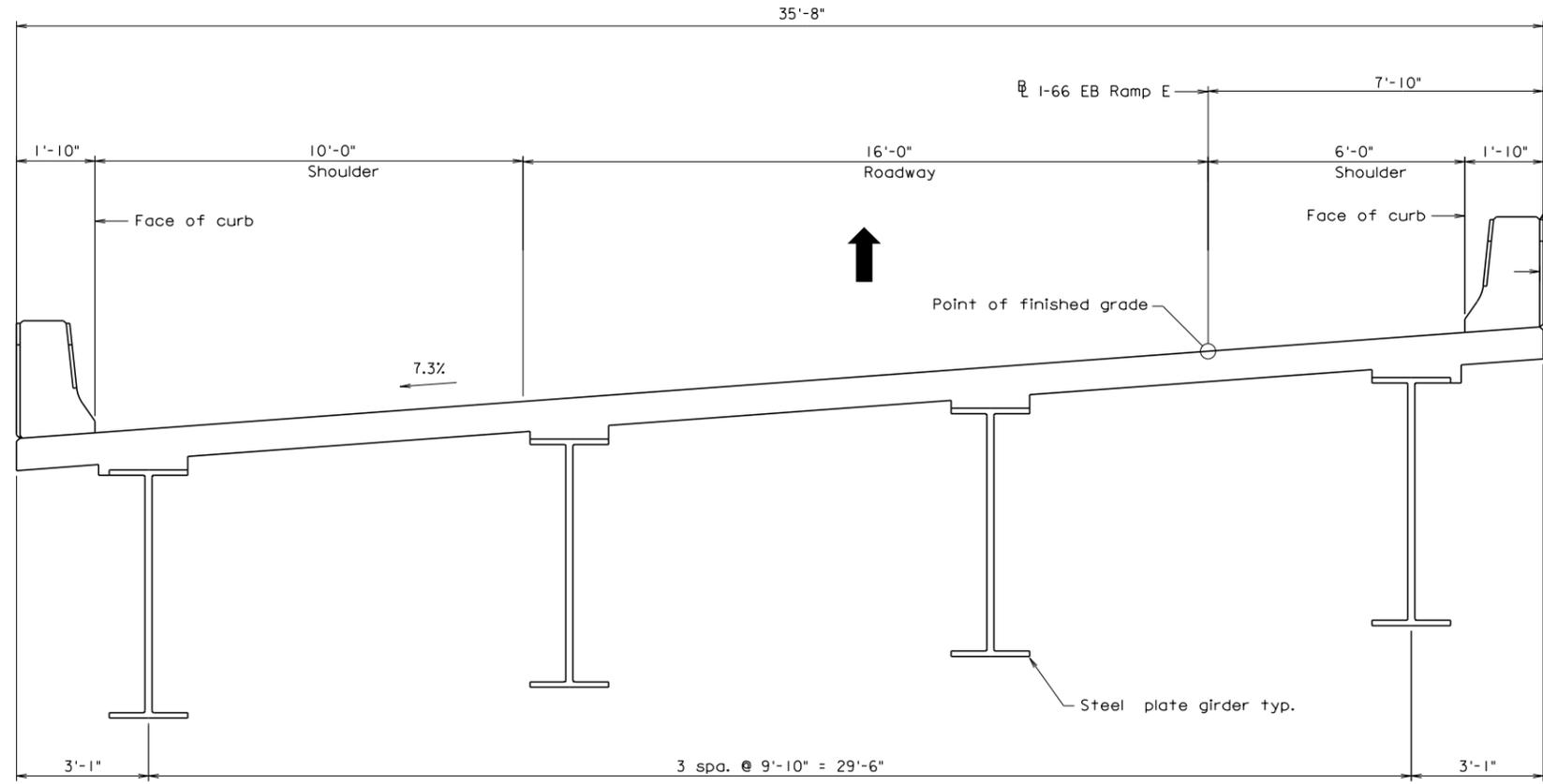
No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

Scale: 1" = 20'-0"

B680.RAMP E OVER RTE 15_GPE.dgn

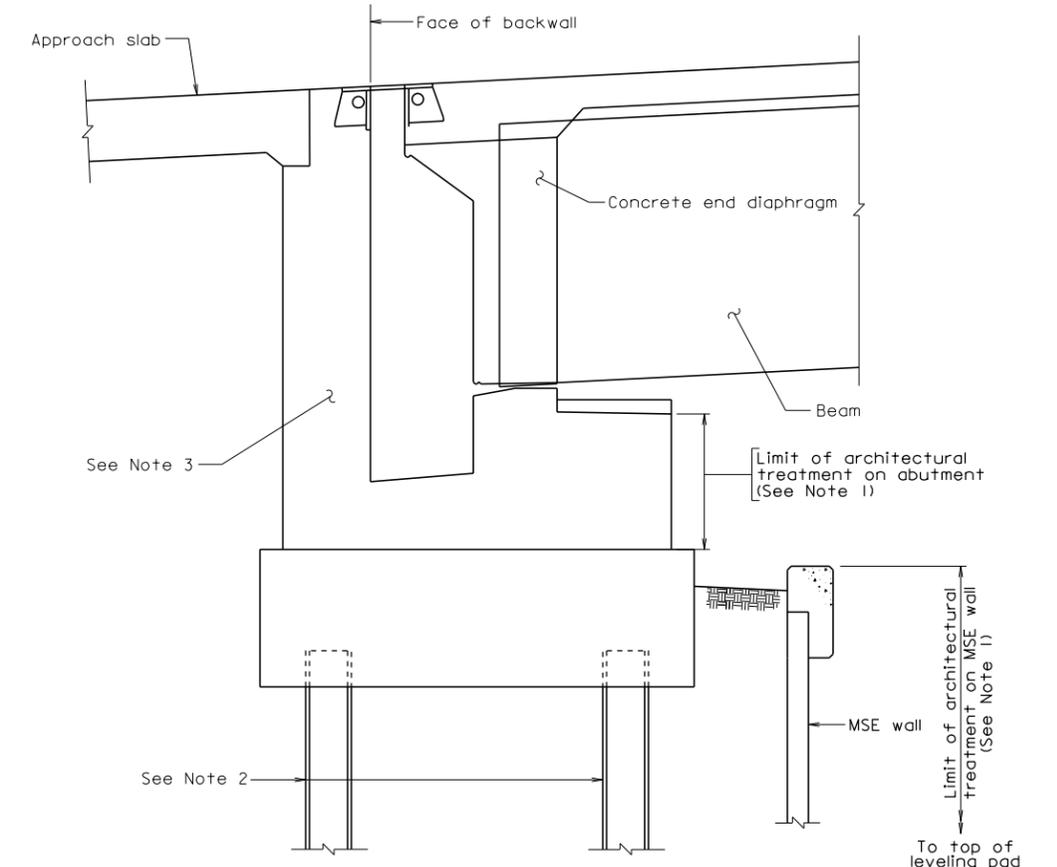
STATE	ROUTE	FEDERAL AID	PROJECT	ROUTE	PROJECT	SHEET NO.
VA.				66	0066-076-074, B680	2

- Notes:
1. Areas indicated as relieving architectural treatment will receive a finish in accordance with the Special Provision for architectural finish included in RFP Information Package.
 2. Foundation type will be determined during final design after the final geotechnical investigation has been completed. Foundation type may include drilled shafts, steel piles or spread footings.
 3. MSE wall will wrap around the end of the abutments and step up to the finished grade elevation, which will hide this face of the abutments. MSE wall will have architectural treatment.



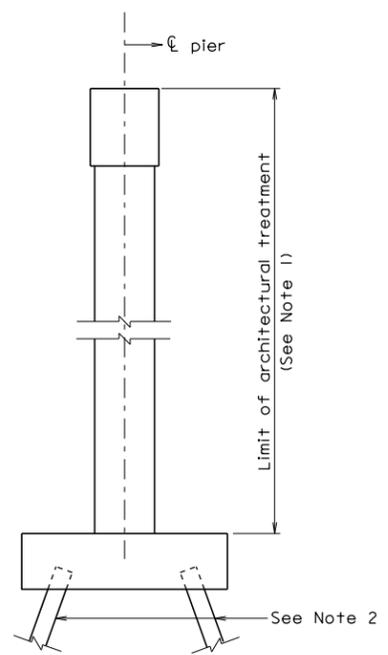
TRANSVERSE SECTION

Scale: 1/2" = 1'-0"
 Note: All dimensions are radial to I-66 EB Ramp E



ABUTMENT SECTION

Scale: 1/2" = 1'-0"



PIER END VIEW

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

B680..RAMP E OVER RTE 15..SECTIONS.dgn



CONCEPTUAL PLANS
 THESE PLANS NOT TO BE USED FOR CONSTRUCTION

Scale: As shown © 2014, Commonwealth of Virginia

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION					
STRUCTURE AND BRIDGE DIVISION					
RAMP E OVER RTE. 15 & I-66 TRANSVERSE SECTION AND SUBSTRUCTURE DETAILS					
No.	Description	Date	Designed: MAA	Date	Plan No.
			Drawn: MAA	Jan. 2014	294-26
			Checked: JDD		Sheet No.
Revisions					2 of 2