

Submitted By:

LANE

in conjunction with



Volume I: Technical Proposal



Interstate 66/Route 15 Interchange Reconstruction A Design-Build Project

State Project No.: 0066-076-074
Federal Project No.: IM-066-1(341)
Contract ID Number: C00100566DB63

Prepared For:



January 23, 2014

4.1 Letter of Submittal





January 23, 2014

Mr. John C. Daoulas, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

RE: Interstate 66/Route 15 Interchange Reconstruction
State Project No.: 0066-076-074; Federal Project No.: IM-066-1(341);
Contract ID Number: C00100566DB63

Dear Mr. Daoulas:

The Lane Construction Corporation (LANE) is pleased to present our Technical Proposal for the above referenced Design-Build project. Our response contains all information requested in the RFP dated September 24, 2013 and Addendum No. 1. LANE is teamed with Rinker Design Associates, PC (RDA), Lead Design Consultant, to provide the Virginia Department of Transportation (VDOT) a team with a solid reputation for completing innovative, complex projects on time, and often ahead of schedule. Our Team's experience enables us to deliver a high quality and technically-sound project that VDOT and the public deserve.

4.1.1 Offeror's Full Legal Name and Address:

The Lane Construction Corporation
90 Fieldstone Court
Cheshire, CT 06410

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

4.1.3 120 Day Declaration: Pursuant to Part 1, Section 8.2, we declare that the offer represented by this Technical Proposal will remain in full force and effect for one hundred twenty (120) days after the date of the Technical Proposal submission to VDOT.

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

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

4.1.5 Offeror's Principal Officer Information: Mr. Mark A. Schiller is a Principal Officer of LANE.

Mark A. Schiller, Regional Vice President, Mid-Atlantic Region
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
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The Lane Construction Corporation

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4.1.6 Final Completion Date: In accordance with RFP Section 2.3.1, LANE proposes a final completion date of August 8, 2017.

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

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

4.1.9 Written Statement of Compliance: LANE'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 this RFP. LANE certifies the proposed limits of construction, to include all stormwater management facilities, are located within the right of way limits shown on the RFP plans with the exception of permanent and temporary easements. LANE's design concept does not require Design Exceptions and/or Design Waivers unless they are identified or included in the RFP or Addendum.

The LANE Team appreciates the opportunity to propose on this critically important project. We look forward to partnering with VDOT to make the I-66/Route 15 Interchange Reconstruction project a landmark success for the citizens of Virginia.

Respectfully submitted,



Richard A. McDonough
District Manager
The Lane Construction Corporation

4.2 Offeror's Qualifications



4.2 | OFFEROR'S QUALIFICATIONS

4.2.1 CONFIRMATION OF SOQ INFORMATION

Prior to the evaluation of the SOQ, LANE was notified that our Lead Structural Engineer (Khosrow Babaei, PE) had resigned from his company, Michael Baker Corporation (Baker). We proposed a new Lead Structural Engineer (Amir Fouladgar, PE) from Baker and this personnel change was approved by VDOT via email on August 16, 2013. LANE was later notified that Mr. Fouladgar had resigned from his company and we proposed a new Lead Structural Engineer (Philip Quillin, PE) from Baker. This change was approved by VDOT via email on October 30, 2013.

LANE was also notified that our Quality Assurance Manager (Robert Bolduc, PE) had resigned from his company, Quinn Consulting Services. We proposed a new Quality Assurance Manager (Kaushik Vyas, PE) and this personnel change was approved by VDOT via email on November 22, 2013.

LANE confirms that all other information presented in the Statement of Qualifications (SOQ) dated July 1, 2013 remains true and accurate in accordance with RFP Section 11.4.

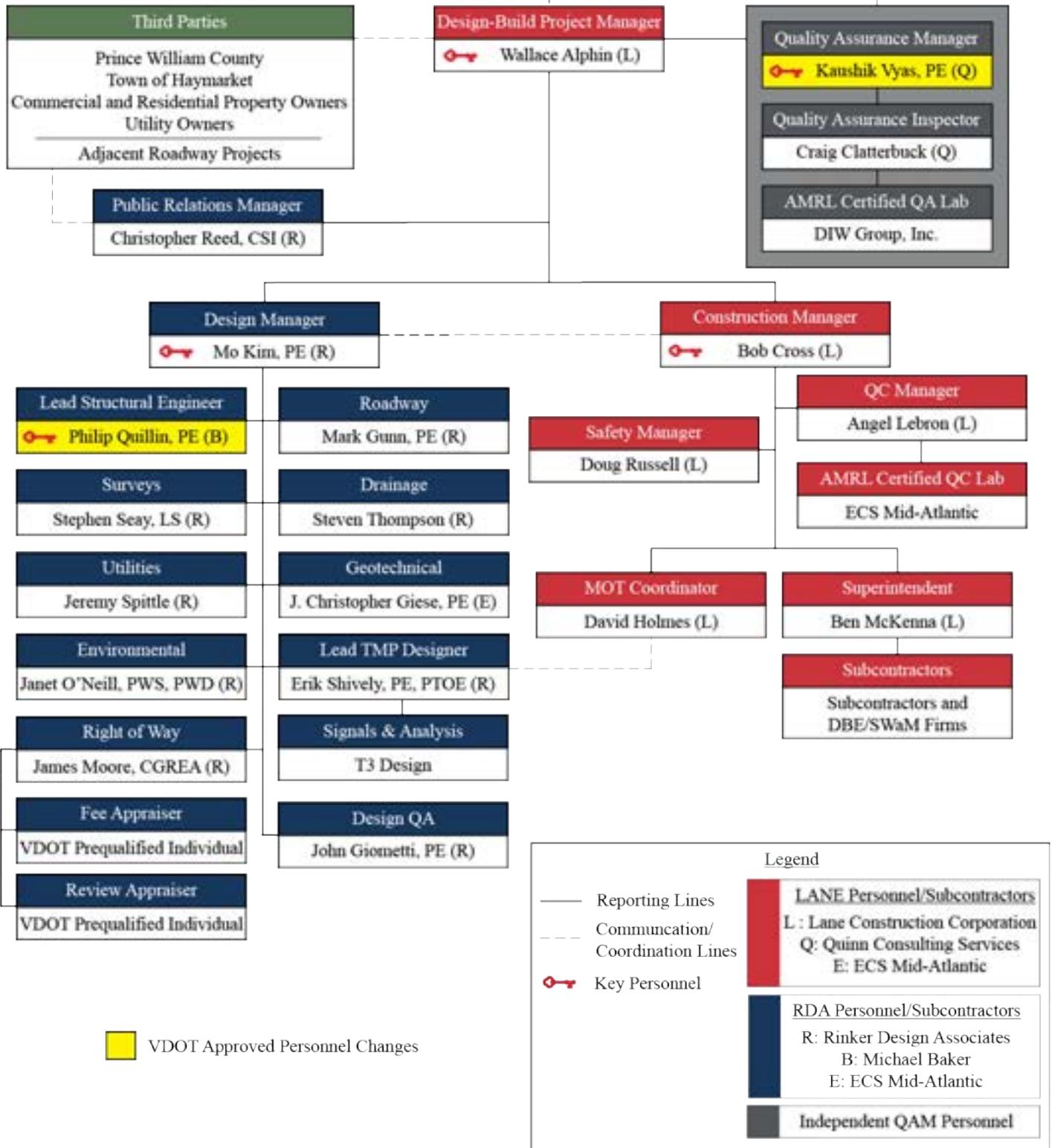
4.2.2 ORGANIZATIONAL CHART

The following narratives have been updated from the SOQ submittal and clearly indicate the changes that have been made (highlighted in yellow) and were previously approved by VDOT in accordance with Part 1, Section 11.4.

QAM, Mr. Bolduc Mr. Kaushik Vyas, will report regularly to Mr. Alphin, the Design-Build Project Manager, and will coordinate with Mr. Bob Cross, the Construction Manager, on all quality issues. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel will have no authority over QA inspection staff, and issues raised by construction personnel will be resolved by **Mr. Bolduc Mr. Vyas** and the Design-Build Project Manager. During all phases, VDOT will be informed by **Mr. Bolduc Mr. Vyas** of issues/solutions through weekly reports and progress meetings. As QAM, **Mr. Bolduc Mr. Vyas** holds the authority to shut down the job if quality issues warrant.

Lead Structural Engineer, Mr. Babaei, PE, SE Mr. Amir Fouladgar, PE Mr. Philip Quillin, PE, will report directly to Mr. Kim, the Design Manager. **Mr. Babaei Mr. Fouladgar Mr. Quillin** will be responsible for the structural design of the bridges and retaining walls. If necessary, **Mr. Babaei Mr. Fouladgar Mr. Quillin** will be available to review, verify, and/or modify designs based on field conditions and construction activities related to dismantling and removing portions of existing structures, installing foundation structures, handling and erecting bridge girders, and making superstructure and substructure repairs.

As demonstrated in the organizational chart presented on the following page, the Team proposed by LANE, including but not limited to our organizational structure, lead contractor, lead designer, key personnel, and other individuals identified pursuant to Part 1, Section 4.2, will remain intact for the duration of the contract.



4.3 Design Concept



4.3 | DESIGN CONCEPT

As the LANE Team began reviewing the RFP plans in order to develop an approach that would minimize both cost and impact to the environment, several features of the design became focal points of our evaluation. The most obvious design feature was the constructability and cost of a flyover structure. We understand the significance of the southbound Route 15 to eastbound I-66 movement due to the large left turning volumes; but, we determined a need to explore options that would allow us to improve traffic movements in all directions, enhance constructability, and reduce cost. Our unique design solution described in detail below accomplishes these benchmarks for success.

The result of our brainstorming is the implementation of a Diverging Diamond Interchange (DDI) option (see sample image to the right) instead of the modified diamond/ flyover option selected in the IMR and presented in the RFP plans. ***Our DDI concept will provide significant cost savings and improve overall safety and traffic operations.***

The DDI (see **Volume II, Page II-1** for overall layout) will transition traffic in a crossing pattern through signal controlled intersections at either end of the bridge where the on- and off-ramp tie-ins. As a result, the signal phasing is simplified by removing the left turn phase altogether. Left turns onto the ramps and left turns from the ramps onto Route 15 will be performed as free-flowing/yield movements similar to right turns. Eliminating these conflict points and opening the movements up to be free flowing or yield controlled improves safety and efficiency. The DDI also provides numerous other advantages over the RFP design. It allows us to reduce the bridge costs by eliminating the need for a flyover – albeit the U.S. Route 15 bridges will be wider to accommodate three lanes in each direction versus two. It more closely resembles an urban diamond, keeping the ramps tighter to the interstate. This in turn better utilizes the westbound I-66 to Route 15 ramp construction (Ramp B) being performed under the I-66 Widening Design-Build project. As an added benefit, impacts to the parcels and residences on the north side of Ramp B will be significantly reduced and/or eliminated.



Source: Missouri Department of Transportation

To develop a DDI alternative that operationally met or exceeded the RFP Design, our team determined that Route 15 needed to be 3 lanes in each direction through the interchange. Two lanes on Route 15 do not adequately address the Level of Service.

Implementation of the DDI alternative will:

- Enhance public safety
- Save VDOT construction dollars
- Reduce construction duration
- Eliminate two total parcel takes
- Eliminate future maintenance of a flyover bridge
- Improve overall traffic operations
- Reduce VDOT's Right of Way costs (saving the Commonwealth approximately \$450,000.00)

In developing the DDI alternative further, we will revisit the Public Hearing process and modify the IMR for ultimate Design Approval from VDOT and FHWA, as accomplished in the LANE I-581/Valley View Boulevard (DDI) project.

4.3.1 CONCEPTUAL ROADWAY PLANS

As described above, the LANE Team’s unique, innovative solution to this project incorporates one of the latest design innovations being implemented – the DDI. Design and construction of DDIs has primarily been done in the Midwest with some recent ventures in Virginia, such as the I-581/Valley View Boulevard Design-Build project being managed and constructed by LANE.

In order to fully understand our design concept, we reference our exhibits/graphics at various points in our proposal to provide the reviewers with a graphical reference of the narratives that follow. In addition to those elements requested in the RFP, we direct the reviewers to our Operational Analysis, which analyzes the DDI in accordance with the requirements of the LANE Team’s approved Proprietary Meeting Minutes.

Based on AASHTO’s A Policy on Geometric Design of Highways and Streets (2011), (Green Book) ramp terminals are characterized as either turning movements or turning roadways.

The turning movements (Spurs A1, B1, D2 and Ramp E – left turn movements) are designed for low speeds (min. 10 mph) for a typical vehicle and capable of accommodating a WB-62. The superelevations and transitions are designed accordingly. **Table 4.3.1** identifies achieved design speeds of our innovative DDI concept.

The turning roadways (Spurs A2, B2, B3, C1 and D1 – right turn movements) are designed to a higher standard than turning movements. AASHTO identifies that a speed reduction of 10 to 20 mph less than the diverging roadway is acceptable. Our design approach was to maintain a minimum 20 mph design speed using TC-5.11R and a maximum superelevation of 8%. Achieved design speeds for these movements are also shown in **Table 4.3.1**.

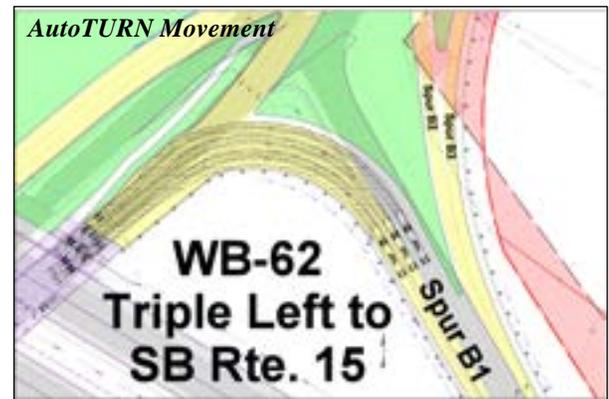


Table 4.3.1. Roadway Geometry

Roadway	Geometric Design Standard	Design Speed (mph)	Design Speed (mph) Achieved	Number and Width of Lanes	Widths of Paved Shoulders or Curb & Gutter Type	Width of Shared Use Paths
I-66	GS-5 (TC-5.11R)	70	70	6-12' *	12' Shoulder	N/A
Route 15	GS-5 (TC-5.11U)	40	40+	6-12' **	CG-6	10' SUP
Route 55	GS-6 (TC-5.11U)	30	30+	4-12' *	CG-6	8' SUP, 5' Sidewalk
Service Road	GS-8 (TC-5.11ULS)	20	20	2-12' *	CG-6	N/A
Ramp A	GS-R (TC-5.11R)	50	50	2-12' *	4'(L), 8'(R)	N/A
Spur A1	Turning Movement	*	30**	1-16' **	4'(L), 8'(R)	N/A
Spur A2	Turning Roadway	*	30**	1-16' **	4'(L), 8'(R)	N/A
Ramp B	GS-R (TC-5.11R)	50	50+	2-12' *	4'(L), 8'(R)	N/A
Spur B1	Turning Movement	*	25**	3-16' **	4'(L), 8'(R)	N/A
Spur B2	Turning Roadway	*	25**	1-12' *	4'(L), 8'(R)	N/A
Spur B3	Turning Roadway	*	30**	1-16' **	4'(L), 8'(R)	N/A
Ramp C	GS-R (TC-5.11R)	50	50+	2-12' *	4'(L), 8'(R)	N/A
Ramp E	GS-R (TC-5.11R)	35	35***	2-16' **	4'(L), 8'(R)	N/A
Spur C1	Turning Roadway	*	30+	1-16' *	4'(L), 8'(R)	N/A
Ramp D	GS-R (TC-5.11R)	50	50+	2-12' *	4'(L), 8'(R)	N/A
Spur D1	Turning Roadway	*	20**	1-16' **	4'(L), 8'(R)	N/A
Spur D2	Turning Movement	*	30**	1-16' **	4'(L), 8'(R)	N/A

NOTE: In accordance with the ROADWAY INVENTORY AND MAJOR DESIGN CRITERIA table (Attachment 2.2 of the RFP), Ramp design speed may be reduced to 30 mph where the ramps connect to Route 15. This criterion applied to the RFP design affects Ramp C and Ramp E. All other Ramp connections are either “turning roadways” or “turning movements” as previously defined. As a result, our design has applied this criterion to the same movements as the RFP design.

- * Movement not specifically shown in RFP Design. RFP Design meets 10-20 mph for turning movements/roadways.
- ** Exceeds RFP design.
- *** Ramp E is designed to 30 mph as it departs from Route 15 as described above. It merges with Ramp C approximately 460’ after departure, at which time it meets Ramp C’s design speed of 50 mph.

Volume II of our Technical Proposal contains the 11”x17” graphics that illustrate our Conceptual Project Plans. To further explain our concept and each benefit to the Project, we have provided a narrative addressing each required element (Items “a” through “i”) in the RFP.

(a) General Geometry

Table 4.3.1 above summarizes the pertinent geometric features for each roadway. Of particular note are the ramp and spur designations provided. The ramp designs strictly follow the design criteria table in the RFP. The spurs identify the “turning movements” and “turning roadways” associated with the ramps which mirror the diamond interchange right and left turn movements. The exception to this approach is where the design criteria table notes that ramp speeds may be reduced where the ramp connects to Route 15. To appropriately compare our alternative with the RFP design, this speed criterion was specifically applied to Ramp C (Spur C1) and Ramp E. In all cases, the ramps and spurs are sufficient to handle WB-62 vehicles.

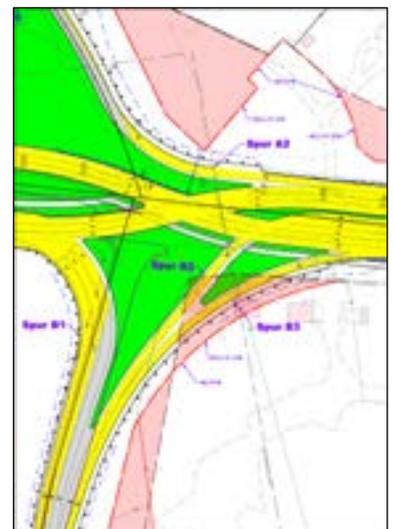
(b) Horizontal Alignments

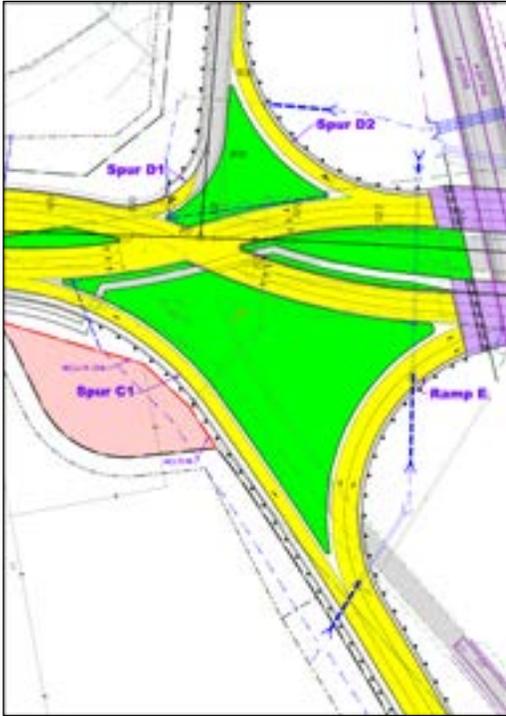
I-66. In developing our DDI alternative, we endeavored to utilize as much of the existing I-66 roadway and proposed roadway widening provided under the I-66 Widening Design-Build project. As a result, I-66 will not be significantly impacted. In fact, the only construction along I-66 will occur at the Ramp C connection where we will reconstruct the gore in its entirety. The gores at the other three ramp ties to I-66 will remain as constructed under the I-66 Widening Design-Build project.

Route 15. Implementation of our Team’s DDI alternative allows for all requisite roadway features while maximizing reuse of the existing roadway during TMP and final construction phasing scenarios. Our alignment more closely follows the existing alignment along Route 15 and replaces the two existing bridges over I-66 as required.

Ramp A and Spurs A1 & A2. The RFP design for Ramp A provided low speed (10 to 20 mph) movements from Route 15 to westbound I-66. Our design provides higher, free flowing speeds (30 mph) through the turning area of the ramp without the conflicts associated with crossing left turns. The actual ramp design/construction follows the existing alignment and meets 50 mph. **Volume II, Pages II-10 and II-12** clearly depict the layout of the ramp and spur alignments.

Ramp B and Spurs B1, B2 & B3. Ramp B provides distribution of westbound I-66 traffic to Route 15 – north and south. The proposed alignment of Ramp B utilizes the proposed design/construction plans of the I-66 Widening Design-Build project. To provide the required three left turn lanes, a free flowing right turn lane and a segregated right turn lane for vehicles wishing to turn left at Heathcote Boulevard, our design widens the existing ramp to be constructed under the I-66 Widening Design-Build project accepted by VDOT and creates





higher speed connections to Route 15 (25 to 30 mph). The RFP design provides for ramp termini turning movements – 15 to 20 mph. **Volume II, Pages II-10 and II-13** clearly depict the layout of the ramp and spur alignments.

Ramps C & E and Spur C1. North/south traffic along Route 15 will utilize Ramp C to go eastbound on I-66 toward Washington, D.C. This southeast quadrant of the interchange provides the greatest improvement to the interchange when comparing the RFP design to the LANE Team DDI alternative. Our design delivers added capacity by providing a second lane on Ramp E compared to the single lane in the RFP design. The design of Ramp C further exceeds all requisite criteria and can be constructed (along with the majority of Ramp E and Spur C1) outside of traffic. **Volume II, Pages II-10 and II-13** clearly depict the layout of the ramps and spur alignment.

Ramp D and Spurs D1 & D2. Ramp D provides access to Route 15 from I-66 eastbound while utilizing the existing ramp alignment. The spurs provide ramp termini turning movements that exceed allowable turning movement speeds defined and characterized in the AASHTO Green Book.

(c) Maximum Grades

The grades for Route 15 and Route 55 are shown in profile view in **Volume II, Pages II-6, II-8, II-9, II-11, and II-15. Table 4.3.2** (at right) shows the maximum grade for all roadways, ramps, and connections.

(d) Typical Sections

The pertinent typical sections to build each roadway, ramp, and connection are contained in **Volume II on Pages II-4 and II-5**. The typical sections include roadway widths, shared use paths, and retaining walls. Additionally, the bridge concept plans (**Volume II, Pages II-16 through II-19**) show the typical (transverse) section (**Page II-17**) of the bridges on Route 15 over I-66.

Table 4.3.2. Maximum Roadway Grades

Roadway	Maximum Grade		
	(RFP Plan)	(LANE Concept Plan)	(Allowable)
I-66	N/A	N/A	3%
Route 15	4.10%	4.10%	8%
VA Route 55	Match Existing	Match Existing	9%
Service Road	3.00%	3.00%	11%
Ramp A	4.00%	4.00%	3–5%
Spur A1	N/A	4%	5–7%
Spur A2	N/A	4%	5–7%
Ramp B	2.00%	3.20%	3–5%
Spur B1	N/A	5%	5–7%
Spur B2	N/A	5%	5–7%
Spur B3	N/A	5%	5–7%
Ramp C	6%	5%	3–5%
Ramp E	6%	4%	4–6%
Spur C1	N/A	4%	5–7%
Ramp D	3%	3%	3–5%
Spur D1	N/A	4%	6–8%
Spur D2	N/A	4%	5–7%

(e) Conceptual Hydraulic and Stormwater Management Design (Storm Drainage)

Watersheds. The project limits are located in the Bull Run-Catlett’s Branch Watershed (PL32) and the Little Bull Run Watershed (PL43) as designated by The Virginia Department of Conservation and Recreation Hydrologic Unit Code System (HUC). PL32 flows into the North Fork and Lake Manassas which outfalls into Broad Run and ultimately the Occoquan River. PL43 flows north into Bull Run and ultimately outfalls into the Occoquan River as well.

According to FEMA mapping, the project limits and subsheds located on this project are not located within a FEMA designated 100-year floodplain limit.

Hydrologic and Hydraulic Analysis. According to VDOT criteria, Hydrologic and Hydraulic Analysis will be required to model existing and proposed conditions of the individual subsheds. Elements requiring consideration include:

- Drainage Analysis of existing and proposed culverts and storm drain systems
- Stormwater Management (SWM)
- Adequate Outfall analysis
- Erosion and Sedimentation Control design
- A Stormwater Pollution Prevention Plan and Virginia Stormwater Management Program permit

Culverts and Roadway Drainage. Roadway drainage design will include the design and construction of culverts, open channels, storm sewer systems, underdrains, and bridge deck drainage and structures. Existing culverts will be inspected and evaluated for reuse, subject to the approval of VDOT and in accordance with VDOT's guidelines. Existing culverts and storm drain systems not being reused are required to be abandoned in-place or removed as necessary.

Adequate Outfall. The project includes 8 outfalls, which are required to meet adequate outfall in accordance with MS-19 requirements of the Virginia Department of Conservation and Recreation. Adequacy of downstream channels includes meeting the minimum required 2-year storm erosive velocity based on existing soil types and meeting capacity for the 10-year storm event within the bed and banks of the existing channel.

As required by MS-19, if a channel is proven inadequate, then additional measures are necessary to improve the post-developed conditions such that the receiving downstream channels become adequate by definition. Methods of meeting channel adequacy include providing SWM facilities to control the post-developed drainage to the pre-developed rate for the 2-year and 10-year storm events. Also, channel improvements to a point downstream where the Project Area is 1% of the total drainage shed, or to a point where the erosive velocities and the channel capacity are satisfied. Our design will accommodate the construction of two SWM facilities, which will attenuate the 2-year and 10-year storms to provide adequate outfall for the downstream receiving channels to the extent practical so that no additional construction or channel improvements will be necessary. To the extent practical, roadside ditches will convey and divert drainage to the SWM facilities so that the requirements of MS-19 are met for all receiving channels.

Permit Sketches. Wetland delineation and permitting by the Design-Build Team for this project is required. All disturbances that will occur as a result of this project that require permitting and mitigation are the responsibility of the Team.

Temporary Drainage (TMP). TMP drainage will be provided for all construction phases. SWM facilities will be utilized as sediment basins where feasible during the construction phase. The erosion control plans, Phases 1 and 2, will address the temporary drainage conditions.

Stormwater Management Facilities. Runoff water quality and quantity will be addressed by two new SWM ponds designed based upon new project impervious area. Water quality, per the RFP, will be in accordance with the most current VDOT IIM-LD-195. Pond #1 is located in the Bull Run Watershed north of I-66 and west of Route 15. In accordance with the RFP, this facility is required to remove 7.16 lbs/year of phosphorus. This facility can achieve this requirement designed as a Retention Basin III Wet Pond Facility with aquatic benches and 4*WQV (Required water quality volume). Analysis indicates 8.54 acres of total drainage and 5.37 acres of impervious area going to this facility will achieve a 7.80 lbs/year removal rate. Pond #2 is located in the Broad Run Watershed south of Route 55 and west of Route 15. In accordance with the RFP, this facility is required to remove 3.67 lbs/year phosphorus removal rate. Analysis of the drainage shed indicates that 12.41 acres of total area and 4.00 acres of impervious area drains to this facility. Pond 2 can be designed

as a Retention Basin III Wet Pond Facility with an aquatic bench and achieve a 6.25 lbs/yr removal rate or as an Enhanced Extended Detention Dry Pond and achieve a 4.81 lbs/yr removal rate. Stormwater quantity will control the 2-year and 10-year storms, as well as assist in attenuating these storms to the pre-developed rate to provide adequate outfall for the downstream receiving channels.

In accordance with the RFP, all existing pipes within the project limits that are a functional element of our design have been assumed to be unserviceable and replacement systems have been designed. The drainage design is provided through a combination of open and closed systems. In developing the drainage concept, our team has economized the layout and constructability by aligning the design to our MOT approach.

Stormwater Management Design. To address stormwater management needs (quantity and quality), two facilities will be designed and constructed with our DDI alternative interchange design. These facilities are described based on their functionality and use in **Table 4.3.3**.

SWMF #1–Parcel 01 (Route 15 Station 506+00 LT)	Designed as an extended detention facility to provide both water quality and quantity to meet VDOT and DEQ criteria.
SWMF #2–Existing ROW (Ramp B Station 710+00 RT)	Will provide quantity management in order to ensure adequate outfall and quality management as required.

(g) Proposed Utility Impacts

Although the impacts to utilities are not projected to be significant with respect to the Route 15/I-66 Interchange, there will be a substantial amount of impacts along Route 55 and Route 15 due to the additional improvements beyond the interchange. Following the notice-to-proceed, we will initiate contact with all utility owners, perform utility designations and locations to verify the location of existing utilities, distribute plans and hold a Utility Field Inspection Meeting. We will obtain letters of no-conflict from all owners within the project area who do not require relocation. For any utilities that require relocation, conflict evaluations will be performed, cost responsibility determinations made using VDOT form UT-9, and utility plan and estimates will be reviewed and ultimately approved. Relocations will be monitored during construction, as well. All of these activities will be accommodated within the overall project schedule and performed according to the policies and procedures in the VDOT Utility Manual.

Our Team understands that there are certain caveats to this project that aren't normally encountered in roadway projects, and we are specially equipped to handle any problems that may arise from these special circumstances. For instance, utilities falling within the Town of Haymarket Town Limits will be subject to 100% reimbursement according to Section 33.1-55 of the Code of Virginia, with the exception of Cable Television facilities. This gives the determination of prorates for each of the utilities requiring relocations a special challenge. Our Team, however has already produced UT-9 forms and cost responsibility prorates have been determined according to this statute, allowing us a head start on utility relocations for this project. This, along with other special circumstances that come with an interchange project such as this one, or VDOT roadway projects in general, always provide challenges that our team has the unique experience and knowledge to overcome.

The list of impacted utilities include: PWCSA (water and sewer), DVP, Verizon (various variants – i.e., Verizon Virginia, GTE, and MCI Business), Columbia Gas and Comcast. Additional utility impacts may be possible and will be identified during the re-designation of the project. The keys to success will be identification (designation) and communication. To that end, the lines of communication between our utility coordination team and the utilities involved in this project will be open and free-flowing from start to finish. Utility meetings will be scheduled in advance throughout the project schedule, including the Utility Field Inspection, Pre-UFIs meetings, and countless additional one-on-one meetings required to ensure schedule impacts are minimized.

(h) Sound Barrier Wall Locations

In accordance with the RFP, our design includes a sound wall, found to be reasonable and feasible in the noise evaluation included in the RFP Information Package, along I-66 and Ramp B. After award, we will prepare a final noise analysis in accordance with current criteria utilizing 2036 traffic forecasts. We recognize that measures found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis or vice versa. A description of the sound wall location is included in **Table 4.3.4**.

Table 4.3.4. Noise Barrier Walls

Noise Wall Location	Description
I-66 WB Station 130+10 LT to Station 136+10 LT (at the ROW Line)	Post and Panel design (no retaining wall component) The proposed sound wall can remain entirely within existing ROW due to ramp redesigns to significantly reduce the ROW impacts.

(i) Other Key Project Features

Interchange Modification Report (IMR). The DDI alternative proposes different roadway configurations compared to the Preferred Build alternative in the previously approved IMR, “I-66/Route 15 Interchange Reconstruction Interchange Modification Report,” prepared by HNTB Corporation and dated June 2013. Per *Section 2.10* of FHWA IJR/IMR guideline¹, the project team will prepare and submit an IMR re-evaluation report for FHWA review and approval. Additionally, we will hold a supplemental Public Hearing to present this new concept to the public so that they can make comments and gain an understanding of the unique nature in which the design handles traffic.

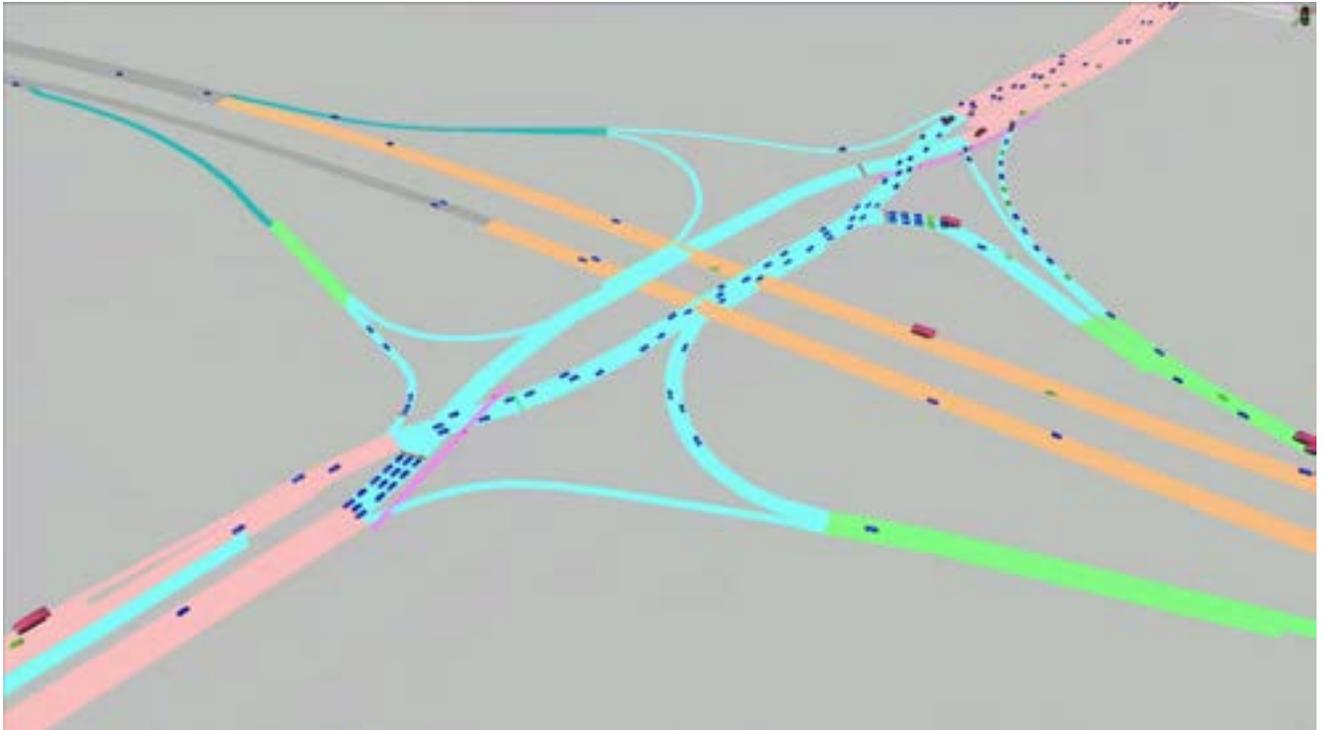
Upon completion of and feedback from the Public Hearing, the project team will use the previous IMR as a base to develop the re-evaluation report with the following modifications:

1. **Executive Summary:** this chapter will be updated to summarize analysis results for the DDI alternative.
2. **Purpose and Need:** no update is needed in this chapter.
3. **Background:** the section on support and commitment from VDOT and local jurisdictions will be updated with the additional efforts undertaken during the re-evaluation development process. All other sections will remain unchanged.
4. **Study Area:** no update is needed in this chapter.
5. **Existing Conditions:** no change is needed in this chapter.
6. **Alternatives Considered:**
 - a) The descriptions of No Build alternative and Transportation System Management (TSM) options will remain unchanged.
 - b) The build alternative development process will be amended with the efforts employed in developing the DDI alternative.
 - c) The screening criteria and evaluation matrix will include the DDI alternative.
 - d) The Preferred Build Alternative section will be revised with a detailed description of the DDI alternative.
7. **Roadway Geometry:**
 - a) The Design Criteria and Design Constraints section will remain the same.
 - b) The Geometric Configuration section will add the functional diagram and typical sections of the DDI alternative.

¹ Interstate System Access Information Guide, Federal Highway Administration, August 2010.

- c) The DDI alternative does not anticipate additional Design Exceptions and Design Waivers; therefore, this section will remain the same except for minor language updates.
- d) The Proposed Limited Access Line will be adjusted to provide an overall reduction of acquisition for the project.
- e) New conceptual signing and pavement marking plans will be provided for the DDI alternative, and the key design considerations will be described in the Interchange Signage and Striping section.

8. Traffic Volumes: this section will remain unchanged. The traffic volumes were recently approved by FHWA and are valid to be used for the re-evaluation analysis.



9. Traffic Operational Analysis:

- a) The results of Existing and No Build scenarios will remain unchanged. All other sections in this chapter will be updated with the traffic analysis results of the DDI alternative recently completed by the project team, using the FHWA approved traffic volumes and methodology.
- b) In a separate technical memorandum “*Traffic Analysis Results for the I-66 at Route 15 Interchange*”, submitted along with this proposal per the approved Proprietary Meeting Minutes, the project team presents the proposed traffic signal timings and traffic operational analysis results of the DDI alternative. The results indicate that compared to the Preferred Alternative in the previous IMR, the DDI alternative shows the following improvements:
 - i. Reduces traffic delays on many movements at the signalized intersections on Route 15 and eliminate all LOS Fs during both AM and PM peak hours for the design year
 - ii. Improves traffic flow on many segments of I-66 at the interchange to LOS A or B during AM and PM peak hours in the design year

The above updated information will be presented in the re-evaluation report. Exhibits and figures will be provided to graphically illustrate the proposed signal phasing and timing, as well as the freeway segments with corresponding analysis results. In addition, tables will present direct side-by-side comparisons of the DDI results versus the previous Preferred Alternative.

10. Safety Analysis:

- a) The crash analysis will remain unchanged for the existing condition and No-Build scenarios.
- b) Due to reduction in conflict points at the signalized intersections and smoother traffic flow on I-66, the DDI alternative is expected to improve traffic safety compared to the Preferred Alternative. The re-evaluation report will update the Safety Impacts analysis and results for the Build Alternative section accordingly, following the same methodology in the previous IMR.

11. Land Use Compatibility and Environmental Compliance: the DDI alternative will not cause additional impacts to land use and environment, compared to the Preferred Alternative. Therefore, these two chapters will not require additional analysis other than minor language updates.

Based on the significant efforts to date, this process will move swiftly. We believe that the public and other stakeholders will embrace this alternative and that the IMR will be approved without concern.

Summary

The LANE Team’s unique solution to implement a Diverging Diamond Interchange (DDI) was developed to provide a design that exceeded the RFP design while reducing costs, improving overall operations, and enhancing public safety. The end result is shown in Volume II; the benefits of which are summarized below:

Table 4.3.5. Design Optimizations

Design Issue	The LANE Team Solution	Benefit
Intersection conflict points and multi-phase signal timing	Design and construct a DDI – cost savings, enhanced overall capacity, and safety for VDOT and the public.	The DDI eliminates left turn conflict points by making left turns free flowing movements. The DDI simplifies signal phasing and increases timing for the movements that need it the most.
Low speed turning movements at Ramps A, B, and D (10 to 20 mph)	Provide higher speed turning movements which more closely emulate free flowing movements	The quicker vehicles can clear an intersection, the safer and more efficient the intersection operates.
Right of Way impacts	Implementation of the DDI allows for a smaller project footprint	Ramp A – Parcel 009 impacts can be reduced (savings for VDOT) Ramp B – does not need to be reconstructed. It can be widened to significantly reduce impacts (2 total parcel takes eliminated – savings for VDOT). Avoids impacts to Robinson’s Paradise subdivision plan with Prince William County. Ramp C – Parcel 007 impacts can be reduced due to at-grade pedestrian crossing versus the RFP design showing a pedestrian tunnel (savings for VDOT)
Ramp B right turn weaving conflict on Route 15	Added safety by separating vehicles turning left at Heathcote Boulevard from other traffic movements	A dedicated lane (Spur B2) for vehicles turning left at Heathcote Boulevard – signal controlled A dedicated lane (Spur B3) for vehicles turning right at Heathcote Boulevard or to go north on Route 15 – yield controlled – more efficient
Inefficient use of work being performed under the Interstate 66 Widening contract	Adjusted our design to align to the improvements being done by the I-66 Widening contractor	Ramp A construction will not impact/affect the ramp gore or acceleration lane being constructed as part of the I-66 Widening project. Ramp B can be fully integrated into our design by widening versus total reconstruction Ramp C connection to I-66 will utilize the full depth shoulder to be constructed as part of the I-66 Widening project and add a shoulder to the outside Ramp D construction can begin beyond the gore area based on improvements being provided by the I-66 Widening project.

The Public Hearing identified a viewshed concern with the selected alternative.	The DDI alternative insignificantly adjusts the vertical profile to meet clearance over I-66 and eliminates the need for a third level (flyover Ramp E) as shown in the RFP design.	Addresses concerns raised by the public by eliminating the 3 rd level. The DDI alternative provides additional opportunities for landscaping and visual enhancements to address aesthetic concerns of the public.
Construction of the RFP Design Ramp E (flyover) creates MOT/ Constructability issues	By eliminating the flyover, we eliminate 17' of fill that would need to be placed on top of existing Ramp C. Under the RFP design, a series of detours and temporary sheet pile or MSE walls would have been required to construct under traffic at a premium cost.	Reduces cost Safer for the public and the contractor Reduces the amount of fill required for the project and better utilizes the facilities currently in place

4.3.2 CONCEPTUAL STRUCTURAL PLANS

The LANE Team is proposing to provide bridges that will meet the RFP requirements for this Design-Build contract with minimum cost to VDOT. The LANE Team is proposing to completely remove and replace the existing Route 15 over I-66 bridges as described in the following sections.

Existing Bridges

The existing Route 15 bridges over I-66 consist of twin parallel bridges approximately 26' apart. Both are roughly 277' long and 42' wide (out-to-out). Each carries two traffic lanes in one direction (NB and SB). The horizontal alignments are on tangent and vertical alignments on slope.

They are two-span, continuous, haunched steel plate girder structures with concrete deck. The skewed substructures consist of multi-column piers and stub abutments parallel to I-66.

Proposed Bridges

See Volume II: Technical Proposal Exhibits for preliminary structural plans and elevations for the proposed replacement bridges.

Structure. The two proposed Route 15 bridges over I-66 are two-span, continuous curved steel plate girder structures with composite concrete decks. The substructures consist of multi-column piers and Virginia Alternate Abutments. U-back wingwalls retain fill behind the abutments. The substructure units are skewed following the skew of the existing structures (and I-66). A MSE wall, also parallel to I-66, is installed in front of each abutment, in order to reduce the height of the abutment walls and to minimize cost. It also provides an appearance consistent with the other nearby bridges over I-66 currently being replaced. The Virginia Alternate Abutment is chosen as outlined in the VDOT Manual of the Structure and Bridge Division, Volume V – Part 2 Chapter 17, to meet the jointless bridge requirement. The utilization of the Virginia Alternate Abutment is required due to the use of curved girders and is consistent with the abutment type as shown in the RFP plans for the curved ramp bridges.

Bridge Elevation and Length. The proposed bridges provide the same horizontal clearance as shown on the RFP plans for I-66. The proposed profile for Route 15 is higher than the existing profile to meet the minimum vertical clearance requirements of 16'-6" for I-66. The vertical and horizontal clearances will be provided during construction and conform to the requirements outlined in Chapter 6 of VDOT Manual of the Structure and Bridge Division, Volume V.

Bridge Transverse Section and Width. The proposed NB (west) bridge is generally 54'-0" wide carrying four lanes of traffic and varies to 78' at Abutment B to accommodate Spur A1. The SB (east) bridge is 69'-0" wide carrying four lanes of traffic and a Shared Use Path (SUP) and varies to 89' at Abutment A to accommodate Ramp E. The SUP is 14' wide and separated from the roadway by BR27C railing. The bridges utilize curved steel girders with uniform spacing between girders, which varies along the bridge.

All railings are BR27C (12" wide for aesthetic treatments) with the steel railings galvanized and painted. Bridge railings include blisters and conduits to accommodate roadway lighting. A pedestrian fence (Ornamental Wire Fence) is used on the outside of the SUP. The guardrail from the approach roadway will be attached to the BR27C terminal walls.

Structural steel plate girders, Grade 50W, are proposed for both bridges due to economy, lower girder depth, and smooth transition of the variable deck width.

Aesthetics. All exposed, vertical faces of concrete bridge elements will receive Architectural Treatments in accordance with the Special Provision for Architectural Finish, Concrete Form Liners and Color Stain Coating. This will include both faces of railings, terminal walls, piers and exterior faces of wingwalls and earth retaining structures. The pattern, to be submitted and approved by VDOT, will be Beverly Mill dry stack (or equivalent).

The exterior face of steel girders will be painted with a color to ensure the structure blends into the environment.

It is important to note that the proposed piers and abutments with MSE walls in front provide a uniform look along I-66, which is similar and consistent with the other nearby bridges being replaced.

Durability. Bridge type and layout is based on reducing long-term maintenance costs: (1) continuous span units and jointless bridge design are utilized, (2) the proposed structures will utilize low permeability concrete in accordance with the Special Provision for Low Permeability Concretes for Design-Build Projects, (3) the structures will utilize Corrosion Resistant Reinforcing Steel, where applicable, in accordance with VDOT Standards, and (4) the steel girders will utilize weathering steel with exterior faces and ends painted to provide durability and minimize future maintenance cost.

Drainage. Bridge deck drainage will utilize, to the extent possible, pipes and downspouts that are hidden to avoid interference with aesthetics of the bridge. They will be pitched at the minimum (4%) or greater slope to achieve self-cleansing velocities. Galvanized steel hardware components will be used.

Proposed Foundations

It is anticipated that the proposed bridge foundations will have piers supported on spread footings and abutments supported by H-piles. The abutments will likely be supported on two rows of H-piles to minimize the height of abutment stem. However, the foundation will be evaluated and designed based on the final geotechnical information and in conformance with AASHTO and VDOT specifications and meet the additional Foundation Criteria for settlements.

4.4 Project Approach



4.4 | PROJECT APPROACH

LANE is one of the nation's leading contractors—ranked 1st among the 'Top Highway Contractors' and 6th among the 'Top Transportation Contractors' by *Engineering News-Record* for 2013. This level of success has been achieved by paying specific attention to detail in controlling and managing our work. LANE's history of successful projects, including local Design-Build projects and projects of similar size and complexity (i.e., I-581/Valley View Boulevard Interchange Design-Build), further demonstrates our ability to undertake this I-66/Route 15 Interchange Reconstruction project for VDOT.

The LANE Team's approach to project management for design and construction minimizes the risk of delays and maximizes safety through:

- Assignment of work tasks to qualified personnel
- Recording and retention of all project documents to ensure that design and construction work is performed according to sound engineering practices, contractual agreements, and client directions
- Periodic review of work in progress to identify and resolve deficiencies affecting the quality of work
- Monitoring and control of all work activities
- Scheduling and identification of long lead time/critical path items
- Sequencing of work to reduce the number of lane closures
- Coordination of multiple crews
- Backup/contingency plans
- Managing material and equipment procurement
- Clear and continuous communication

Our experience and effective project management will successfully coordinate the many facets of the design and construction of this project to minimize impacts to the traveling public. Design associated risks will be mitigated by inter-disciplinary constructability reviews, over-the-shoulder reviews with VDOT, and partnering with stakeholders. Risks during construction will be mitigated by committing the resources necessary to meet or exceed the required schedule, implementing an efficient sequence of construction, and executing a transportation management plan that will minimize incidents and maximize public awareness.

4.4.1 PROJECT COORDINATION AND PUBLIC OUTREACH

Our Public Relations Manager, Mr. Chris Reed, has extensive experience in both the I-66 and Route 15 corridors and will serve as liaison with VDOT's public affairs department, reporting directly to the Design-Build Project Manager. Because the I-66/Route 15 Interchange Reconstruction project has potential to impact a broad range of stakeholders, our communications plan will utilize multiple approaches to reach each of these stakeholders individually and as a group throughout the lifecycle of the project. We anticipate that our communications plan and approach will continually evolve, requiring Mr. Reed's regular attendance at Design and Construction progress meetings. Our Team's familiarity with each of the primary and secondary stakeholders will be pivotal in keeping the necessary parties abreast of the project. VDOT, Prince William County, Town of Haymarket, utility owners, community associations, churches, business owners, police, fire and rescue, Heathcote Health Center, school bus transportation, transit operators, and adjacent VDOT project contractors (I-66 Widening, I-66 ATM, Route 29/Linton Hall Road Interchange, and Town of Haymarket Pedestrian Connections Project) will all be an integral part of our coordination and outreach process.

The I-495 Express Lanes project team received the VDOT and Megaprojects, Commonwealth of Virginia Award of Excellence, Integrated Communications award for their continuous efforts to ensure the public was involved and informed throughout the duration of the project.

Approach to ensure stakeholder interests are identified and accommodated. The LANE Team believes that an effective public outreach process must be integrated into both design and construction. Our approach to the project will encourage multiple communication channels that both push information out to the public and pull it in to find news and information. This kind of open and transparent process that deals honestly with VDOT and stakeholders will help to create community buy-in on project timetables and milestones. This will help ease concerns and avoid potential issues regarding lane closures, detours and impacts to the traveling public and any affected property owners. The project team will have professional communications staff available and on-call to respond quickly and effectively to any issues that arise. We will use both proactive and reactive communications to address safety and environmental issues, while seeking to enhance mobility, even during peak construction periods.

Members of the LANE Team have proven experience in coordination and outreach with identical stakeholders within the Haymarket community. Effective coordination and communication with adjacent developments, parks, schools, and government agencies were successfully led by our Team’s lead designer on the recently completed Route 15 Prince William County PPTA project.

Partnering. The LANE Team will facilitate communications amongst project stakeholders, of which the major ones are identified in the Stakeholder Communication table below, by engaging in a partnering meeting within two months of NTP. This initial partnering meeting will establish an understanding of individual stakeholder expectations to arrive at common goals surrounding the project schedule, issue resolution, the communication plan, and public outreach. Subsequent meetings will be held as needed to discuss major changes in maintenance of traffic, lane closures, and detours. Additionally, the LANE Team will meet and partner with contractors of other active construction projects to facilitate achievement of the I-66 construction program milestones.



Meeting and partnering with the adjacent contractors is the first step. The depth to which we will coordinate will determine the success of each of our projects. A critical method to determine the effects of one project on another and the traveling public as a whole will be to establish a master schedule. During the initial partnering meetings, we will establish a protocol for each contractor to submit to the LANE Team their TMP/MOT schedule in P6 format. Each of these schedules can then be linked into a master schedule for the region. Bi-weekly updates will ensure that the information is up to date and useful. With each update, our team will evaluate if simultaneous operations will cause added stress to the roadway network or if one contractor operation may conflict with the operations of another.

Development of communications plan. The project specific communications plan will be refined with input from the Design-Build Project Manager, his construction and design project staff and VDOT. To ensure success, we will tailor our message and our delivery method based on stakeholder needs.

Stakeholder identification. Working with VDOT and the project management team, we will highlight audiences within the project area and use digital technologies to identify online influencers. Compiling a comprehensive list of audiences at the outset of the project will allow us to engage stakeholders immediately upon project kick-off.

Stakeholder Communication										
Stakeholders	Frequency	Regular Reporting/ Meetings	Citizen Information Meetings	Newsletter	Project Website	Phone Hotline	Social Media	Variable Message Signs	Partnering	Discipline-Specific Meetings
VDOT/FHWA	As Needed	●							●	●
Traveling Public (including School Bus Transportation and Transit Operators)	Daily		●	●	●	●	●	●		
VDOT TOC	Weekly	●							●	●
Prince William County	Weekly	●	●	●	●				●	
Town of Haymarket	Weekly	●	●	●	●				●	
VDOT Public Affairs	Monthly	●	●	●	●				●	
VDOT Maintenance Snow Removal	As Needed								●	●
Adjacent Property Owners, Churches, Community Associations, Business Owners	As Needed		●	●	●	●	●			
Police/Fire & Rescue	As Needed		●	●	●	●	●		●	●
Utilities	As Needed								●	●
Environmental Permit Agencies	As Needed								●	●
Active Projects in Vicinity	As Needed								●	●

Informal meetings. These meetings will be attended by key team members and serve as a consistent method of engaging with stakeholders. All meetings will feature detailed materials and information about the project, and we will offer updates from each of these meetings online for community members and project stakeholders not able to physically attend the meetings. Within the first three months from the NTP we will schedule a Citizen Information Meeting to present our proposed design concepts, explain the construction sequencing, and discuss the project schedule. We envision this initial meeting to be held in a “Town Hall” format allowing for “two-way communications” that would include a presentation from our team and an

opportunity for participants to ask questions. At this meeting we will also introduce our communication plan, project website, social media, and phone hotline and register stakeholders for e-mail and/or postal newsletters.

Project news and updates. Stakeholders will be able to maintain contact with the project team members and keep up with project developments through a variety of communications channels, which may include: project website, Project Manager blog, social media (Twitter, Facebook groups, engagement of local community members’ blogs), project phone hotline, and email newsletters.

Regular reporting to VDOT on project development. Internal project communications will be consistent and thorough, and will include regular summaries provided to VDOT of all project stakeholder engagements via phone, email and digital technology, as well as written summaries of community feedback from each public meeting. In particular, Mr. Reed will provide weekly updates to VDOT’s Northern Virginia District Office of Public Affairs for posting on VDOT’s website. These updates, at a minimum, will include a project overview, plan of work for the upcoming week(s), extended schedule of anticipated activities, potential impacts to traffic on I-66 and other roadways within the project limits, current progress photos, and up to date contact information.

The LANE Team understands and appreciates the role that each stakeholder will play in the successful delivery of this project.

DDI awareness meetings. A “Project Information Campaign” will be utilized to share information with the public about the Project and will begin at NTP and extend through the life of the Project. Our campaign will include public meetings, project brochures, newsletters, and a webpage. Public meetings, held in conjunction with VDOT, may include workshops, one-on-one meetings, and progress meetings. Advanced notice will be provided about meeting times, dates, and locations and we will develop agendas and brochures depending on the type and focus of the meeting. Meeting types will include “Diverging Diamond Interchange Clinics” and “Pardon Our Dust.”

Diverging Diamond Interchange Clinics and Pardon Our Dust Meetings. One of the biggest concerns related to our outreach program is ensuring that stakeholders understand the project and can navigate through the project (during and after construction) in a safe manner. These concerns can be mitigated by educating the public on “how” to drive a DDI. As a result, our public outreach will include DDI Clinics. These clinics will educate drivers on the topics included in **Figure 4.4.1**. The goal of this program will be to remove the fear that drivers have related to their unfamiliarity with DDIs. This program will start early in the design process and progress through and be incorporated with the construction public outreach. Incorporation into our Pardon Our Dust program will allow our Team to continue to interact with the public as the construction implements the design and traffic patterns evolve. Educated drivers are safe drivers. The success of this program will minimize cost and schedule impacts associated with public safety while driving through the construction zone.

Figure 4.4.1. DDI Clinic Topics

DDI Clinics will systematically show drivers:

- How DDIs function.
- Why DDIs make signalized intersections safer.
- Which lane to be in, depending on where you want to go.
- Which signing and pavement markings to expect and what they mean.

Webpage. As a supportive means of maintaining communication, our Team will develop and update a project webpage. This webpage will post upcoming meeting dates, agendas, and meeting minutes as well as construction activity updates, upcoming lane closures, and traffic pattern changes. It is our goal to provide an interactive means of actively communicating with the public. A first step in achieving this goal will be to post a single point of contact for comments or questions during construction.

4.5 Construction of the Project



4.5 | CONSTRUCTION OF THE PROJECT

The successful delivery of any Design-Build project requires a comprehensive understanding of the integration of a good design with sound construction. When innovative solutions are introduced, it magnifies the importance of visualizing the design through each phase of construction to address the challenges that are critical to the success of the project. The LANE Team is the only competing team that has previously introduced a DDI during the pursuit of a VDOT Design-Build project and fully understands the requirements associated with a DDI and VDOT's Design-Build process. Case in point is LANE's successful pursuit of the I-581/Valley View Boulevard project. Additionally, LANE is completing the final phases of the I-85 Widening Design-Build project in Cabarrus County, North Carolina for NCDOT. This project includes the reconstruction of two conventional diamond interchanges as DDIs to provide added capacity and to meet future traffic projections/demands.

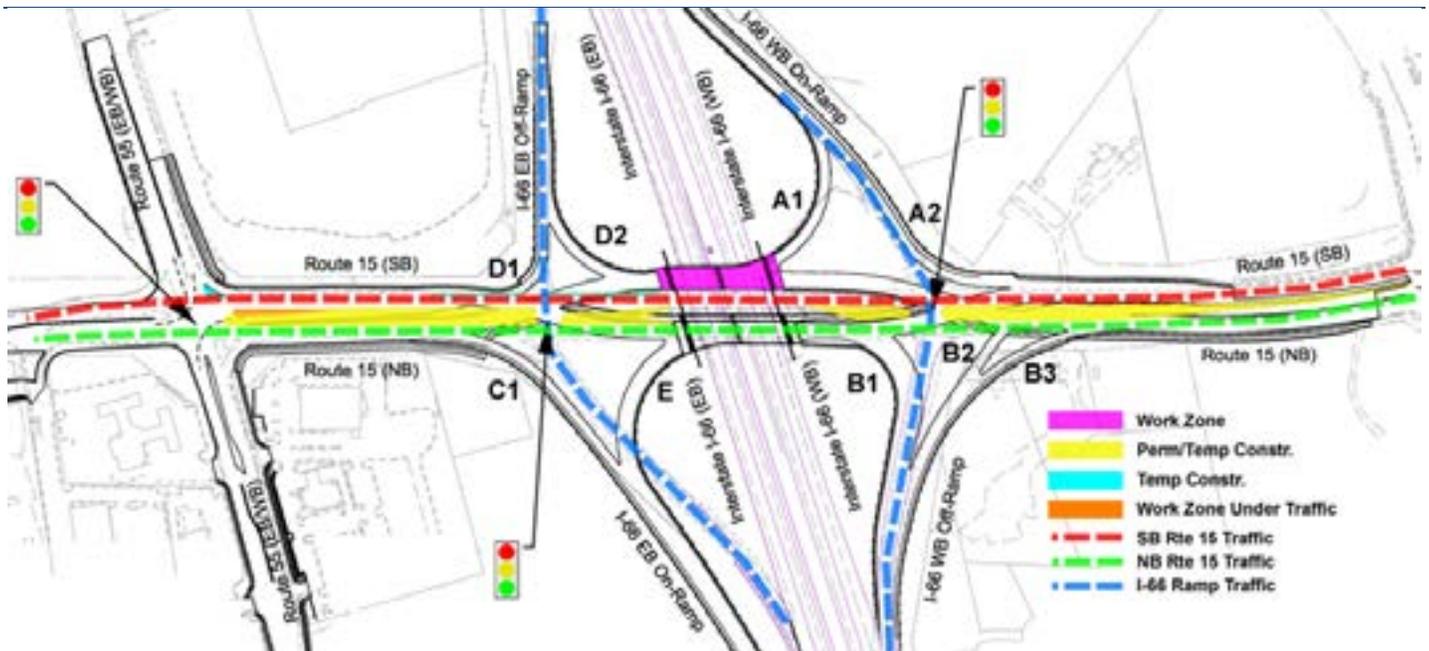


LANE's I-85 Widening Project (consists of constructing two DDIs)

4.5.1 SEQUENCE OF CONSTRUCTION

The LANE Team's sequence of construction has been developed to mitigate impacts to the traveling public, delays to construction and ultimately, facilitate final completion of the project. Some potential delays include, but not limited to: geotechnical constraints, environmental impacts, right of way acquisition, staging and storage areas, and the risk of potential impacts from other active construction projects. In developing the schedule and construction sequences, the LANE Team put public safety first and included measures to limit disruptions to vehicular traffic, including public transportation and adjacent active construction traffic. To achieve the above, we will maximize the amount of construction activities and work area size within a given phase; doing so improves construction efficiency, reduces construction costs, limits the number of traffic shifts, improves public safety, and allows for greater flexibility within phases to work around unforeseen delay issues. In addition, this sequence of construction, at a minimum, maintains the same number of traffic lanes that exist today, throughout the duration of the project. Below, each phase of construction is discussed in detail. To aide in the review of the phasing narratives, we have provided a graphic illustration of each phase extracted from our plan exhibits. Please refer to Volume II of this proposal for the full size drawings.

Phase I



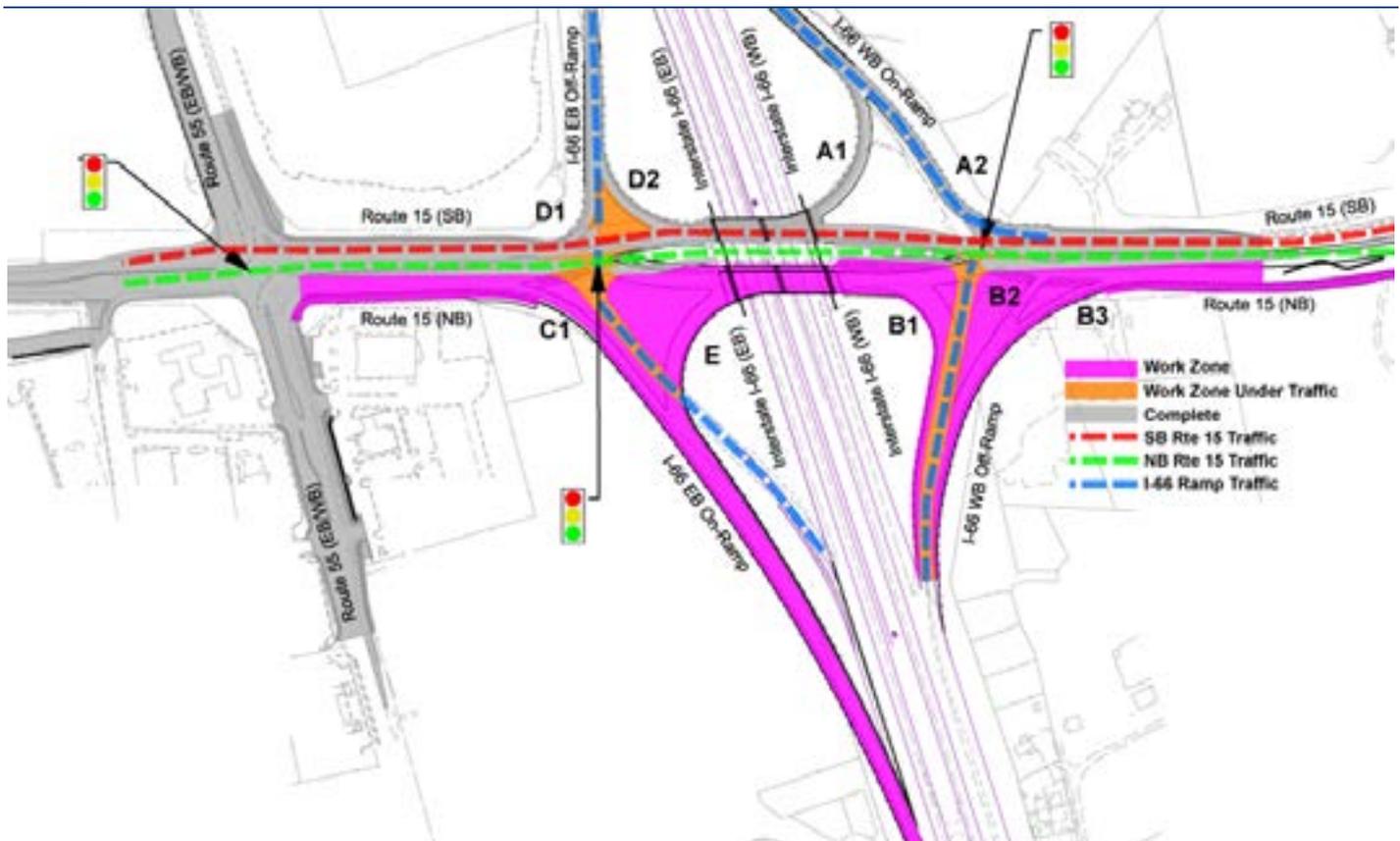
Phase I work will consist of permanent construction of new roadway in the median of existing Route 15 between the Heathcote Boulevard and Route 55 intersections, as well as beginning construction on the new Route 15 westernmost bridge of the interchange, which will carry over to Phase II. North and southbound traffic along Route 15 will be shifted to the outside of the existing pavement in order to maximize the median work-zone area. The LANE Team will construct the new pavement structure to the intermediate asphalt layer and to a grade that will allow for both north and southbound traffic flow. The new roadway constructed in the median will initially be utilized for maintenance of traffic in the follow-on phases in order to reconstruct the existing mainline, full depth pavement between stations 514+00 and 537+00.

Phase II



Phase II construction work-zones include the widening of Route 15 southbound, the off-ramps from I-66 eastbound (Ramp D, Spurs D1 & D2), the on-ramps to I-66 westbound (Ramp A, Spurs A1 & A2), widening and rehabilitation of Route 55, Parcel 2 parking lot, Service Road “A” and continuation of the western bridge work. To develop these work-zones, Route 15 southbound will be shifted onto the newly constructed pavement in the median between the Heathcote Boulevard and Route 55 intersections. Maintenance of traffic protective devices will be set up along the perimeter of the work-zone areas that require full depth construction. Areas that require traffic flow to be maintained through the work-zones will be performed via temporary lane closures, flagging operations and/or under micro-phases – shifting traffic to one side or another in a manner to minimize disruption to the traveling public. The LANE Team’s design allows for the new westernmost bridge over I-66 (ultimate Route 15 northbound direction when the DDI is complete) to be constructed in its entirety as opposed to the multi-phased RFP bridge concept. While portions of work within Phase II could potentially start in Phase I, we’ve allotted time in the schedule to minimize potential delays from utility relocations and right of way acquisitions. Along Route 55, we will begin widening on the north side of the roadway, followed by the enhancements along the south side and finally the median work. Vehicular and pedestrian access to the businesses along Route 55 will be maintained throughout the project. Work along Route 15, south of Route 55, will begin with construction of the storm water management pond, followed by the widening work, including the business parking lot and modified ingress/egress to the adjacent businesses along Route 15. Within the intersection quadrant north of Route 55 and west of Route 15, the full depth pavement reconstruction will also be performed.

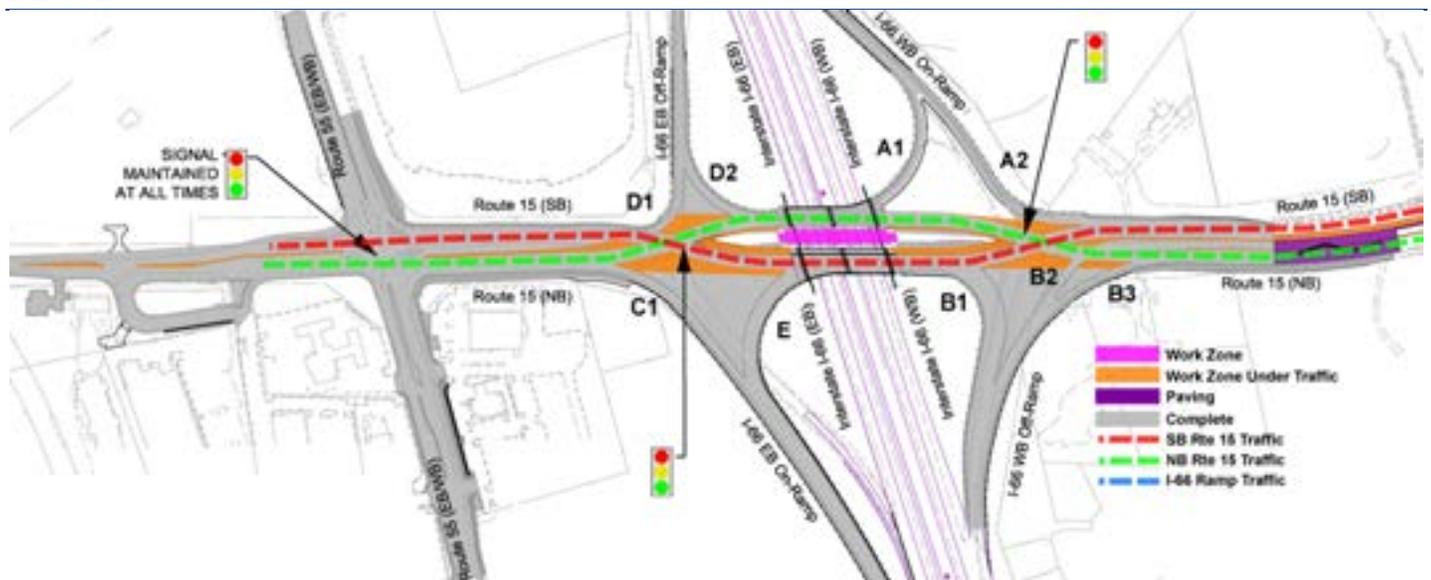
Phase III



Phase III construction areas include: widening of Route 15 northbound, the off-ramps from I-66 westbound (Ramp B, Spurs B1, B2 & B3), the on-ramps to I-66 eastbound (Ramps C & E, Spur C1), continuation of the widening and rehabilitation of Route 55 (as needed), demolition of the existing Route 15 northbound bridge,

construction of the new easternmost bridge, installation of the new asphalt trail, and soundwall along Ramp B. To access these work-zone areas, Route 15 southbound will be shifted onto the newly constructed westernmost bridge and widened section of Route 15. Then, Route 15 northbound traffic will be shifted onto the old/existing southbound bridge and pavement constructed in the median. As requested in the RFP documents, we will provide temporary access for pedestrians crossing over I-66 via Route 15. This path will essentially follow the same alignment that currently exists, which follows along the eastern edge of Route 15 northbound. Following the northbound traffic shift of Route 15, the existing northbound bridge (now out of service) will be demolished in its entirety and the new permanent easternmost bridge will be constructed in the same general footprint. Similar to the Phase II work, maintenance of traffic protective devices will be set up along the perimeter of the work-zone areas that require full depth construction. Areas that require traffic flow to be maintained through construction in this phase will be performed via temporary lane closures, flagging operations and/or under micro-phases – shifting traffic to one side or another in a manner to minimize disruption to the traveling public. Permanent signs, signals, ramp tie-ins and infield work within the new interchange will also be completed in this phase. While portions of work within Phase III could potentially start in Phase I and/or II, we have shown them in Phase III to allow time in the schedule to mitigate potential delays from utility relocations, right of way acquisitions and coordination with adjacent construction projects. Work along Route 55 started in Phase II may overlap into Phase III, without impacting the critical path in the schedule.

Phase IV



In summary, the LANE Team’s design, MOT and construction sequencing plan (see **Volume II, Pages II-20 through II-23** for more detail) first and foremost addresses public safety and provides a fully functional interchange, with a level of service in all phases equal to or better than what exists today. Two weeks prior to the start of construction, we will run advanced notification messaging on electronic sign boards, social media and the project website advising the start of work. Throughout the construction process, the project will be properly marked with static signs and safety devices. Two weeks prior to each roadway alignment shift, advance warning electronic messaging and media will run to alert the public of a change in the traffic pattern.

During all phases of construction, proper work area protection devices will be employed to protect both vehicular and pedestrian traffic through the work zones.

Once construction is complete, the DDI will function at a much higher level of service than exists now or as compared to the provided RFP design. At no time during construction will the road system be reduced to fewer lanes or operating functions during peak traffic movement periods.

Our Proposal Schedule, see **Volume I, Pages PS-7 through PS-9**, identifies critical project activities such as design, permitting, public hearing, design approvals, utility relocations, and right of way relocations. We have planned our construction activities to minimize delays and impacts from these critical activities with an approach for early release packages of work which are not dependent on completion of the full design, utility relocations, etc. before starting construction. We recognize that utility and right of way along Route 55 will be a longer duration, but we can start beneficial work on the I-66/Route 15 interchange since it has fewer complications. As noted in our sequence narrative above, we will open the DDI at completion of Phase III, start of Phase IV, on or about October 10, 2016; this will be a major improvement to the public to provide a significantly better functioning interchange at least ten months prior to project completion.

The LANE Team recognizes the need to plan ahead, be flexible and have contingency plans at the ready since unforeseen impacts will occur. We have developed a project schedule and approach that can accommodate many obstacles and the flexibility to recover without delay. We also recognize the need for open communication with VDOT, regulatory agencies, the adjacent town and communities, fire and rescue and the public. We actively practice partnering to resolve issues at the lowest level and to keep all involved in the project informed. Through the partnering process we will have an outreach plan in place to work with any adjacent projects so we can work together to achieve all of the goals for each party. The LANE Team is prepared to deliver this innovative project to VDOT and the public at the very latest, on time, August 8, 2017. We do not control the utility companies and regulatory agencies, but if we gain their cooperation, we realistically plan to complete the job well ahead of schedule, as much as eight months early.

4.5.2 TRANSPORTATION MANAGEMENT PLAN

The LANE Team will develop and implement the Transportation Management Plan (TMP) in accordance with VDOT's Requirements in IIM-241/TED-351 and incorporate all the strategies outlined for a Type C, Category V project. The LANE Team recognizes that the I-66 corridor is one of the most heavily traveled interstate systems in the Northern Virginia region and that Route 15 is also an important north-south link in the area's roadway network. Additionally, we recognize the importance and necessity of maintaining traffic with the least amount of disruption to the area. Members of the LANE Team have demonstrated their expertise in both developing and implementing effective TMPs for numerous projects including the I-495 Express Lanes, I-95 Express Lanes, and the MWAA-Dulles North Area Roadway Improvements. The LANE Team understands the dynamics of maintaining traffic along a heavily traveled corridor, particularly for our region and I-66. The LANE Team's TMP, as depicted in Volume II of our Technical Proposal, encompasses the following critical parts:

- Temporary Traffic Control (TTC)
- Public Communications Plan
- Transportation Operations and Incident Management Strategies

Temporary Traffic Control

The I-66/Route 15 Interchange Reconstruction project's TTC plan for the construction of roadway widening, two bridge replacements, extensive mill/overlay operations, and pavement marking/signage to provide for an adequate tie to existing conditions east and west along I-66, as well as north and south on Route 15, is divided

into four (4) phases as discussed in Section 4.5.1. The LANE Team's TMP utilizes various temporary traffic control applications over the course of the project. As part of the LANE Team's TMP, the following is noted:

- Flagging Operations will only be permitted as allowed by the VWAPM, and all flaggers will have the required certifications.
- For all roadway, lane, and ramp closures, the LANE Team will follow the time-of-day restrictions outlined in Section 2.10.2 of the RFP.
- All lanes on I-66 as part of the TMP will be a minimum 12' in width, and all temporary traffic control devices (TCD) will be a minimum of 2' from the travelway.
- All lanes on bridges as part of the TMP will be a minimum 11.5' in width.
- For all other roadways within the project limits, the roadway width will be a minimum 11' and Bridge Standards, and all temporary TCD will be a minimum of 1' away from the travelway.
- The LANE Team does not anticipate the need for any speed reduction requests.
- Recognizing the importance of maintaining efficient traffic operations on this heavily traveled corridor, the project will coordinate with adjacent projects as noted within the RFP and all stakeholders as it relates to lane closures.

In general, the types of TTC applications fall within several categories: lane closures, shoulder closure, ramp closures, temporary detours, and total roadway closures. Additionally, detailed traffic control designs will be provided for all construction access points to ensure the safety of the traveling public during all phases of construction.

Lane Closures. Closures will generally be implemented for the following proposed elements: installing concrete barrier to provide separation/protection for the construction work zone, installing project signage, installing ITS infrastructure, foundation installation for overhead signs and bridge structure components that will span the roadway, and to increase the space between the travelway and the work zone activities when the work zone does not have a barrier present. In all cases, the clear zone for the work area will be met per the VWAPM.

- Within the project's limits, VWAPM TTC 16.0 and/or TTC 17.0 will be implemented to provide a work zone area as needed and to install the concrete barrier to provide additional separation between the travelway and construction work zone for all phases of the project.
- All lane closures will be implemented during allowable closure timeframes listed in RFP Section 2.10.2 and the project will review with a Work Zone Traffic Analysis to ensure the delays are not excessive as outlined by RFP Section 2.10.

Shoulder Closures. These closures will generally consist of closing the shoulder. The closures will be for the majority of the construction work to be conducted for this project. A majority of the project's roadway/drainage improvements, bridge and other structural components will be constructed within the work zone separated by a shoulder closure.

- As previously indicated in Section 4.5.1 for Phases 2 and 3, after restriping and shifting traffic to maintain 12' lanes the LANE Team will implement VWAPM TTC-4.0 and/or TTC-6.0 as applicable for all shoulder closures to provide for a safe separation for the construction work zone.
- For the I-66 On-Ramp and Off-Ramp at Route 15, when the construction work zone requires entering into the travelway's clear zone, the LANE Team will implement VWAPM TTC 37.0, 38.0 and/or 39.0 as appropriate during non-peak hours as permitted by the RFP.

Temporary Ramp Closures. As part of the LANE Team's TMP design, these closures will be limited in nature due to the potential disruption it would cause the public. The occurrence of a ramp closure, as permitted by the RFP, will be proposed for approval to VDOT with complete detours for each instance. The TMP plan will review the detour routes to ensure the least impacting route (in terms of traffic, noise etc.) is implemented as required by the RFP. The LANE Team's TMP Design approach will be such that the ramp closures do not

extend more than one overnight shift, the ramps will be re-opened to traffic the following morning, and may be re-implemented the next available overnight shift to avoid major disruption to traffic.

- The LANE Team will design temporary/short term detours, compliant with VWAPM TTC 46.0 for each occurrence in which there is a need to close an interchange's ramp access, noting that the LANE Team will use the optional PCMS to further advise the public as appropriate. For exit ramps that are closed, the LANE Team will direct travelers to the preceding or acceding interchanges, to guide travelers to desired destinations from the opposite direction of travel along I-66.

Total Roadway Closures. This project will require roadway closures to complete bridge construction/modification and overhead signage work. The LANE Team will follow the mandated time-limit requirements (20-minute maximum per RFP Section 2.10.2) and will follow the TTC applications outlined in the VWAPM. The roadway closures (one directional or two directional) will be implemented to best serve multiple needs (e.g., bridge beams) in order to save time for all stakeholders. In all instances of roadway closures (one directional or two directional), the LANE Team will provide the required advance notification outlined by the RFP and communicate the TMP implementation plans to all stakeholders, including the traveling public.

An emergency contact list of project personnel and the response plan to respond to any on-site emergency including in any work zone incidents will be available to EMS personnel, schools, hospitals, parks and recreation and other necessary service providers. (per IIM-241)

Temporary Detours. This project, outside of the temporary detours mentioned for the temporary ramp closures, does not anticipate the need for temporary detours for any side streets and/or I-66. If such circumstances arise, the LANE Team is more than able to adapt and will provide for a temporary detour with accompanying work zone traffic impact analysis that complies with Section 2.10.2's requirements for impacts on adjacent side-streets and intersections. The LANE Team also does not anticipate any long-term detours required for any pedestrian/bicyclist movements as these detours will be on-site deviations of the normal path to ensure continuity of the pedestrian/bicyclist movement for the duration of the project.

Public Communications Plan. A Public Communications Plan developed with the project's TMP will be incorporated into the LANE Team's overall Public Involvement Plan. Through this plan, the LANE Team will maintain multiple channels of communication with the traveling public, mass transit systems, local jurisdiction fire and rescue, utilities, Parks and Recreation, local residents and businesses, and other stakeholders. The major stakeholders include, but are not limited to, the local jurisdictions (Prince William County and Town of Haymarket), WMATA, VDOT's MPSTOC, project managers of adjacent VDOT projects (including but not limited to the I-66 Widening from Gainesville to Haymarket project), and the traveling public. As required by the RFP, the LANE Team has designated Mr. Reed, the Team's Public Relations Manager, to be the project's liaison/Point of Contact between VDOT and the project's stakeholders to help provide notification to the affected property owners and traveling public. These open channels of communication will be used throughout the life of the project to disseminate project information, including TMP information such as lane closures, traffic pattern changes, and the implementation of ramp closures and, if necessary, temporary detours. The LANE Team will provide the required weekly updates to VDOT's Northern Virginia District Office of Public Affairs to enable information to be posted on VDOT's website for access by the traveling public and any others who may be seeking project updates. In addition to ongoing communication, the LANE Team will hold coordination meetings with VDOT and any other stakeholders to provide critical information for continuity of operations along I-66 and Route 15.

The LANE Team will provide advance notification of construction activities to VDOT and the public to minimize and mitigate the disruption to travelers through the project area. We will address this with proper signage and notification, as stated above, but it will require some exposure to the traffic pattern to complete

the education and to normalize traffic movement. As required, all steps to schedule significant construction events will be taken to use off-peak times for construction activities. Likewise, strict attention will be paid to construction activities being normalized in the appropriate flow direction during peak hours.

Transportation Operations and Incident Management Strategies. The LANE Team will coordinate with VDOT to develop protocols for the implementation of incident management. We will develop the necessary list of contacts for any emergency action required and will develop plans to address incident scenarios. Such plans will include the utilization of strategically-placed variable message signs to assist motorists in dealing with the incident. These plans may include recommended alternative routes and procedures for emergency lane closures or hazard protection. Plans may include recommended signal timing changes at affected intersections, as well as possible turn movement restrictions, by the installation of cones or drums to be placed in addition to what may be reflected in the plan. In addition to planning for incidents occurring within the immediate project limits, it is also appropriate to consider the effect of an incident outside the project boundary. The LANE Team will develop protocols and procedures for various incidents that could affect travel patterns in, and around, the project area. LANE will have on hand: variable message sign boards, signs, and channelizing devices to immediately deploy for incident management. The LANE Team will follow VDOT's recently updated VWAPM 2011, which now includes TTC applications for emergency/incident situations. The LANE Team will keep this onsite along with a list of emergency contacts. This approach will allow our project team to be prepared for, and react quickly and appropriately to, any incident affecting travel through and around the project. Recently, LANE has been responsible for maintaining traffic on two mega construction projects on the region's most congested commuter routes, the I-495 Express Lanes and I-95 Express Lanes construction. The lessons learned on this project in moving high volumes of traffic through extremely tight construction limits will be integrated as part of our overall TMP approach.

4.6 Disadvantaged Business Enterprises (“DBE”)



4.6 | DISADVANTAGED BUSINESS ENTERPRISES (DBE)

The LANE Team embraces and supports VDOT's DBE program and is committed to meeting or exceeding the 18% goal for the design and construction of this project. Furthermore, we will take all necessary and reasonable steps to provide SWaM firms with the maximum opportunity to compete for and perform services on this contract.

Design Subconsultants

The LANE Team includes the highly qualified DBE subconsultant, Quinn Consulting Services, Inc., to manage the QA Management/Inspections/Testing necessary for the successful completion of this Design-Build project.

Construction Subconsultants

LANE implements a subcontracting plan on all of our projects to confirm the maximum opportunity for DBE and SWaM subcontractors to qualify for and provide services. The first step is source selection. LANE researches the capabilities of a wide range of subcontractors. This includes an evaluation of past performance, socioeconomic status, financial condition, current availability, and safety performance. Based on this research, a list of potential subcontractors is developed. The second step is the outcome of the proposal process. Once a solicitation for pricing has been set, potential subcontractors have the opportunity to respond with their site-specific worker protection program and best price proposals. LANE reviews the price proposal to determine price reasonableness. The final selection of the subcontractor is made by combining the results of the safety and price evaluations to determine the proposal that provides the best value to VDOT and LANE.

Safety is an integral part of any scope of work performed on this project. Accordingly, a subcontractor's safety approach is a key component of our evaluation process. All subcontractors must meet our stringent safety requirements to be a member of the Team.

LANE also conducts a technical evaluation of the qualifications presented in the subcontractor's proposal, as well as an independent review of their past performance. References provided with their price proposal are contacted and questioned about the subcontractor's past performance. The topics covered include safety, schedule and cost compliance, and quality of work. If the potential subcontractor has worked for LANE before, its past performance and safety record for LANE will be evaluated. If the potential subcontractor is required to submit a Quality Control Program or Worker Protection Program with their proposal, these documents will also be evaluated. If the subcontractor has not worked for LANE previously, a project interview will be required.

LANE solicits subcontractor and supplier price proposals and evaluates for award of a subcontract or purchase order based on quality, past performance, and competitiveness. Once these reviews are complete, our evaluation team members discuss the results and select the subcontractors and suppliers that best satisfy the requirements of the contract. Any subcontractor that fails to meet these requirements will be eliminated without further consideration.

4.7 Proposal Schedule



4.7 | PROPOSAL SCHEDULE

Integral to the Design-Build process is the creation of a working CPM schedule, the Lane Team is utilizing Primavera® software, version P6. Lane has developed a Proposal Schedule that represents the plan to execute the work in accordance with the Contract Documents. It includes a detailed work plan illustrating the sequence of the comprehensive scope of work on the Project. Furthermore, the detailed work plan includes a Work Breakdown Structure (WBS), activity durations, Critical Path (based on the longest path calculations), milestones, Scope Validation Period, permitting and right of way (ROW) acquisition activities, utility relocations, design and construction, reviews by VDOT, FHWA and other regulatory agencies.

4.7.1 PROPOSAL SCHEDULE

The Proposal Schedule is located at the end of this section.

4.7.2 PROPOSAL SCHEDULE NARRATIVE

LANE has developed the following Proposal Schedule Narrative detailing our overall plan to successfully accomplish the Project in accordance with the Contract Documents. The narrative provides overall sequencing, a description and explanation of the Critical Path, proposed means and methods and other key assumptions on which our Proposal Schedule is based.

Work Breakdown Structure. The Work Breakdown Structure (WBS) is a multi-level, hierarchical arrangement of the work to be performed on the project. LANE has laid out the WBS to enable the identification of the project milestones, design, permitting, ROW acquisitions, utility relocations, public involvement, submittals & procurement of materials, and construction phases of the project. Design has been further broken down into geotechnical, alternative technical concepts (ATC), structural and roadway packages. In addition construction has been subdivided into the two distinct areas of the project, Route 15 and Route 55. Within each area, an MOT Phase breakdown provides further details of the work scope.

Level 1 of the WBS that is depicted in the Proposal Schedule is as follows:

- **Project Milestones:** Includes the various contractual milestones for the project, including Notice to Proceed, and Final Completion.
- **Project Management:** Includes mobilization activities, as well as the Safety Plan & QA/QC Plan submittals for the project.
- **Scope Validation Period:** Includes the Scope Validation Period activity for the project.
- **Obtain Design Approval for Alternative Design Concept:** Includes the sequence of activities necessary for requesting and seeking approval of the proposed Alternative Design Concept.
- **Design:** Includes preliminary engineering services, plan development, QA/QC reviews, and VDOT review and approval of the plans. This section includes a second level to the WBS, grouping the design activities by type of design submission packages including Geotechnical, Right of Way, Structures, and Final Roadway.
- **Public Involvement:** Anticipated Town Hall Meetings throughout the project are notated based upon the significant design and construction milestones that will be achieved.
- **Environmental/Permits:** Includes wetland and stream delineations and jurisdictional determination, permit management and preparation, mitigation, and permit submission, and review and approvals through the process. Also includes the SWPPP, local noise ordinance validation, and VSMP permit.

- **Right of Way Acquisitions:** 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 review, offers, negotiations, and settlements.
- **Utility Relocations:** The utility relocations section of the schedule include 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.
- **Submittals & Procurement:** Shop drawing submittals and approvals are included within this WBS element, as well as the subsequent material procurements, as applicable.
- **Construction:** Includes all components of roadway and bridge construction as well as MOT, signals, and drainage. The Construction section is segmented by two additional levels of WBS elements to divide the construction activities into more detail. The first level differentiates the two work Areas of the project, Route 15 & Route 55. The next level of the WBS further divides the activities by the MOT phasing of work for each location, Phases One through Four.

Calendars. LANE has used five (5) different calendars to represent a variety of different work scenarios.

Calendar	Non-Work Period
7-Day	
5-Day Admin (No Weather)	
5-Day Construction	
5-Day Asphalt Paving–Base/Int Courses	December–February
5-Day Asphalt Paving–Surface Course	November–April

LANE’s approach to adverse weather differs depending on the type of work being performed. Any schedule acceleration attempts to remediate adverse weather impacts will occur first on Saturdays and then during the winter months.

The amount of adverse weather days to be expected has been calculated utilizing the National Oceanic and Atmosphere Administration’s (NOAA) National Climatic Data Center to collect data from the Washington Dulles Airport. Utilizing daily data from 2001 through 2010, the average number of adverse weather days over this 10-year period have been incorporated into the schedule calendars, which have subsequently been assigned to the appropriate work operations involved. The asphalt paving operations have been assigned the most-restrictive schedule calendars, which represent the anticipated winter shutdown periods for the various paving activities, as shown above.

Plan and Strategy

Design. Immediately following Notice to Proceed (NTP), we will begin the field surveys and investigations necessary for design of the project. Survey notifications will be distributed to adjacent properties, and a complete design level survey will be performed. Utility designations and test pits will be completed, and geotechnical investigations and analyses will be initiated.

As the first phase of design, the LANE Team will develop the plans to a Right of Way Plan level. Design plans and supporting design calculations with appropriate design QA/QC checklists will be provided to VDOT/ FHWA for review. The design team will resolve any review comments, and request Notice to Commence Right of Way Acquisition. This milestone represents a hold point in the project schedule.

Construction Plans will be broken into logical work packages to allow for approvals and authorizations to be obtained for early construction phases while the design is finalized. We anticipate the design plans to be

broken down into obtaining the Alternative Technical Concept approval, Geotechnical, Structural, ROW, and Roadway. For each work package plans will be submitted to VDOT/FHWA following completion of our internal Design QA/QC process, comments will be resolved, and VDOT/FHWA approval will be obtained. Following VDOT approval of each work package, Notice to Commence Construction will be obtained and Released for Construction Plans will be issued to the field for construction. The Notice to Commence Construction represents a hold point in the project schedule.

Permitting. Our project schedule includes all necessary tasks required to obtain the environmental permits for the project construction. Depicted on the schedule are durations for wetland delineations, obtaining a Jurisdictional Determination, updates to the threatened and endangered species studies in conjunction with the Joint Permit Application, and obtaining environmental permits from the approving agencies. Schedule risk due to environmental permitting has been minimized by phasing construction to allow for work in “upland” areas first should permit delays be experienced. In addition to the environmental permits, the LANE Team will obtain all necessary permits including, but not limited to, VSMP and VDOT construction permits.

Right of Way Acquisitions. Right of way acquisition will be performed in accordance with VDOT requirements and the RFP. The initiation of the Right of Way Acquisition phase is dependent on our team obtaining Notice to Commence Right of Way Acquisition from VDOT. Our project schedule reflects the necessary durations need to perform all right of way acquisition tasks including Title Reports, Appraisals, Appraisal Reviews, Submittal of Offers, Negotiations, and Settlement/Closing. The LANE Team has minimized schedule risk due to right of way acquisition by preparing our construction phasing in a manner that minimizes the reliance of early construction phases on right of way acquisition.

Utility Relocations. The project schedule incorporates all utility relocation activities necessary to clear existing utilities from the work area. Utility related activities include utility designation and location, UFI meetings, utility plan and estimate preparation by utility owners, review and approval of plan and estimates, authorization to relocate, and the relocation of utilities by utility owners. Schedule risk due to utility relocation has been minimized by: 1) a design approach which minimizes utility conflicts; 2) impacted utilities not requiring easements for relocation removes the dependence of right of way acquisition on utility easement requests by utility owners; and 3) sequenced the construction around potential conflicts we have identified.

Construction Phases

The LANE Team’s phases of construction on which this schedule is based, has been developed to mitigate impacts to the traveling public, delays to construction and ultimately, facilitate final completion of the project. Some potential delays include, but not limited to: geotechnical constraints, environmental impacts, right of way acquisition, staging and storage areas, and the risk of potential impacts from other active construction projects. In developing the schedule and construction sequences, the LANE Team put public safety first and included measures to limit disruptions to vehicular traffic, including public transportation and adjacent active construction traffic. To achieve the above, we will maximize the amount of construction activities and work area size within a given phase; doing so improves construction efficiency, reduces construction costs, limits the number of traffic shifts, improves public safety, and allows for greater flexibility within phases to work around unforeseen delay issues. Below, each phase of construction is identified with key features of the phase listed for emphasis. A more detailed discussion of the Sequence of Construction may be found in Section 4.5.1. Please refer to Volume II of this proposal for the full-size Sequence of Construction drawings.

—Phase I

- Shift Route 15 North and Southbound traffic to the outside of existing pavement.
- Construct the new permanent and temporary pavement structure in the median of Route 15 to the intermediate asphalt layer.
- Begin construction on the new Route 15 westernmost bridge.

—Phase II

- Shift Route 15 Southbound traffic onto the newly constructed pavement in the median between the Heathcote Boulevard and Route 55 intersections.
- Continue construction on the new Route 15 westernmost bridge.
- Construct the widening portion of Route 15 Southbound between the project limits.
- Widen/Construct/Rehabilitate Ramps A and D, inclusive of new ramp spurs A1, A2, D1 and D2.
- Construct the widening portion of Route 15 Northbound between the southern project limits and Route 55.
- Construct the new parking lot in Parcel 2 and new ingress/egress to the adjacent business along Route 15.
- Construction of the storm water management ponds
- Begin the widening and enhancements to Route 55 between the project limits.

—Phase III

- Shift Route 15 southbound traffic to the newly constructed westernmost bridge and widened section of Route 15. Followed by shifting Route 15 northbound traffic to the old/existing southbound bridge and pavement constructed in the median.
- Begin construction on the new Route 15 easternmost bridge.
- Construct the widening portion of Route 15 Northbound between Route 55 and the northern project limits.
- Demolish the existing Route 15 northbound bridge (now out of service).
- Widen/Construct/Rehabilitate Ramps B, C and E, inclusive of new ramp spurs B1, B2, B3 and C1.
- Continuation of the widening and rehabilitation of Route 55 (as needed).
- Installation of the new asphalt trail, soundwall, signs and signals.

—Phase IV

- Shift Route 15 Northbound and Southbound Traffic to the ultimate DDI configuration.
- Demolish the existing Route 15 southbound bridge (now out of service).
- Construct the raised medians and median curb along Route 15.
- Complete permanent pedestrian path, removing temporary asphalt.
- Milling/overlay existing asphalt surfaces, surface asphalt paving and final pavement markings throughout the entire project.
- Final Cleanup/Demobilization.

Potential Impacts. The following risk issues have been identified as having the potential to cause impacts:

- Rock Excavation/Soil Conditions
- Maintenance of Traffic
- 3rd Party Coordination
- Ground Water

Key Milestone Dates. The I-66/Route 15 Interchange Proposal Schedule details our plan for all phases of the Design-Build process based on the following key project milestones:

Key Milestone	Milestone Date
Notice of Intent to Award Date	March 12, 2014
CTB Approval/Notice of Award	April 16, 2014
Notice to Proceed (NTP) Date	May 15, 2014
Final Completion Date	August 8, 2017

Critical Path. The Critical Path of the Project, as shown in the Schedule, starts with the Right of Way Acquisition process. The Right of Way Plan preparations and submissions (2 each), design QA/QC, VDOT reviews and subsequent approvals will precede the commencement of the Final Roadway Plans preparation. The Proposal Schedule reflects that the Right of Way Plans approval is expected to be completed on November 15, 2014. The initial submission of the Final Roadway Plans, design QA/QA, VDOT review and subsequent approval will precede the commencement of any construction activities on the project.

Following the Final Roadway Plan approval (1st submission), it is anticipated that construction will begin on the project on February 19, 2015. Work will commence on Route 15, starting with the first MOT phase of the project. The operations will be erosion and sediment controls, clearing and grubbing, earthwork/demo, storm drainage, subgrade preparation, subbase placement, base course asphalt paving, intermediate course asphalt paving, and temporary pavement markings. Subsequently, following the Phase I work operations, Phase II will begin on May 19, 2015. The Phase II critical path activities will be the roughly the same as the Phase I activities, and will conclude on December 24, 2015. Additional Phase II critical path activities will be the guardrail/barrier installation, and the temporary traffic signal installations.

Phase III critical path construction activities (Route 15) will include the MOT setup, east bridge demolition, substructure and superstructure construction of the east bridge, completion of the subbase placement, curbs and sidewalk placement, base course asphalt paving, intermediate course asphalt paving, guardrail/barrier, temporary traffic signals, and temporary pavement markings. Phase III work activities on Route 15 will conclude on October 7, 2016.

Phase IV construction activities for Route 15 that are on the critical path will follow. They are: MOT setup, curb and raised median placements, surface course asphalt paving, permanent pavement markings, guardrail/barrier, final grading, and punchlist and cleanup. Phase I will complete on August 8, 2017, which is the Final Completion Date.

Assumptions. The LANE Team made the following key assumptions on which our Proposal Schedule is based:

- Lane and road closures remain in accordance with the RFP
- No impacts due to unforeseen circumstances
- Effective partnering and coordination with contractors on adjacent active contracts to facilitate achievement of the I-66/Route 15 Interchange construction program milestones

Schedule Management. Effective management and control of a construction project of this scope requires the use of a proven software package for scheduling, documentation control, cost control, and design functions of the integrated team concept to the Design-Build approach. The LANE Team uses Primavera P6 (P6) scheduling software to plan, schedule, and monitor its construction projects. This software is an industry standard of practice for scheduling projects allows us to plan, organize, and control the project with the Precedence Diagram Method (PDM) of scheduling. As a management tool, P6 is powerful and flexible enough to handle all project scheduling needs, including the following capabilities:

- CPM scheduling
- Cost management
- Resource management
- Data exchange
- Reporting capabilities
- Networking

P6 also has tools to assist the project management team in tracking and forecasting the project performance from the milestone level to the smallest work activity.

LANE will coordinate the scope of all project-related activities to establish a timely Critical Path Method (CPM) job schedule that will help ensure an on-time completion and identify potential risks. LANE's Project Controls will be coordinated from the on-site project office. The Project Engineer is responsible for scheduling, cost engineering, and cost forecasting. The Design-Build Project Manager, supported by the Construction Manager, is ultimately responsible for the implementation of the project controls system.

Upon award of the contract, LANE's project team will collaborate to develop the entire project schedule based on the proposal design plans. To control time spent on activities, LANE will develop a detailed, time-phased CPM project schedule, prepared with timelines outlined within the scope of work, with the assistance of their Corporate Scheduling Department. After an internal analysis and review of the general schedule logic and critical path, the schedule is completed. The P6 software program is used to generate a time-scaled logic diagram reflecting the interdependencies of all the activities incorporated into the schedule. In addition, other various tabular reports are produced, as required, for submission to the owner.

This schedule will indicate the necessary procurement and construction activities for each section or phase of the project. Various calendars will be incorporated into the project schedule to reflect holidays, seasonal work, temperature and precipitation restrictions, owner requirements, etc. The activities within the CPM schedule will be organized according to a WBS that has been developed for the project. An Activity Coding Structure will be utilized in the project schedule to organize data output. The project schedule will be the tool used for coordination by both on-site and off-site LANE management. Schedule updates are used by managers to review progress and coordinate the efforts of all entities involved. A full-time on-site engineer is tasked with the responsibility to track schedule progress on a daily basis and provide monthly updates.

Detailed schedules are used to plan and monitor specific items of work and will be prepared as necessary to deal with individual work packages or smaller work activities as the need arises. As the work progresses, start dates, finish dates, percent complete, and remaining durations will be updated to report the progress of each work activity. The Construction Manager will incorporate updated data into the CPM schedule on a monthly basis, review the results internally and with the owner, and prepare the required reports for submittal. Monthly updates of the CPM schedule provide the foundation of progress reports utilized by the project team.

When changes or unforeseen circumstances arise that impacts the project schedule, the LANE Team will immediately notify VDOT (and other appropriate stakeholders) and begin incorporating changes into the "live" CPM schedule. If changes to any task or phase in the schedule result in schedule slippage, the Design-Build Project Manager will divide the task into its components to determine the reason(s) for falling behind. LANE will develop and implement a recovery plan to put the project back on track. Progress can then be tracked daily via the schedule compared to the previously accepted schedule. LANE's management will evaluate any slippage to determine if additional manpower, equipment, multiple shifts, a change in subcontractor, or additional subcontractors is required. If so, the necessary resources will be mobilized to correct the slippage and maintain the schedule. Scheduling practices and concerns will be clearly communicated to all subcontractors and key suppliers. Delays and schedule slippage will not be tolerated.

Summary. LANE has developed a Proposal Schedule and Proposal Schedule Narrative that demonstrates our understanding of the complexities and interrelationships of the technical elements of the Project. Additionally, our Proposal Schedule takes into account: internal plan reviews, VDOT plan reviews and approvals, environmental permitting, right of way acquisitions, utility relocations, and construction activities.

The LANE Team is committed to improve the enclosed Proposal Schedule to better serve VDOT, all associated stakeholders, and the traveling public. Once we have notice to proceed and the final design process begins, all team members will actively work to make this project more efficient, high quality and award winning.



Attachment 4.0.1.1: Technical Proposal Checklist

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		
Letter of Submittal on Offeror's letterhead	NA	Section 4.1.1	yes	1
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	Appendix
Certification Regarding Debarment Forms	Attachment 11.8.6(a) Attachment 11.8.6(b)	Section 4.1.8	no	Appendix
Written Statement of Compliance	NA	Section 4.1.9	yes	2

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
Offeror's Qualifications	NA	Section 4.2		
Confirmation that the information provided in the SOQ submittal remains true and accurate or indicates that any requested changes were previously approved by VDOT	NA	Section 4.2.1	yes	3
Organizational chart with any updates since the SOQ submittal clearly identified	NA	Section 4.2.2	yes	3, 4
Revised narrative when organizational chart includes updates since the SOQ submittal	NA	Section 4.2.2	yes	3
Design Concept	NA	Section 4.3		
Conceptual Roadway Plans and Description	NA	Section 4.3.1	yes	6 and Volume II
Conceptual Structural Plans and Description	NA	Section 4.3.2	yes	14 and Volume II
Project Approach	NA	Section 4.4		
Project Coordination and Public Outreach	NA	Section 4.4.1	yes	16
Construction of Project	NA	Section 4.5		
Sequence of Construction	NA	Section 4.5.1	yes	20 and

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
				Volume II
Transportation Management Plan	NA	Section 4.5.2	yes	24
Disadvantaged Business Enterprises	NA	Section 4.6		
Written statement of percent DBE participation	NA	Section 4.6	yes	28
DBE subcontracting narrative	NA	Section 4.6	yes	28
Proposal Schedule	NA	Section 4.7		
Proposal Schedule	NA	Section 4.7	no	PS-7—PS-9
Proposal Schedule Narrative	NA	Section 4.7	no	PS-1
Proposal Schedule in electronic format (CD-ROM)	NA	Section 4.7	no	CD located inside the back cover of proposal

Attachment 3.6: Form C-78-RFP
Acknowledgement of Receipt of RFP, Revisions, and/or Addenda

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
 Richard A. McDonough, District Manager

 PRINTED NAME AND TITLE

1/23/2014

 DATE

Attachment 9.3.1: Proposal Payment Agreement

ATTACHMENT 9.3.1
PROPOSAL PAYMENT AGREEMENT

THIS PROPOSAL PAYMENT AGREEMENT (this "Agreement") is made and entered into as of this 6th day of January, 2014, by and between the Virginia Department of Transportation ("VDOT"), and The Lane Construction Corporation ("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, 2011~~ 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: _____

The Lane Construction Corporation

By:  _____

Name: Richard A. McDonough

Title: District Manager

Attachment 11.8.6: Certification Regarding Debarment Forms
(a) Primary Covered Transactions & (b) Lower Tier Covered Transactions

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.

 1/6/2014 District Manager
Signature Date Title

The Lane Construction Corporation
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.



December 27, 2013
Date

Director of Transportation
Title

RINKER DESIGN ASSOCIATES, P.C.
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 9, 2014	President
Signature	Date	Title

Quinn Consulting Services, Inc.
Name of Firm

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

Project No.: 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.

<u>Paul Brideaux</u>	<u>12/31/13</u>	<u>Vice President</u>
Signature	Date	Title

Michael Baker Jr., 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 Date

Vice President
_____ Title

ECS Mid-Atlantic, 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.

DM 1/8/14 PRESIDENT
Signature Date Title

Specialized Engineering
Name of Firm (DIW Group, Inc.)



Submitted By:

LANE

in conjunction with



Volume II: Technical Proposal Exhibits

Interstate 66/Route 15 Interchange Reconstruction

A Design-Build Project

State Project No.: 0066-076-074
Federal Project No.: IM-066-1(341)
Contract ID Number: C00100566DB63

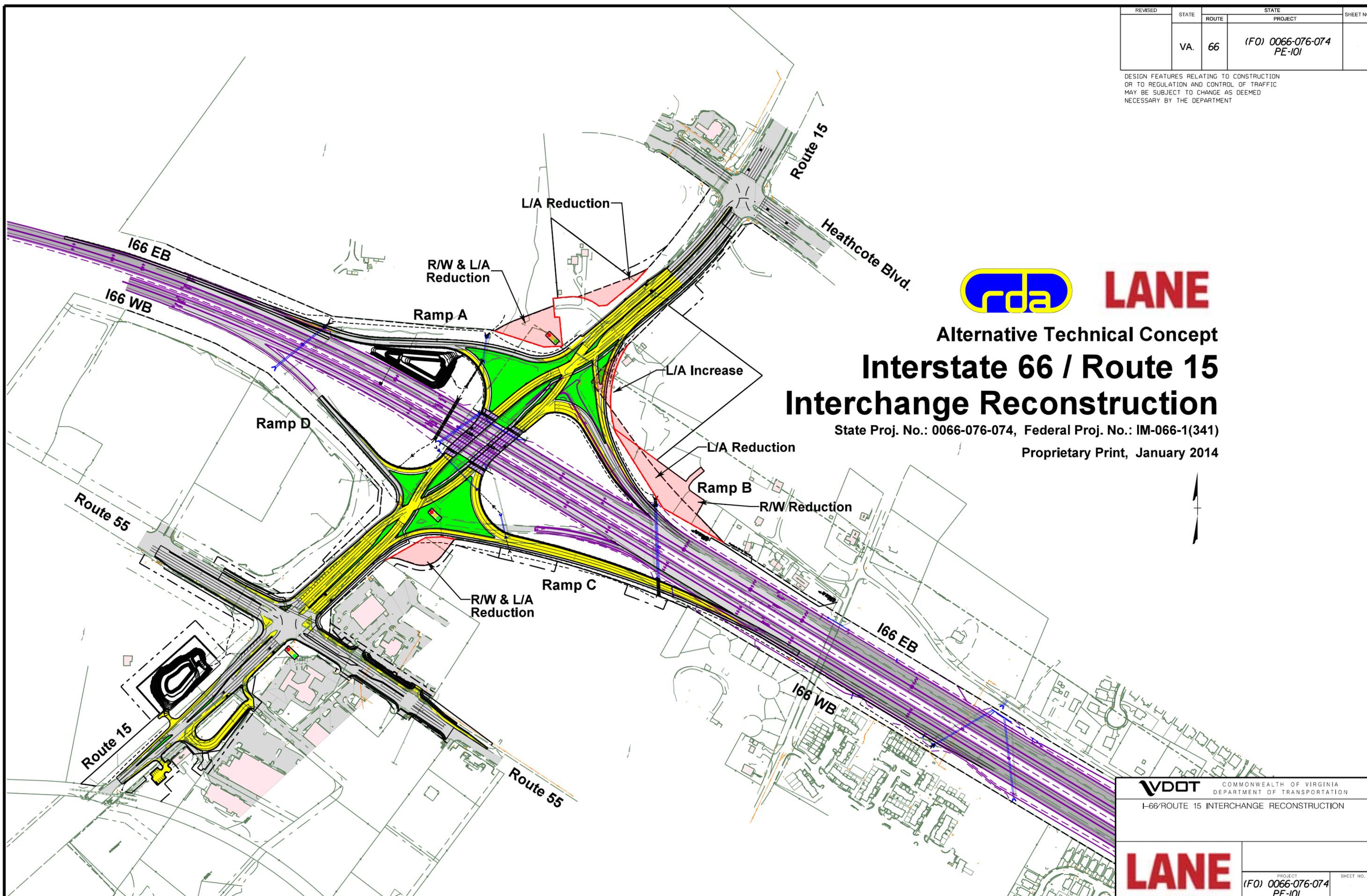
Prepared For:





REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 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



Alternative Technical Concept
**Interstate 66 / Route 15
Interchange Reconstruction**

State Proj. No.: 0066-076-074, Federal Proj. No.: IM-066-1(341)
Proprietary Print, January 2014

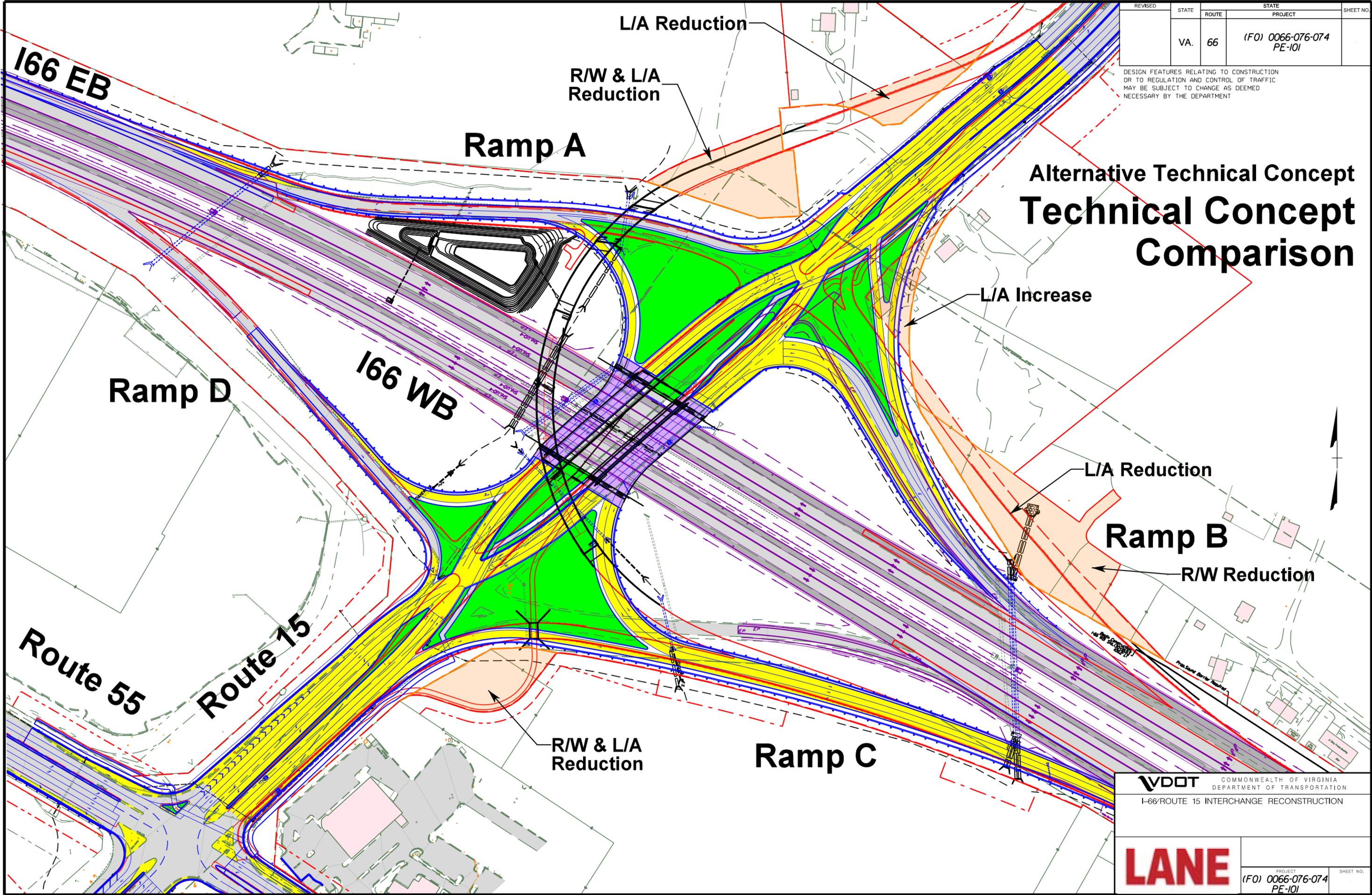
VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION

LANE PROJECT SHEET NO.
(FO) 0066-076-074
PE-101

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 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

Alternative Technical Concept Technical Concept Comparison



VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION

LANE

PROJECT (FO) 0066-076-074 PE-101	SHEET NO.
--	-----------



FOR INDEX OF SHEETS SEE SHEET 1B

THIS PROJECT WAS DEVELOPED UTILIZING GEOPAK DESIGN SOFTWARE
 GEOPAK COMPUTER IDENTIFICATION NO.100566



COMMONWEALTH OF VIRGINIA
 DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED
 STATE HIGHWAY
 PRINCE WILLIAM COUNTY
 I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
 From: 0.4 MI. W. OF U.S. ROUTE 15
 To: 0.6 MI. E. OF U.S. ROUTE 15

FHWA 534 DATA 4A103

FHWA REGION	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
3	VA	IM-0066-076-074 See Tabulation Below For Section Numbers	66	(FO) 0066-076-074, PE-101 See Tabulation Below For Section Numbers	1

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA			
1-66 NHS, URBAN PRINCIPAL ARTERIAL (FREEWAY) LEVEL - 70 MPH DESIGN SPEED, VDOT STD. GS-5			
	Fr: VA ROUTE 245 To: U.S. ROUTE 15	Fr: U.S. ROUTE 15 To: U.S. ROUTE 29	
ADT 2011	35,700	57,500	
ADT 2036	62,000	91,000	
DHV	3740	6010	
D (%) (design hour)	67%	70%	
T (%) (design hour)	16%	16%	
V (MPH)	.	.	
U.S. ROUTE 15 NON-NHS, URBAN PRINCIPAL ARTERIAL ROLLING - 40 MPH DESIGN SPEED, VDOT STD. GS-5			
	Fr: HEATHCOTE BLVD To: I-66	Fr: I-66 To: VA ROUTE 55	Fr: VA ROUTE 55 To: MARKET RIDGE BLVD
ADT 2011	31,000	31,000	19,000
ADT 2036	51,000	58,000	32,000
DHV	4,010	4,785	2,745
D (%) (design hour)	53%	58%	55%
T (%) (design hour)	5%	5%	5%
V (MPH)	.	.	.

* See Geometric Layout Sheets For Horizontal Design Speed. See Profile Sheets For Vertical Design Speed & Superelevation Transition.
 All Traffic Data Provided By VDOT

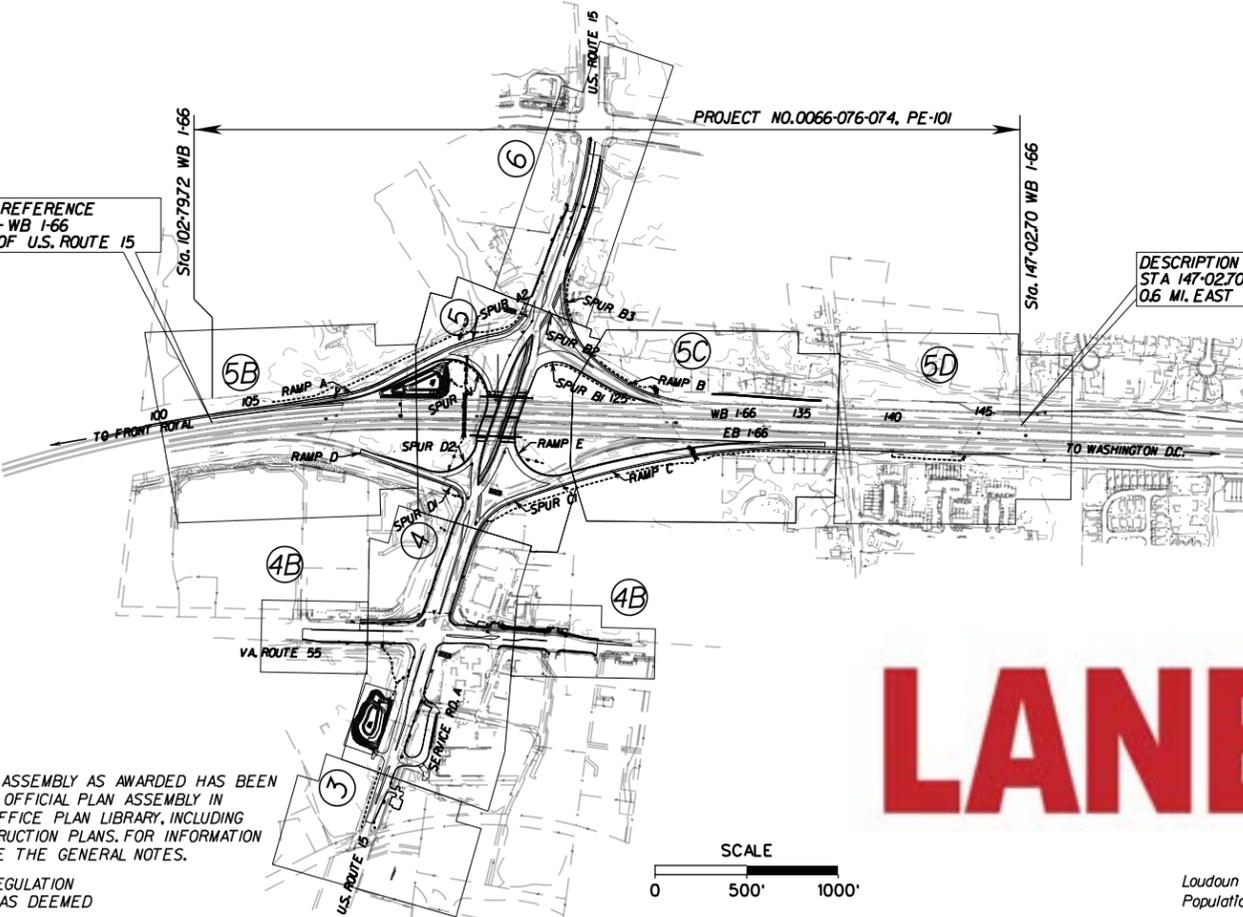
PROJECT MANAGER Amir Salahshoor, PE, VDOT Northern Virginia District L&D (703) 259-1957
 SURVEYED BY Surveyor Name (000) 000-0000 (District)
 DESIGN SUPERVISED BY Supervisor Name (000) 000-0000 (District)
 DESIGNED BY HNTB Corporation (703) 824-5100

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

CONVENTIONAL SIGNS

STATE LINE	-----
COUNTY LINE	-----
CITY/TOWN OR VILLAGE	-----
RIGHT OF WAY LINE	-----
FENCE LINE	-----
UNFENCED PROPERTY LINE	-----
FENCED PROPERTY LINE	-----
WATER LINE	-----
SANITARY SEWER LINE	-----
GAS LINE	-----
ELECTRIC UNDERGROUND CABLE	-----
TRAVELED WAY	-----
GUARD RAIL	-----
RETAINING WALL	-----
RAILROADS	-----
BASE OR SURVEY LINE	-----

LEVEE OR EMBANKMENT	-----
BRIDGES	-----
CULVERTS	-----
DROP INLET	-----
POWER POLES	-----
TELEPHONE OR TELEGRAPH POLES	-----
TELEPHONE OR TELEGRAPH LINES	-----
HEDGE	-----
TREES	-----
HEAVY WOODS	-----
GROUND ELEVATION	-----
GRADE ELEVATION	-----



January 2014

LANE



THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED HAS BEEN SEALED AND SIGNED USING DIGITAL SIGNATURES AND THE OFFICIAL PLAN ASSEMBLY IN ELECTRONIC FORMAT IS STORED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE THE GENERAL NOTES.

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

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2007 ROAD AND BRIDGE SPECIFICATIONS, 2008 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED, AND WIDENED IN ACCORDANCE WITH STANDARD TC-5JIR EXCEPT WHERE OTHERWISE NOTED.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, IS FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	EQUALITIES		LENGTH INCLUDING BRIDGE(S)		LENGTH EXCLUDING BRIDGE(S)		PROJECT TYPE	DESCRIPTION
					FEET		FEET	MILES	FEET	MILES		
(FO) 0066-076-074	P-101			100566			4423.0	1.0	4423.0	1.0	PREL. ENG.	FROM: 0.4 MI. WEST OF U.S. ROUTE 15 TO: 0.6 MI. EAST OF U.S. ROUTE 15
	R-201			100566			4423.0	1.0	4423.0	1.0	RIGHT-OF-WAY	
	C-501		XXXX	100566			4423.0	1.0	4423.0	1.0	CONSTRUCTION	
	B-678		XXXX	100566			235.0	0.05			BRIDGE	
	B-679		XXXX	100566			108.4	0.03			BRIDGE	
	B-680		XXXX	100566			525.3	0.1			BRIDGE	

THE LENGTH OF PROJECT IS BASED ON THE WB I-66 BASELINE.

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

DATE	PROGRAMMING DIVISION DIRECTOR
DATE	STATE LOCATION AND DESIGN ENGINEER
DATE	CHIEF OF PROGRAMMING AND PLANNING
DATE	CHIEF ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION

DATE	CHIEF OF POLICY AND ENVIRONMENT
------	---------------------------------

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

DATE	PROGRAMMING DIVISION DIRECTOR
DATE	STATE LOCATION AND DESIGN ENGINEER
DATE	STATE STRUCTURE AND BRIDGE ENGINEER
DATE	CHIEF FINANCIAL OFFICER

APPROVED FOR CONSTRUCTION

DATE	CHIEF ENGINEER
------	----------------

APPROVED

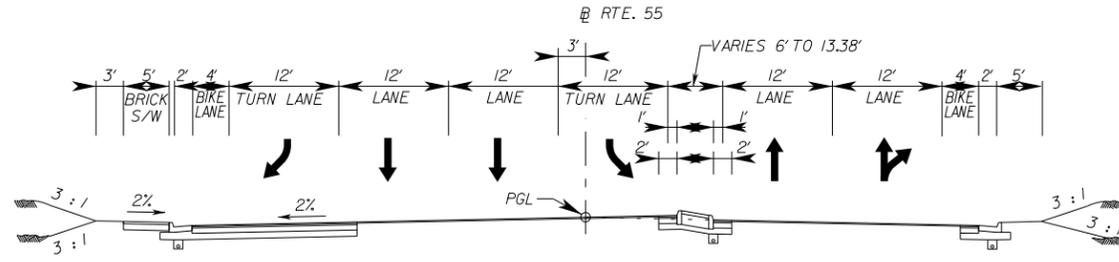
DATE	DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION
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Copyright 2013, Commonwealth of Virginia

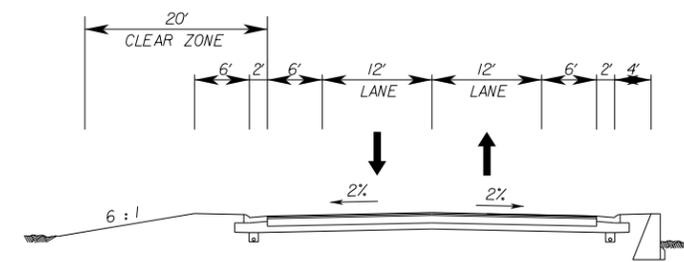
PRINTS SENT TO	DATE
R/W DIV.	
ADVANCE PLANS COMPLETED PLANS	
DIST. ENGR.	
RES. ENGR.	
CONSTR. ENGR.	

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

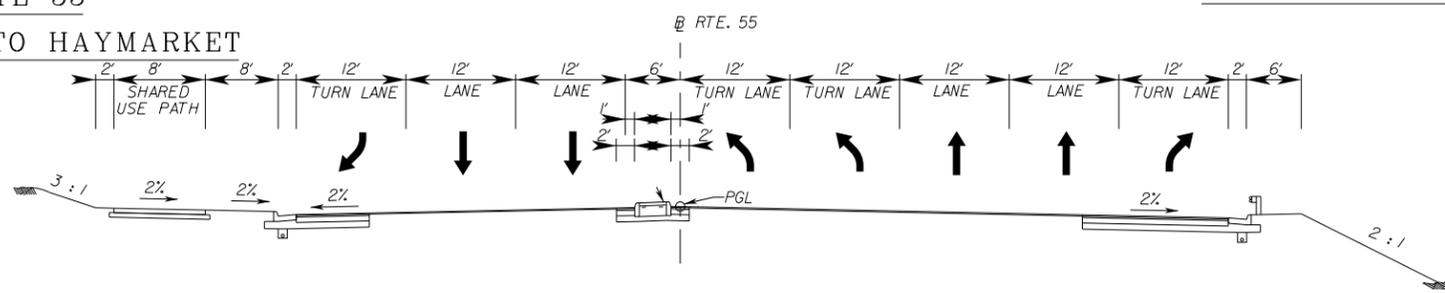
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



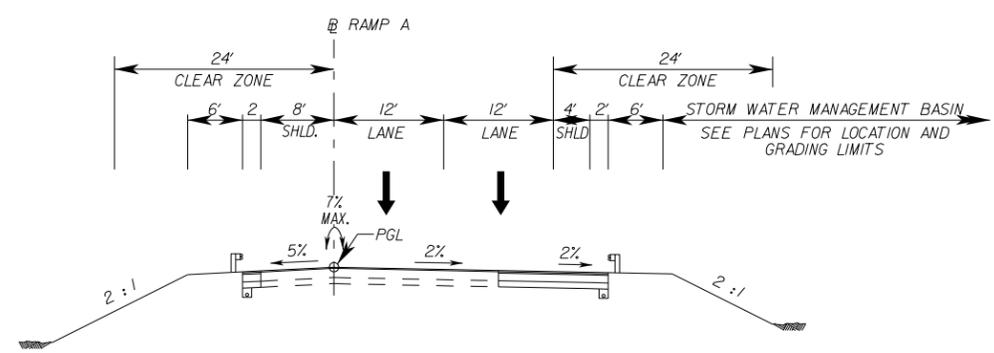
VA ROUTE 55
FROM ROUTE 15 TO HAYMARKET



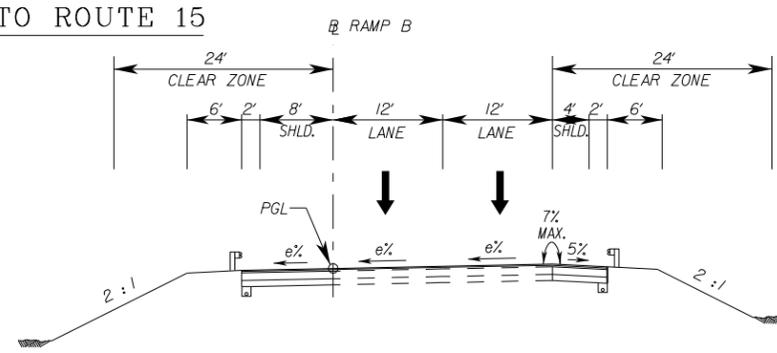
SERVICE ROAD A



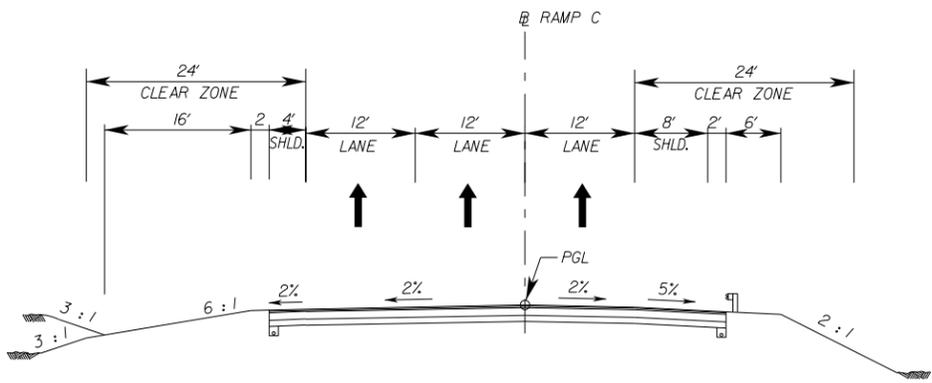
VA ROUTE 55
FROM WALMART TO ROUTE 15



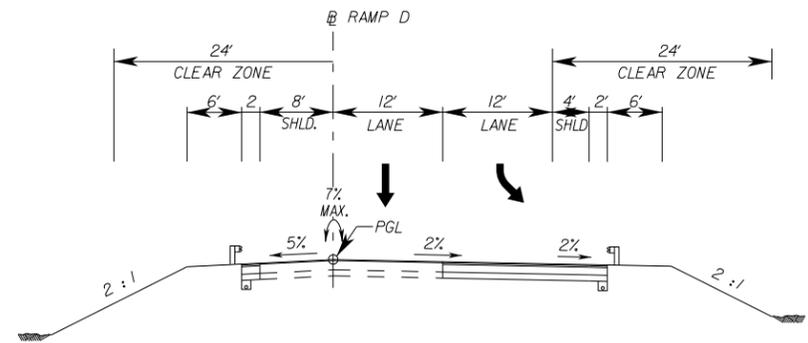
RAMP A



RAMP B



RAMP C



RAMP D

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

VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION

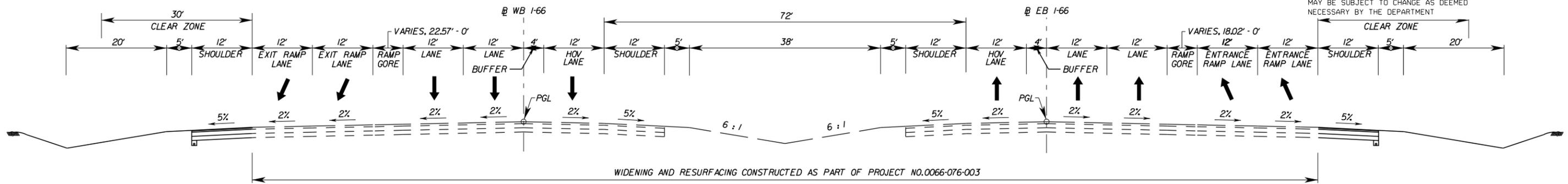
LANE

PROJECT (FO) 0066-076-074 PE-101	SHEET NO. 2A(1)
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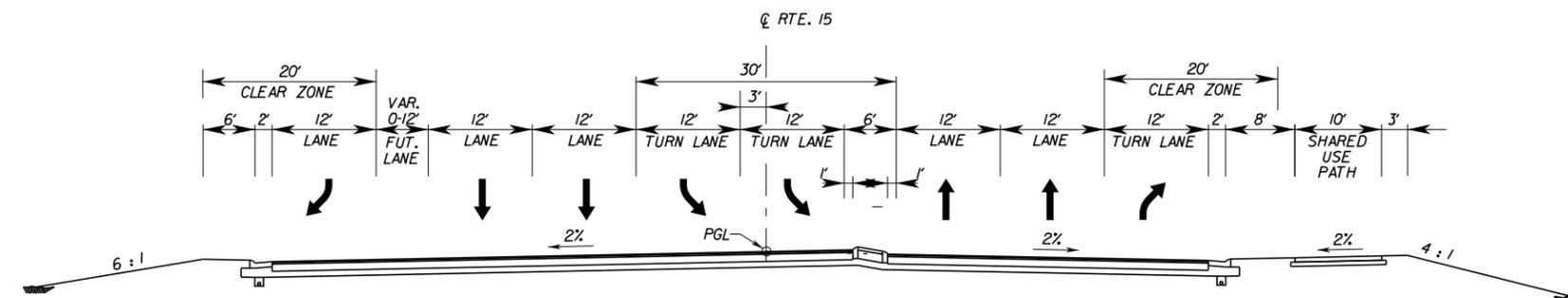
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

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

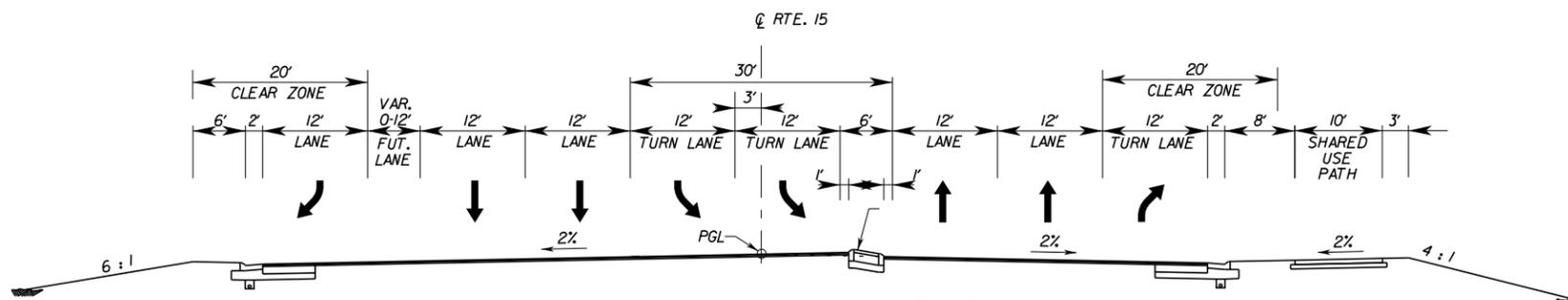
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



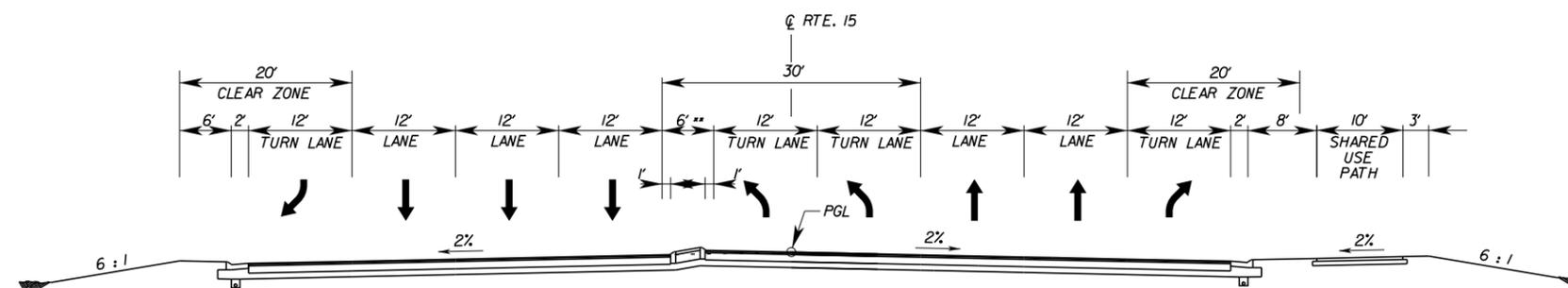
I-66



U.S. ROUTE 15
FULL DEPTH FROM HAYMARKET



U.S. ROUTE 15
OVERLAY TO HAYMARKET



U.S. ROUTE 15
FULL DEPTH TO HEATHCOTE

		COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION		
	PROJECT (FO) 0066-076-074 PE-101	SHEET NO. 2A(2)

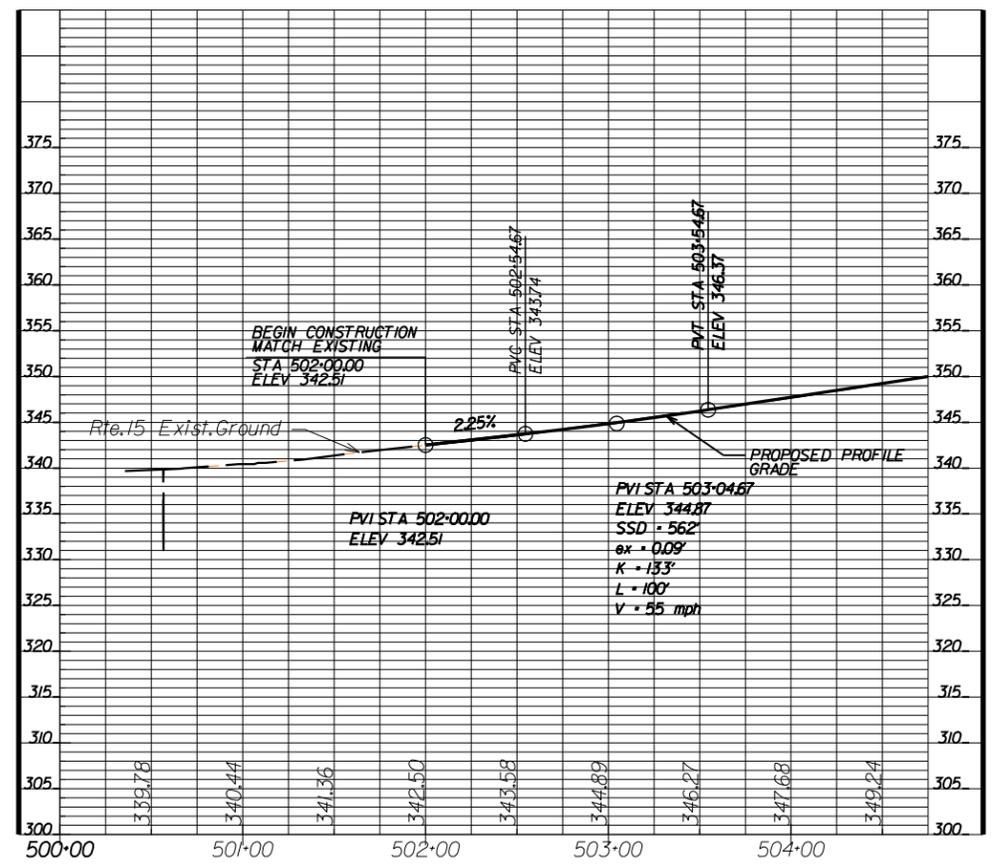
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 0066-076-074 PE-101	3

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

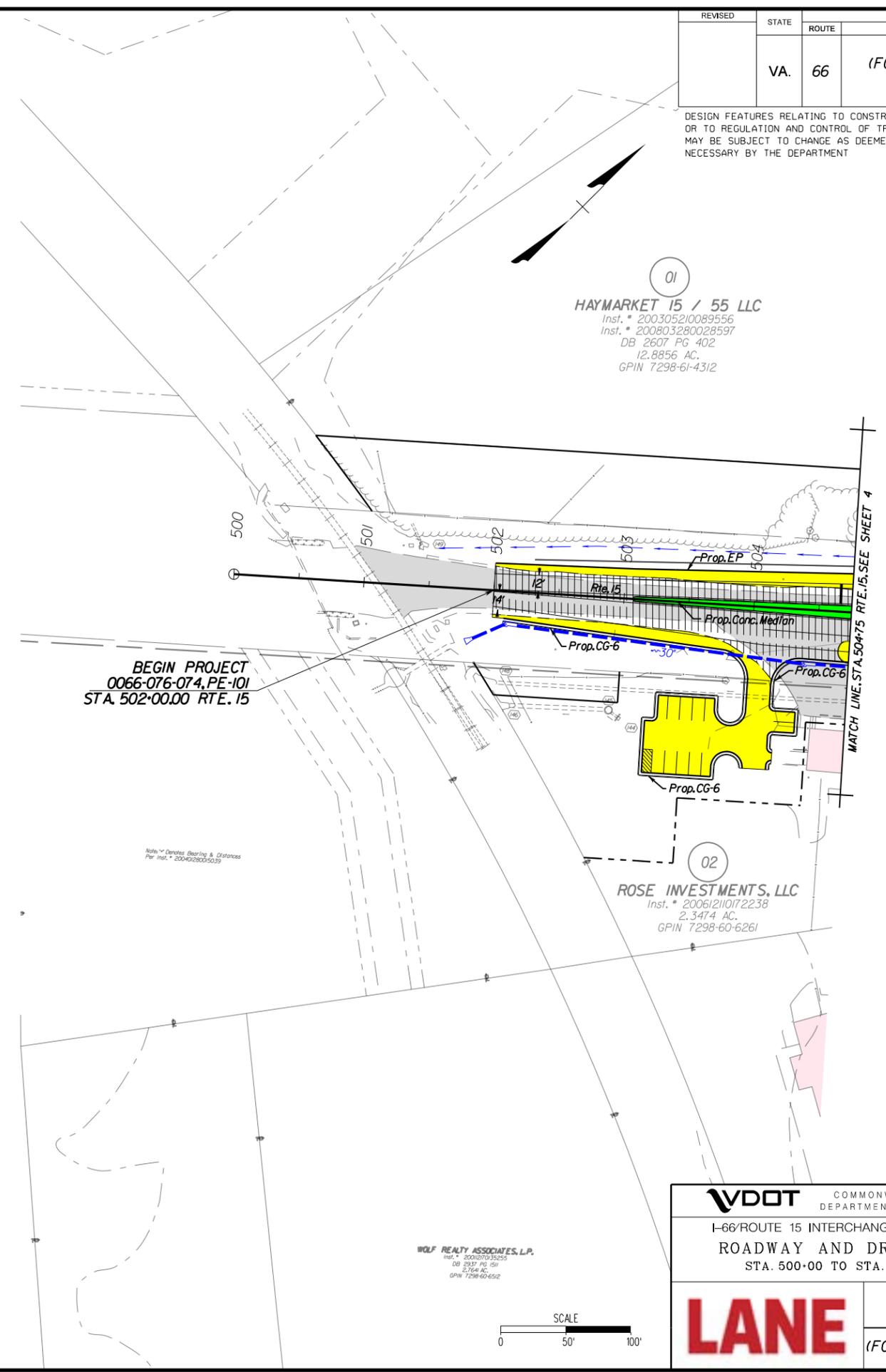
LEGEND

-  Mill & Overlay
-  Full Depth Pave.

Profile Rte.15, Sta. 500 to 504+75



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



VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
ROADWAY AND DRAINAGE PLAN
STA. 500+00 TO STA. 504+75 RTE. 15

LANE

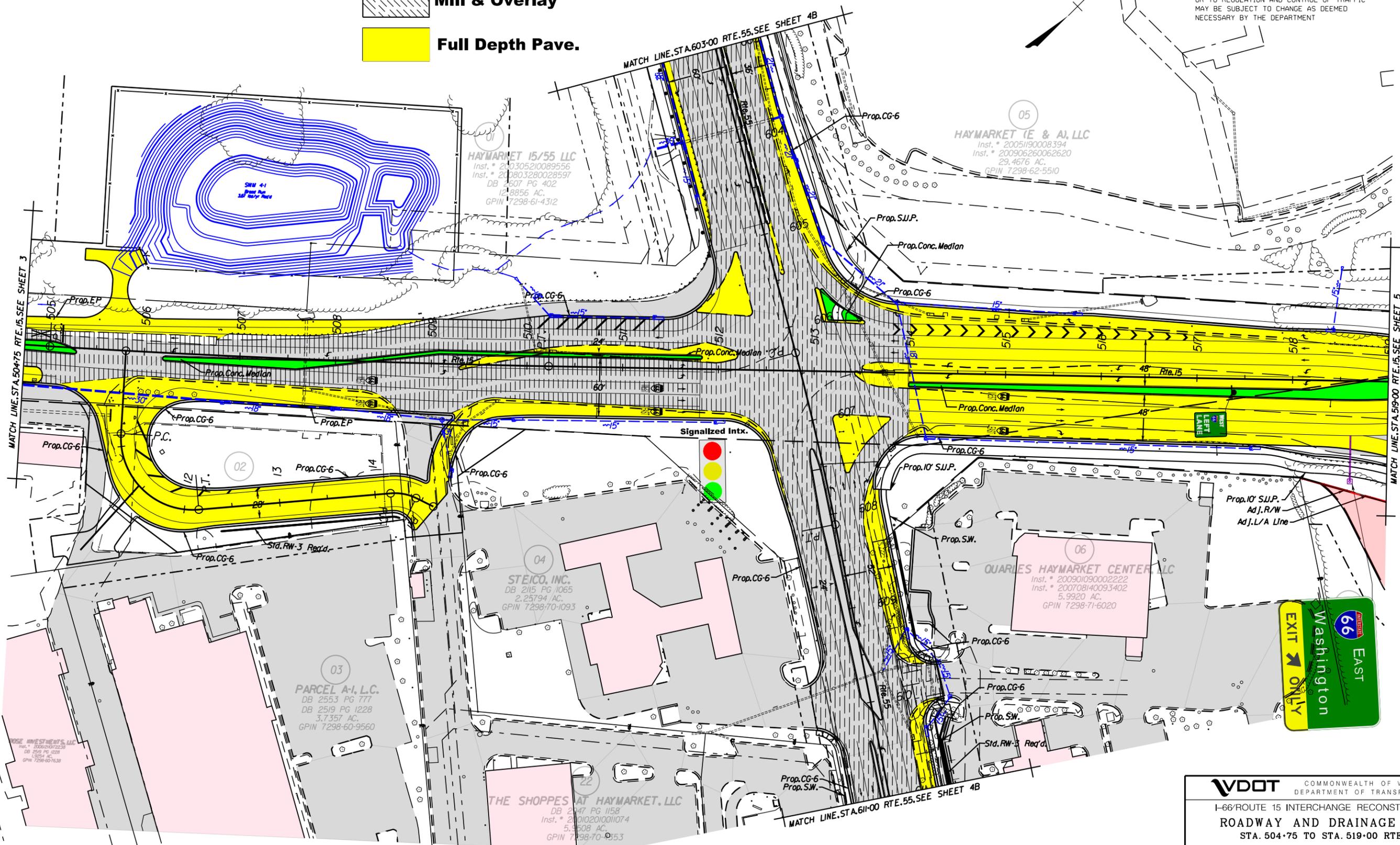
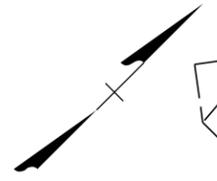
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 0066-076-074 PE-101	4

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

LEGEND

-  Mill & Overlay
-  Full Depth Pave.



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

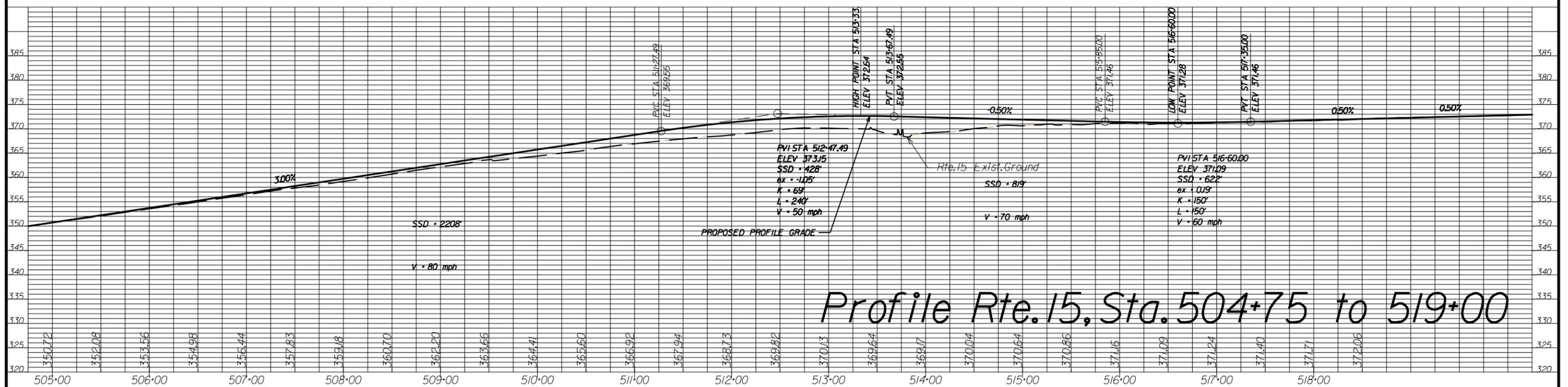
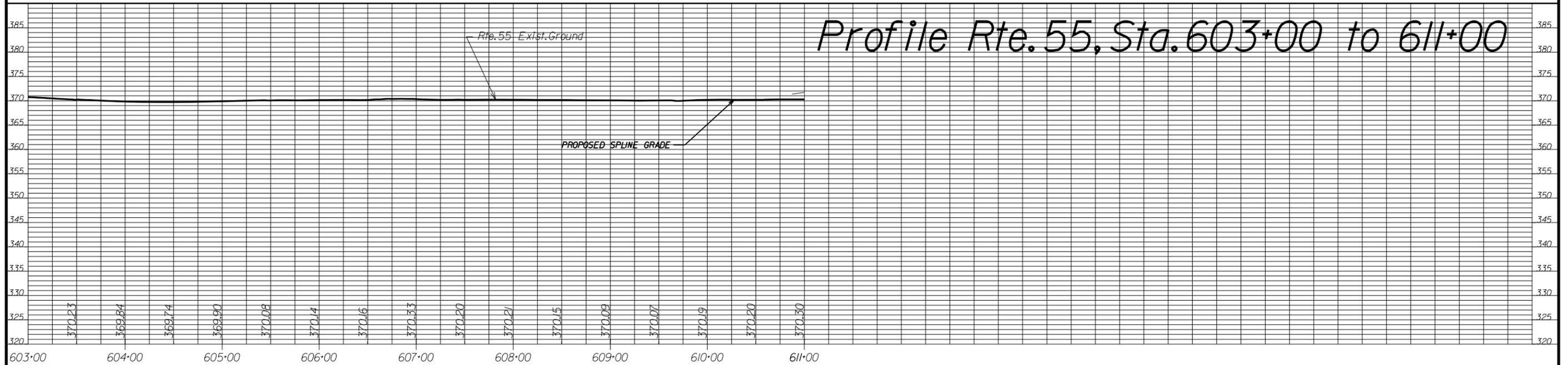
VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
ROADWAY AND DRAINAGE PLAN
STA. 504+75 TO STA. 519+00 RTE. 15

LANE PROJECT (FO) 0066-076-074 PE-101 SHEET NO. 4

PROJECT MANAGER BY *Amir Salahshoor, PE / Nd/va L&D (703) 259-1957*
 SURVEYED BY *Rice Associates*
 DESIGNED SUPERVISED BY *Peter Bonaccorsi, PE / HNTB (703) 824-5100*
 DESIGNED BY *HNTB Corporation*

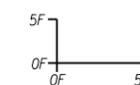
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 0066-076-074 PE-101	4A

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



\$FILES\$
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 Pen Table = \$PENTBL\$

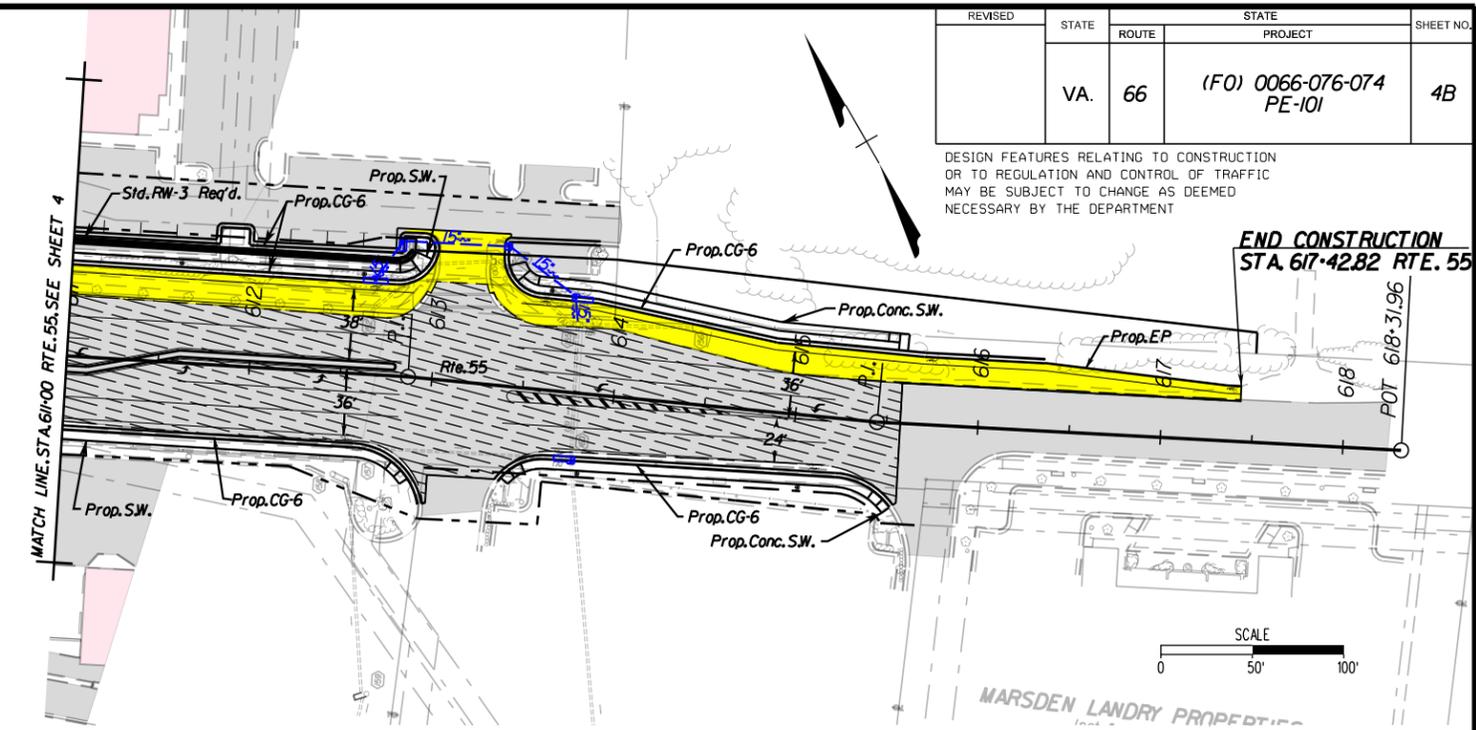
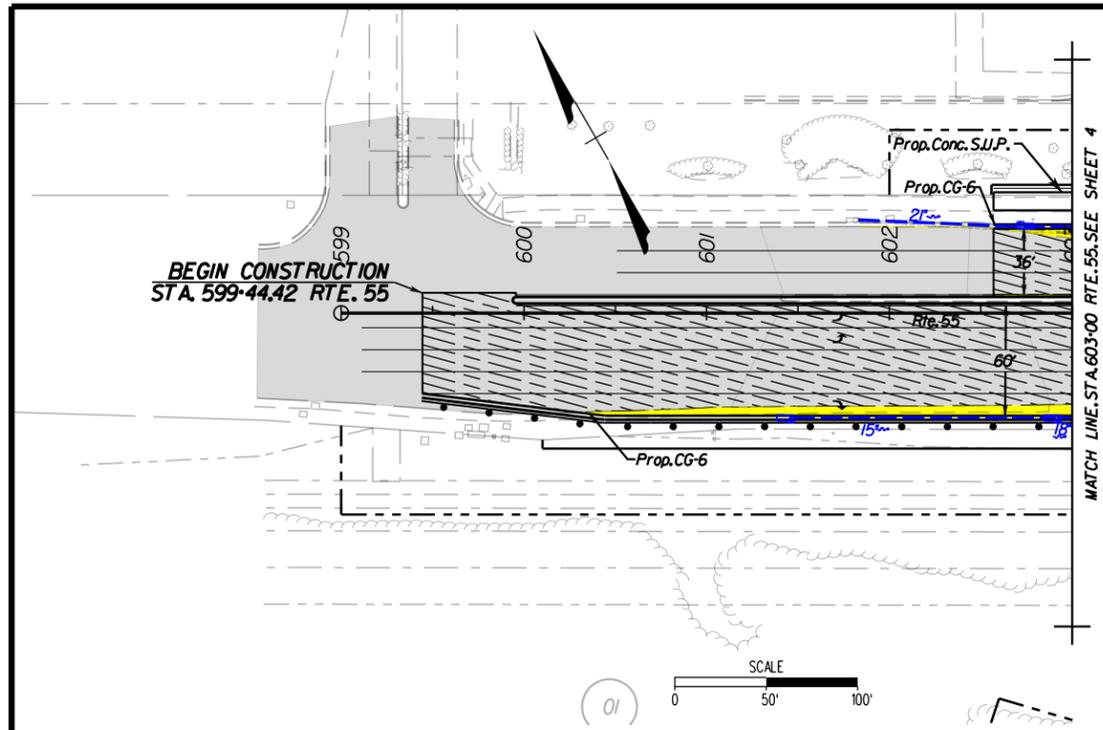
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



PROFILES			
Scale	HORIZ. 1" = 50'-0"	VERT. 1" = 10'-0"	Date
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
A	0066-076-074		4A

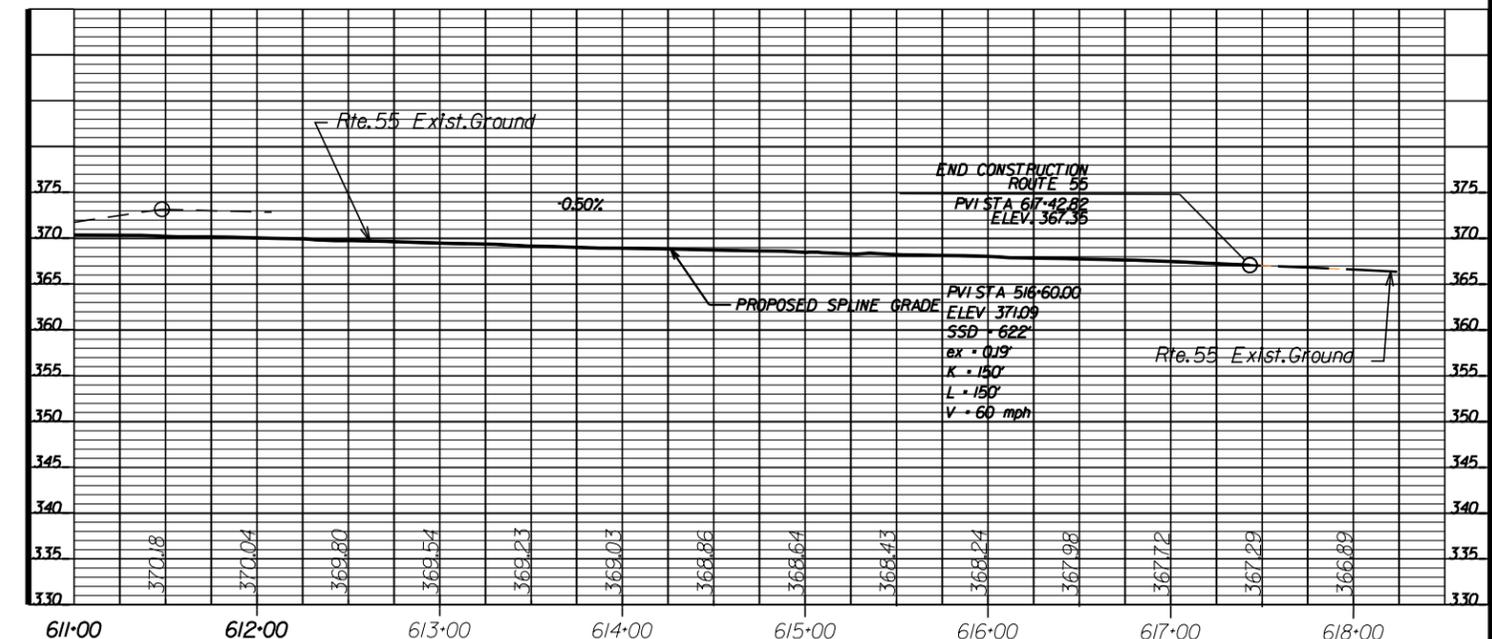
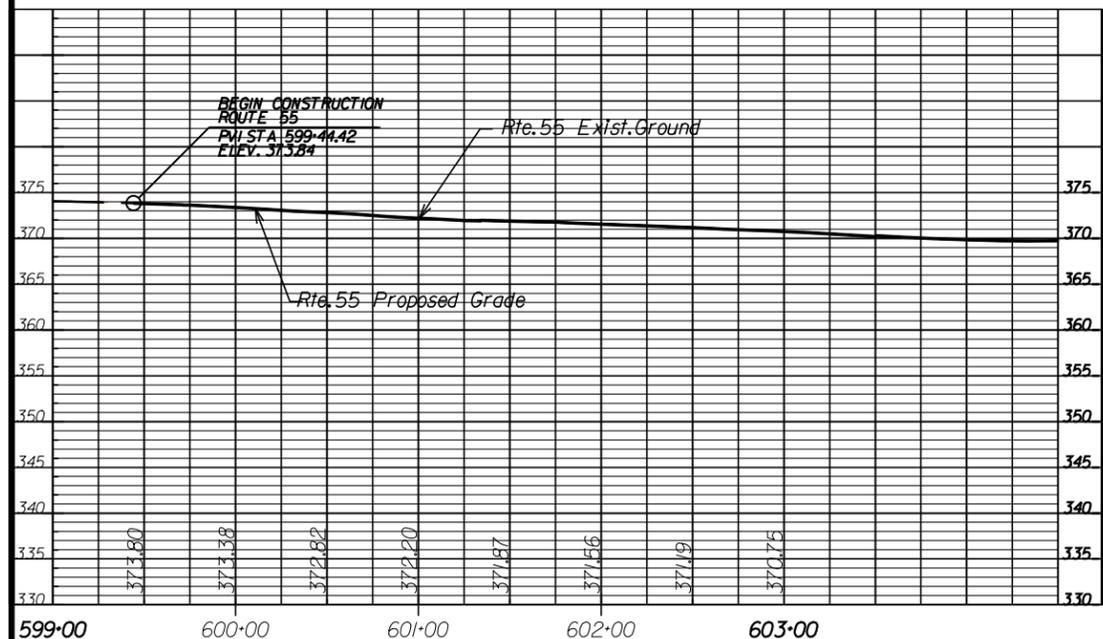
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 0066-076-074 PE-101	4B

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

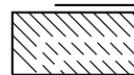


Profile, Rte. 55, Sta. 599+00 to 603+00

Profile, Rte. 55, Sta. 611+00 to 618+00



LEGEND

-  Mill & Overlay
-  Full Depth Pave.

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

VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

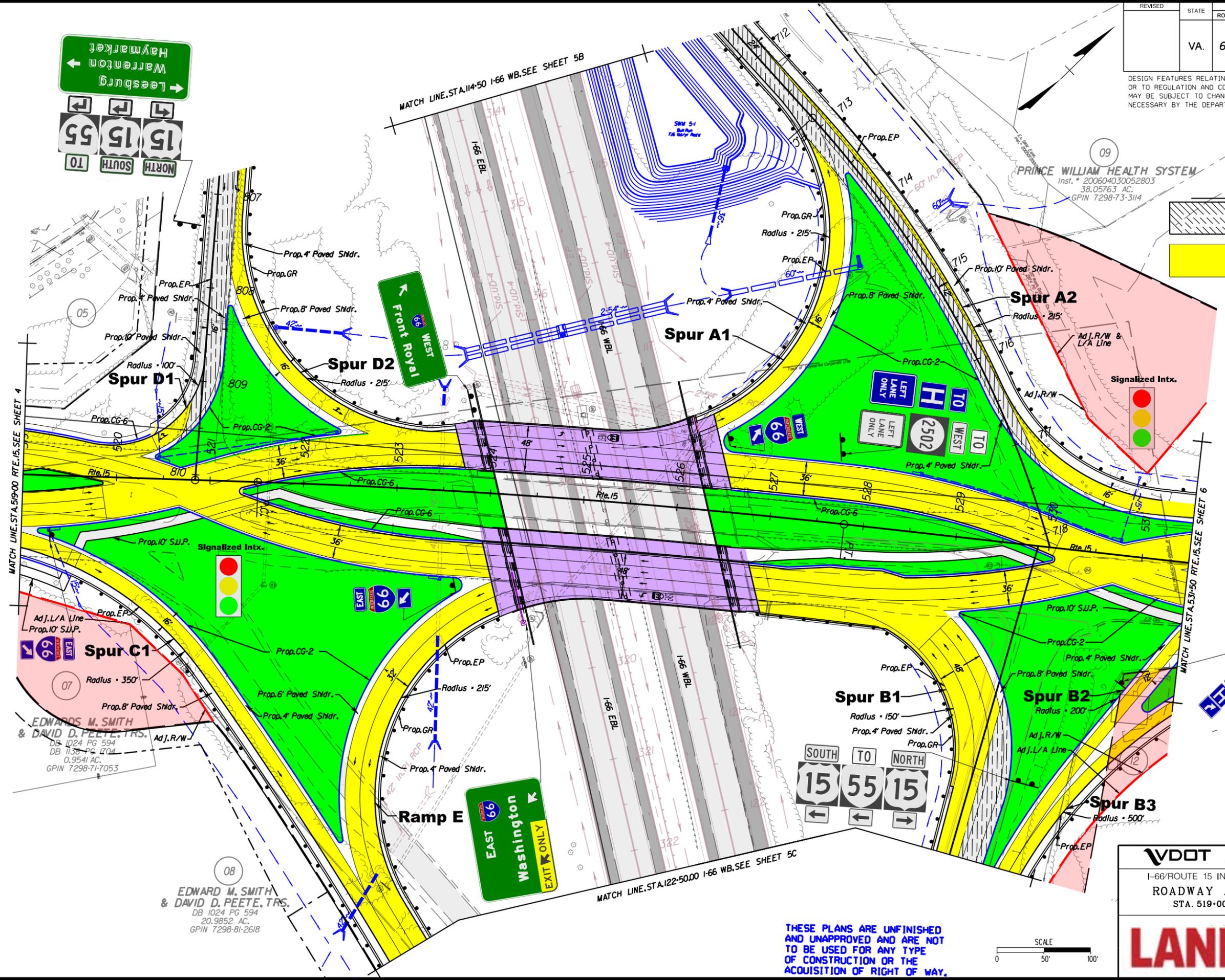
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
ROADWAY AND DRAINAGE PLAN
STA. 611+00 TO STA. 617+43 RTE. 55

LANE

PROJECT	SHEET NO.
(FO) 0066-076-074 PE-101	4B

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 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



LEGEND

- Mill & Overlay
- Full Depth Pave.

09
PRINCE WILLIAM HEALTH SYSTEM
Inst. # 200604030052803
38.05763 AC.
GPIN 7298-73-3114

MATCH LINE STA. 519+00 RTE. 15 SEE SHEET 4

MATCH LINE STA. 531+50 RTE. 15 SEE SHEET 6

EDWARDS M. SMITH & DAVID D. PEETE, TRS.
DB 1024 PG 594
DB 1138 PG 0704
0.9541 AC.
GPIN 7298-71-7053

08
EDWARD M. SMITH & DAVID D. PEETE, TRS.
DB 1024 PG 594
20.9852 AC.
GPIN 7298-81-2618

MATCH LINE STA. 122+50.00 I-66 WB. SEE SHEET 5C

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



VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
ROADWAY AND DRAINAGE PLAN
STA. 519+00 TO STA. 531+50 RTE. 15

LANE

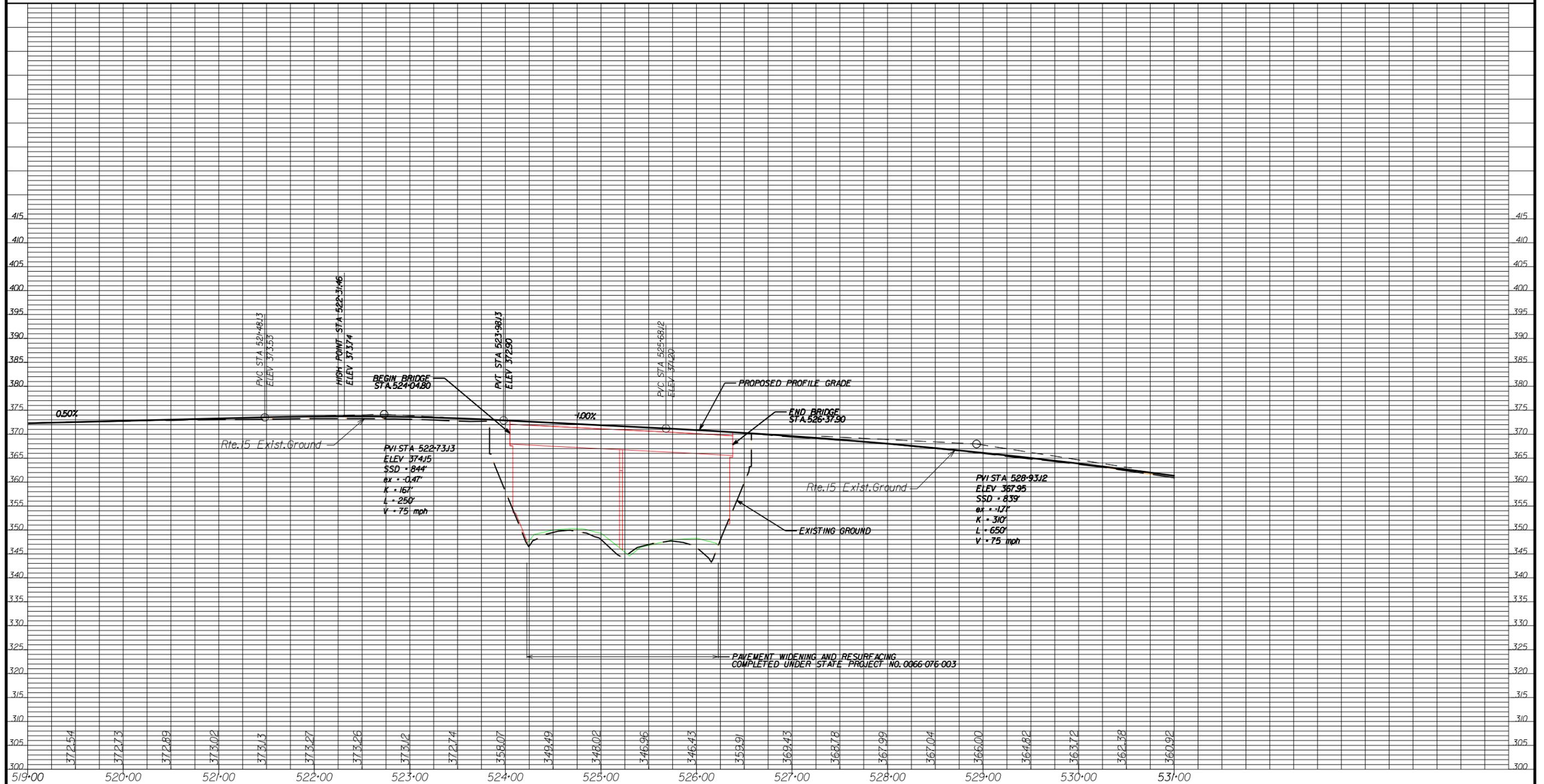
PROJECT	SHEET NO.
(FO) 0066-076-074 PE-101	5

PROJECT MANAGER BY *Amir Salahshor, PE / Nd/va L&D (703) 259-1957*
 SURVEYED BY *Rice Associates*
 DESIGNED SUPERVISED BY *Peter Bonaccorsi, PE / HNTB (703) 824-5100*
 DESIGNED BY *HNTB Corporation*

Profile Rte.15, Sta. 519 to 531+50

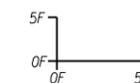
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 0066-076-074 PE-101	5A

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



\$FILES
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 Pen Table = \$PENTBL\$
 \$TIMES
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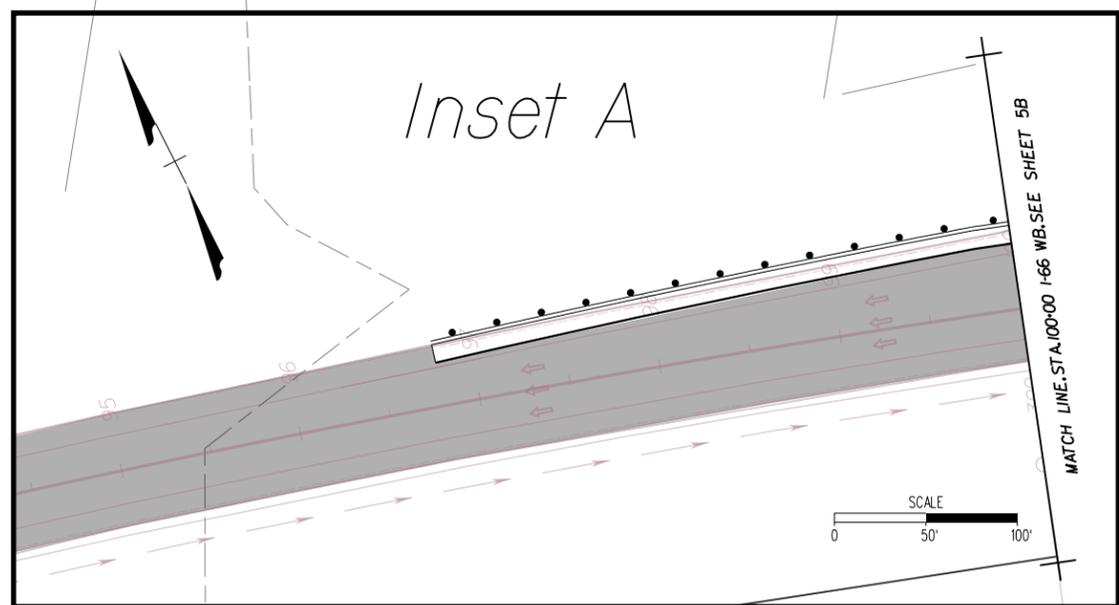
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



PROFILES			
Scale	HORIZ. 1" = 50'-0"	VERT. 1" = 10'-0"	Date
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
A	0066-076-074		5A

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

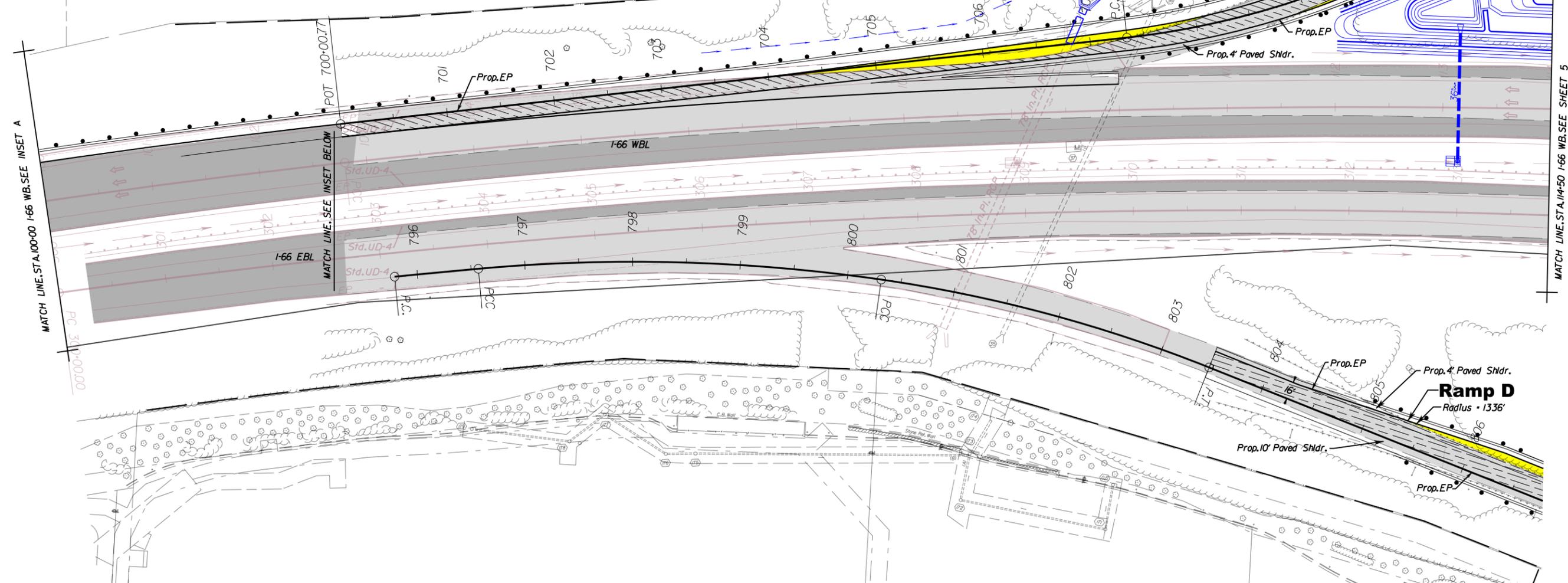
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



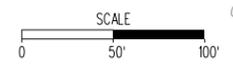
LEGEND

- Mill & Overlay
- Full Depth Pave.

09
PRINCE WILLIAM HEALTH SYSTEM
Inst. # 200604030052803
38.05763 AC.
GPIN 7298-73-3114



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



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

VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
ROADWAY AND DRAINAGE PLAN
STA. 700+00 TO STA. 713+14 RAMP A
STA. 804+31 TO STA. 808+00 RAMP D

LANE

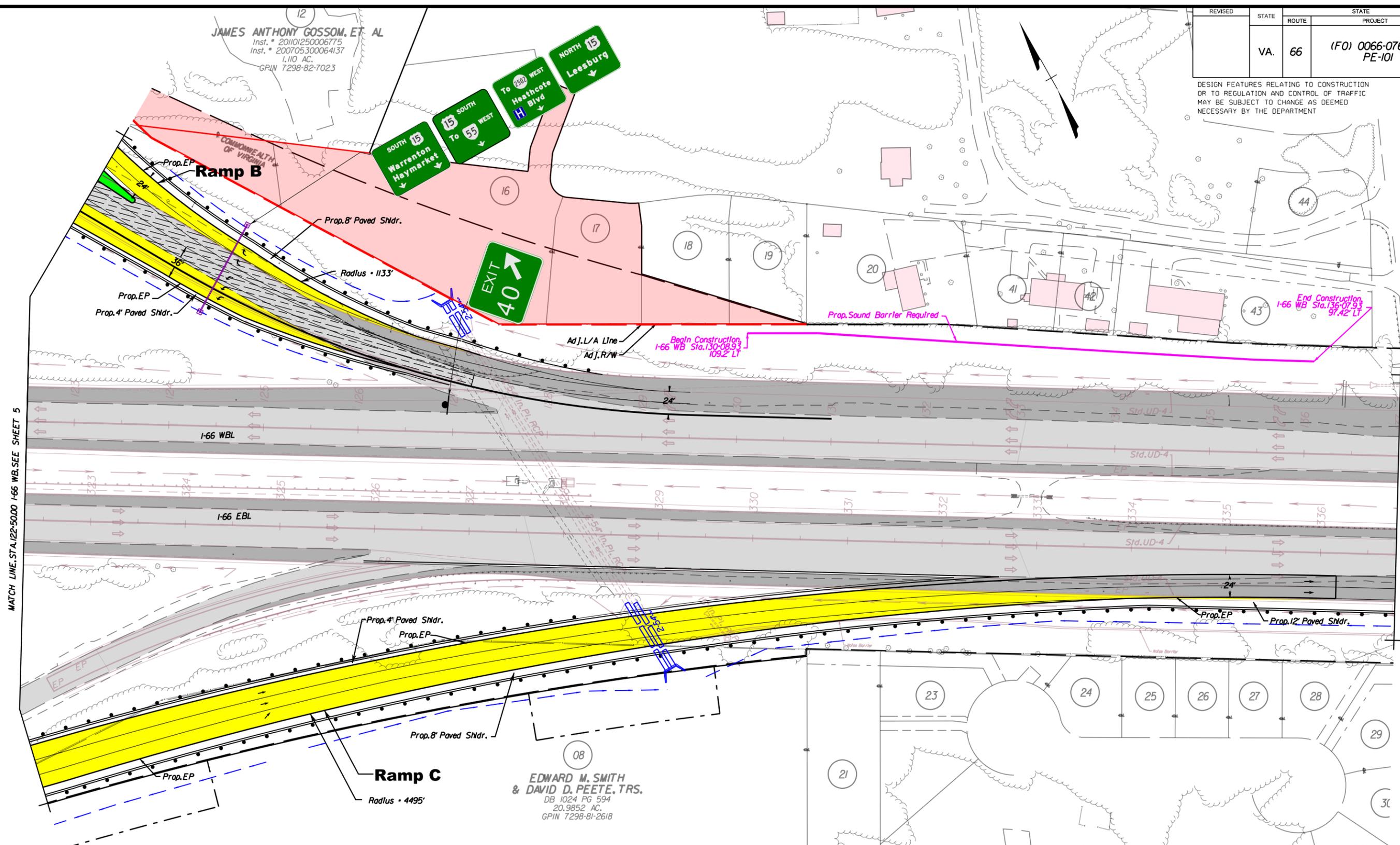
PROJECT (FO) 0066-076-074 PE-101	SHEET NO. 5B
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REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 0066-076-074 PE-101	5C

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

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

EDWARD M. SMITH & DAVID D. PEETE, TRS.
DB 1024 PG 594
20.9852 AC.
GPIN 7298-81-2618



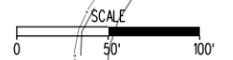
MATCH LINE STA. 122+50.00 I-66 WB. SEE SHEET 5

MATCH LINE STA. 137+00 I-66 WB. SEE SHEET 5D

LEGEND

- Mill & Overlay
- Full Depth Pavement

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



ROADWAY AND DRAINAGE PLAN
 STA. 857+40 TO STA. 896+78
 I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
 1"=50'-0"

LANE

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

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

CHARLES FRANKLIN ENG., P.C.
 CIVIL & SURVEYING ENGINEERS
 0.7462 AC.
 GPIN 7398-01-7217

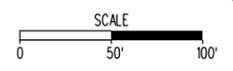
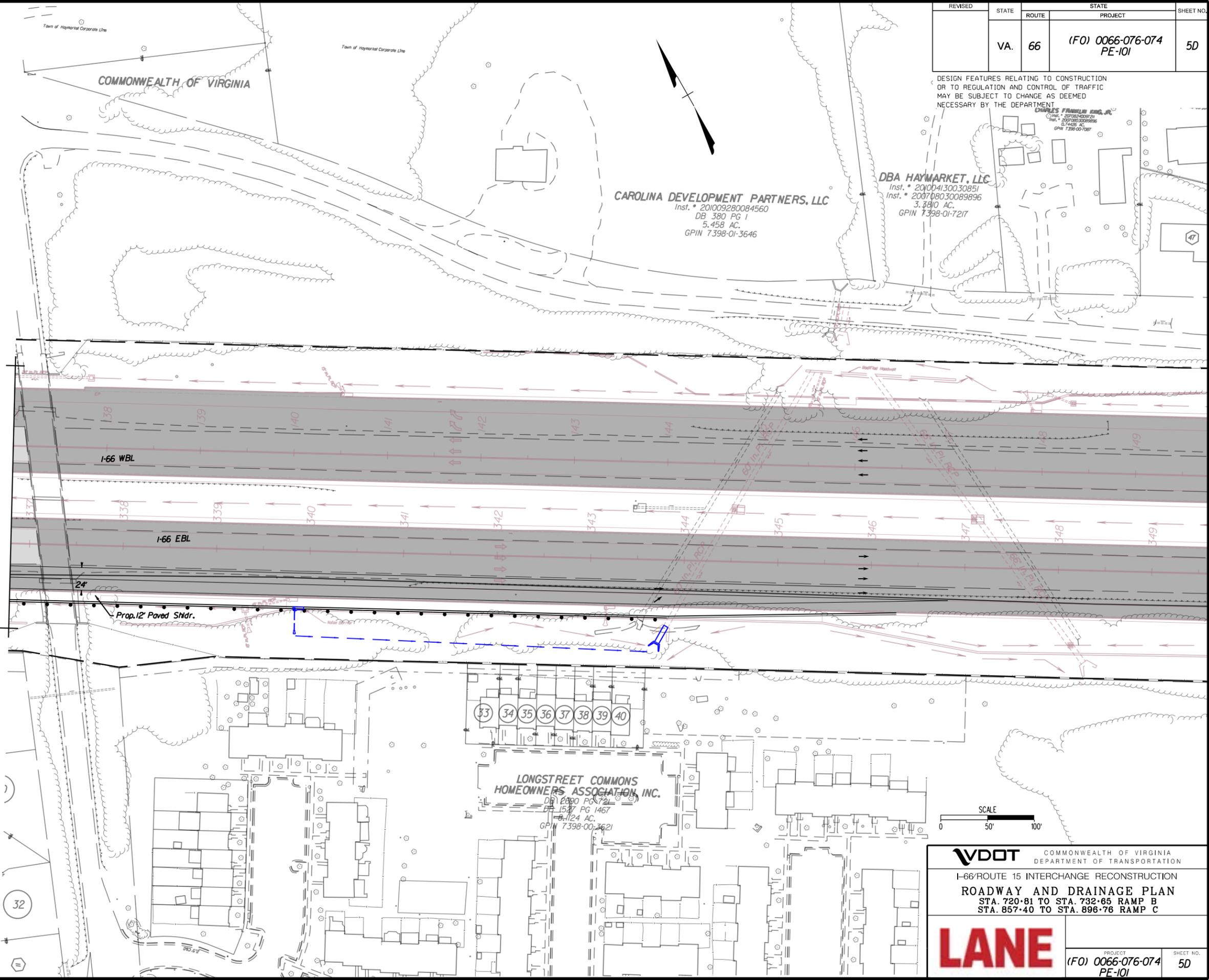
DBA HAYMARKET, LLC
 Inst. # 201004130030851
 Inst. # 200708030089896
 3.8310 AC.
 GPIN 7398-01-7217

CAROLINA DEVELOPMENT PARTNERS, LLC
 Inst. # 201009280084560
 DB 380 PG 1
 5.458 AC.
 GPIN 7398-01-3646

LEGEND

-  Mill & Overlay
-  Full Depth Pave.

MATCH LINE STA. 37+00 I-66 WB. SEE SHEET 5C



VDOT COMMONWEALTH OF VIRGINIA
 DEPARTMENT OF TRANSPORTATION
 I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
 ROADWAY AND DRAINAGE PLAN
 STA. 720+81 TO STA. 732+65 RAMP B
 STA. 857+40 TO STA. 896+78 RAMP C

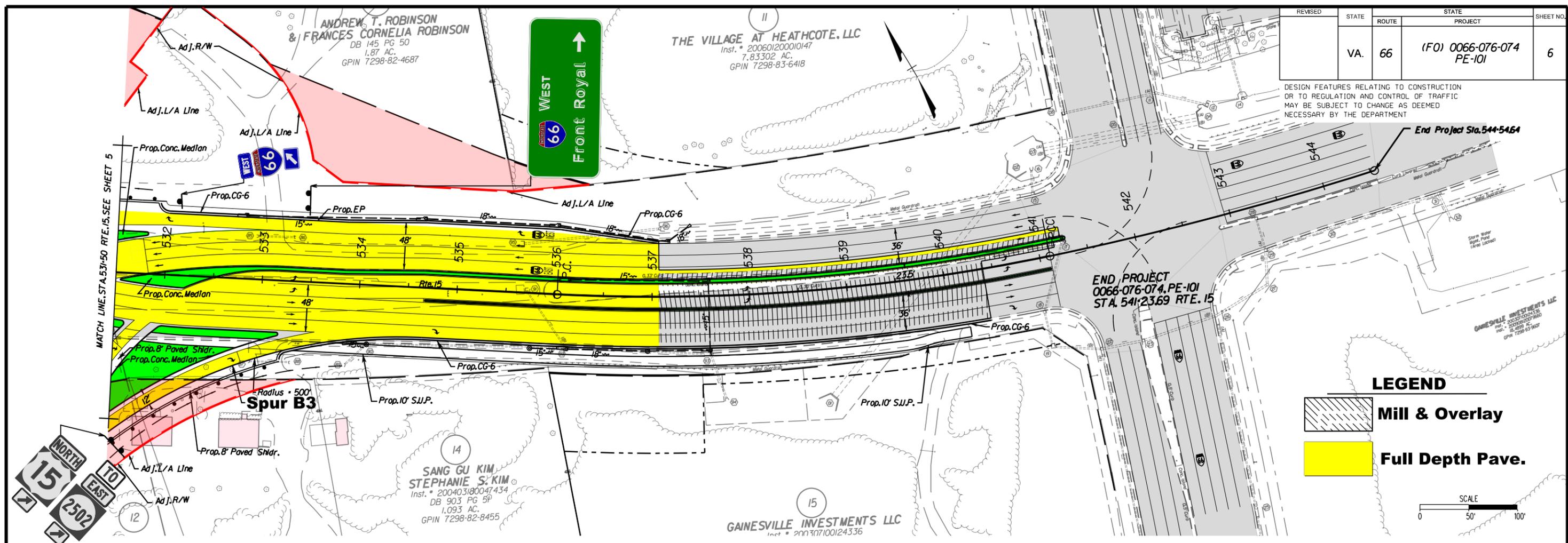
LANE

PROJECT (FO) 0066-076-074 PE-101	SHEET NO. 5D
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THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

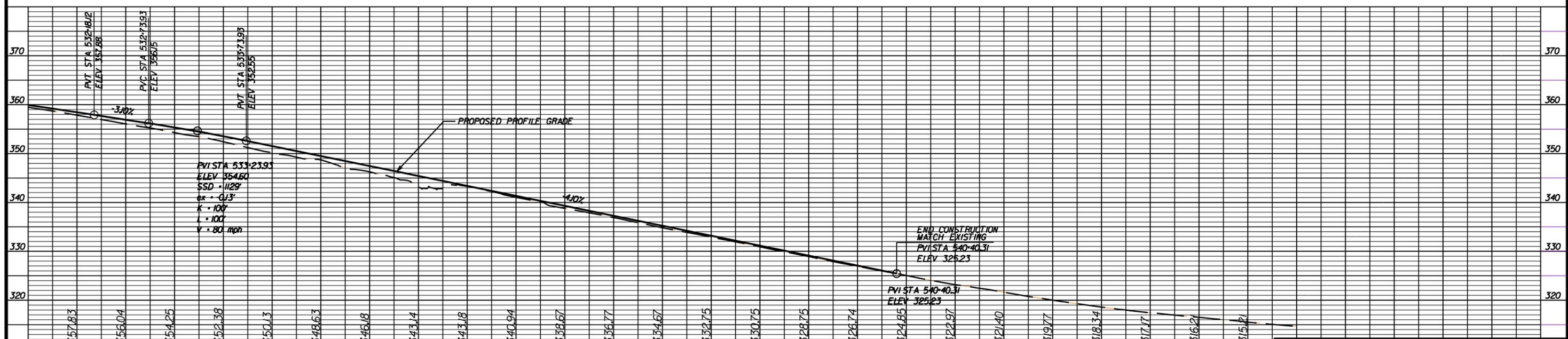
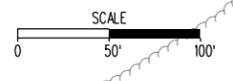
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	VA.	66	(FO) 0066-076-074 PE-101	6

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



LEGEND

- Mill & Overlay
- Full Depth Pave.



VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION
ROADWAY AND DRAINAGE PLAN
STA. 134+50 TO STA. 147+00 I-66 WB

LANE

PROJECT (FO) 0066-076-074
PE-101

SHEET NO. 6

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



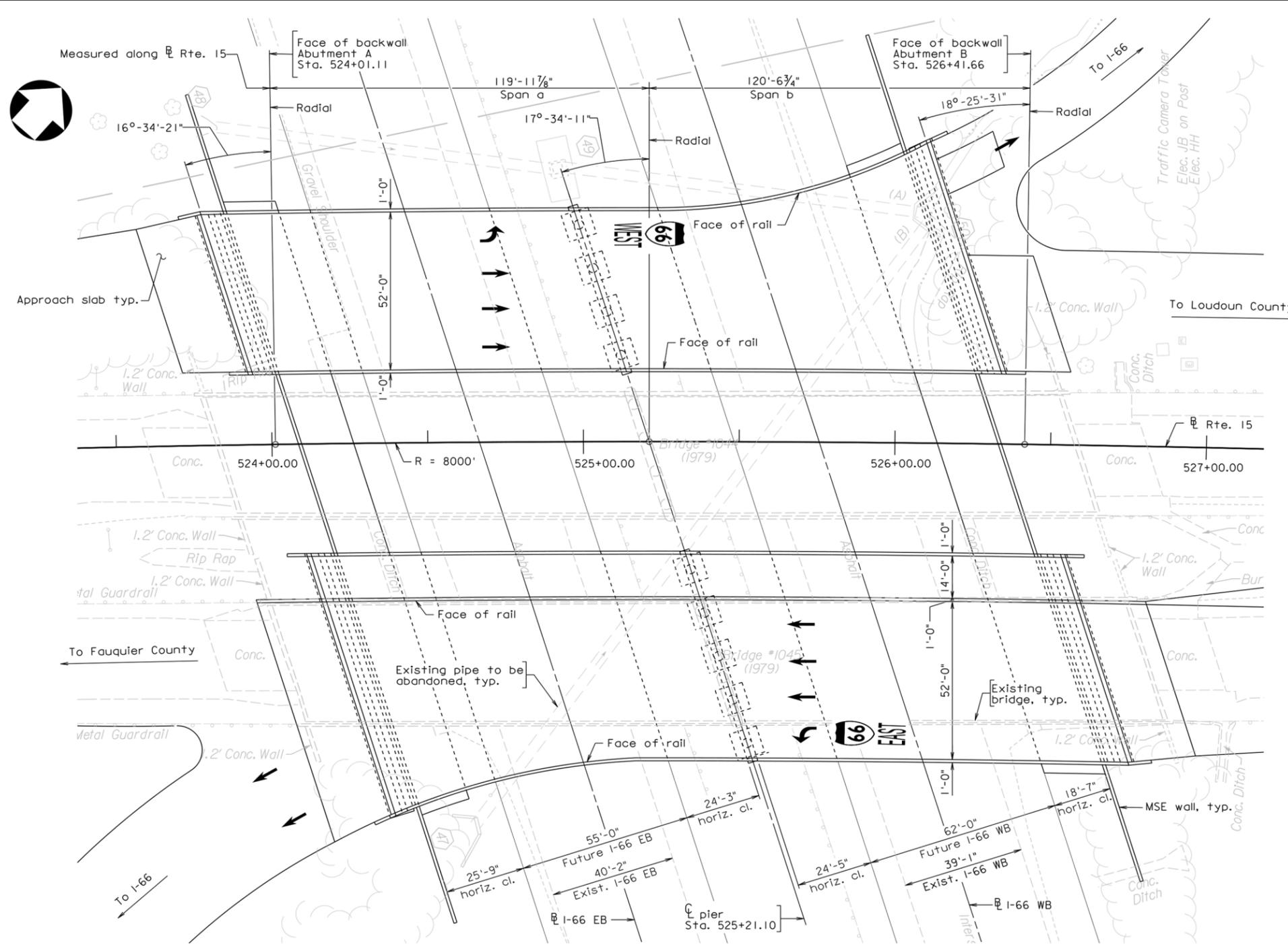
STATE	FEDERAL AID		STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT	NO.
VA.		15	0066-076-074	1
NBIS Number: 00000000030013		UPC No. 100566		
Federal Oversight Code: F0		FHWA Construction and Scour Code: X271-SN		

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

- Width: NBL: 52.0' to 78.6' roadway.
- SBL: 14.0' Shared Use Path, 52.0' to 72.9' roadway.
- Span layout: 120'-120.5' continuous steel plate girders
- Capacity: HL-93 loading.
- Drainage area: () sq. mi.
- Specifications:
 - Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007.
 - Design: AASHTO LRFD Bridge Design Specifications, 6th Edition, 2012; and VDOT Modifications.



PRELIMINARY PLANS
 THESE PLANS NOT TO BE USED FOR CONSTRUCTION



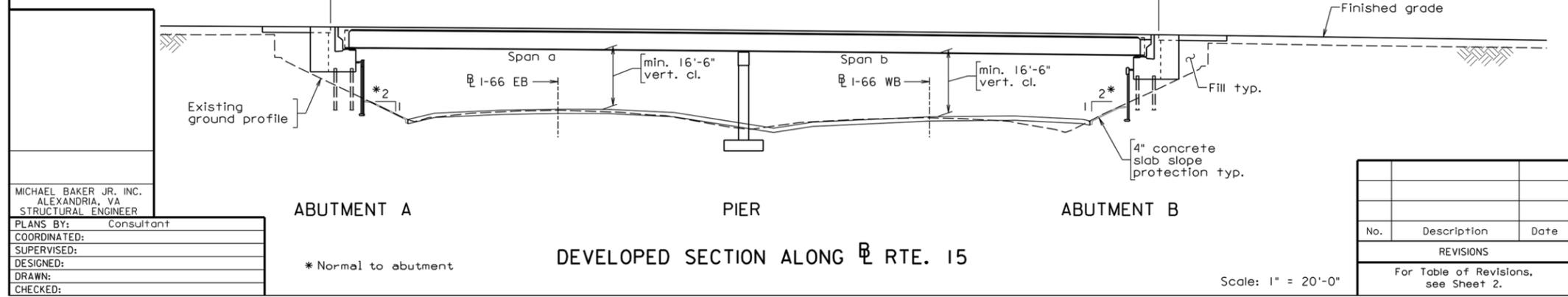
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
 PROPOSED BRIDGE ON
 ROUTE 15 OVER I-66
 PRINCE WILLIAM CO. - INT. I-66 AND RTE.15
 PROJ. 0066-076-074

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

Approved: _____ Date _____
 Chief Engineer

293-90

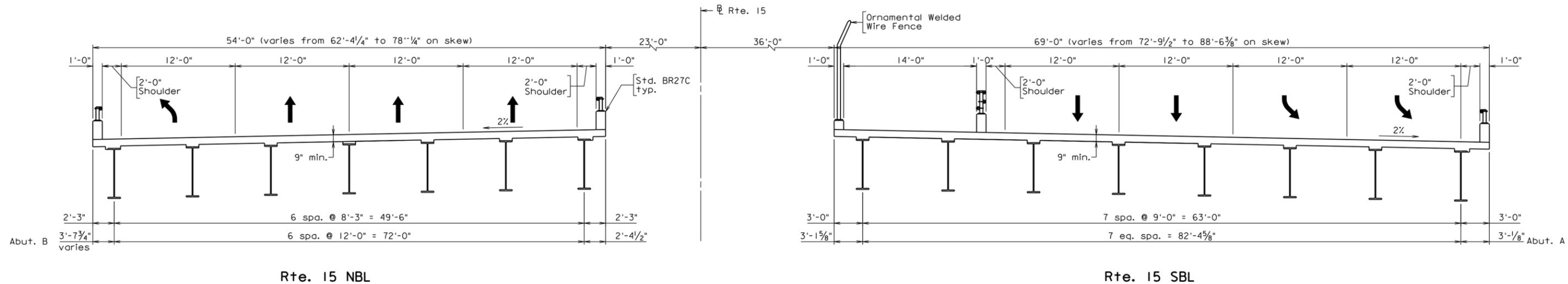
Date: January, 2014, _ _ _ _ © 2014, Commonwealth of Virginia Sheet 1 of 3



MICHAEL BAKER JR. INC. ALEXANDRIA, VA STRUCTURAL ENGINEER
PLANS BY: Consultant
COORDINATED:
SUPERVISED:
DESIGNED:
DRAWN:
CHECKED:

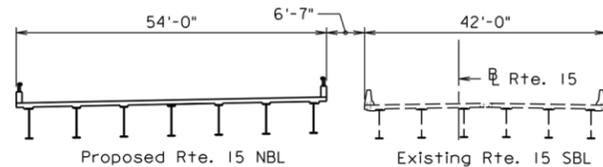
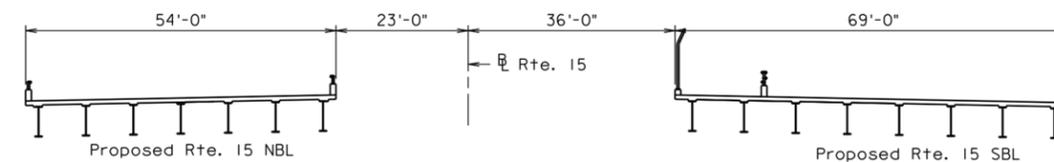
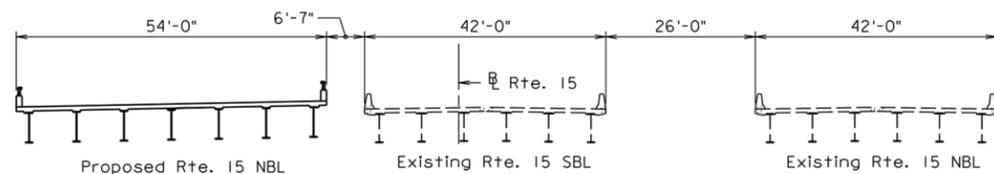
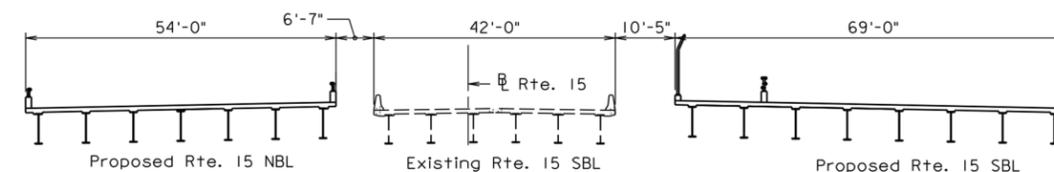
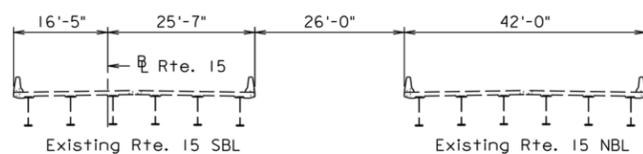
No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

Scale: 1" = 20'-0"



TYPICAL TRANSVERSE SECTION
Scale: 3/16" = 1'-0"

- Notes:
- All dimensions are radial to $\bar{\bar{C}}$ Rte. 15 for constant width nonunless otherwise noted.
 - Dimensions at abutments are measured along $\bar{\bar{C}}$ bearing.



- Notes:
- Dimensions are measured along radial.
 - Dimensions and locations for the existing structures are approximate.

STAGE 1 DEMOLITION

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

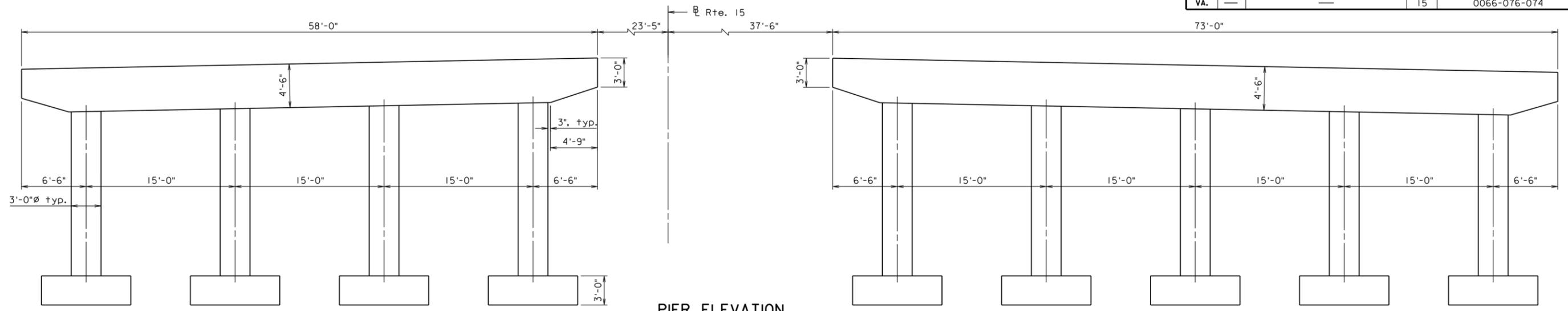
PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION STRUCTURE AND BRIDGE DIVISION			
CROSS SECTION CONSTRUCTION PHASING			
No.	Description	Date	Designed:
			Drawn:
			Checked:
Revisions		Date	Plan No.
		Jan. 2014	293-90
			Sheet No.
			2 of 3

MICHAEL BAKER JR., INC.
ALEXANDRIA, VA
STRUCTURAL ENGINEER

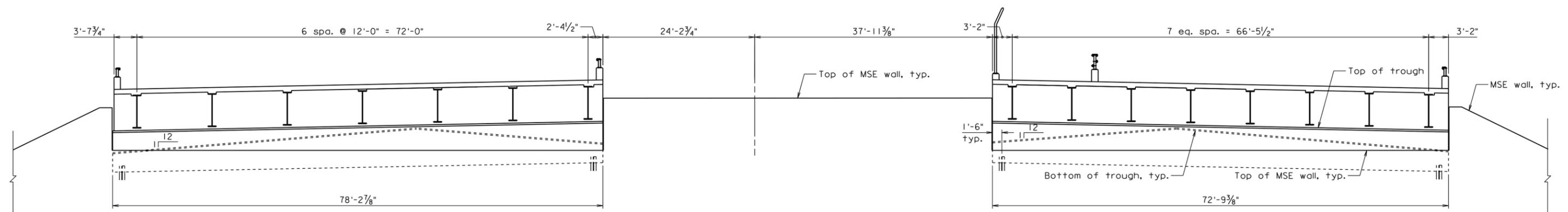
© 2014, Commonwealth of Virginia

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



PIER ELEVATION

Scale: $\frac{3}{16}'' = 1'-0''$
 Note: dimensions are measured along ℓ Pier.

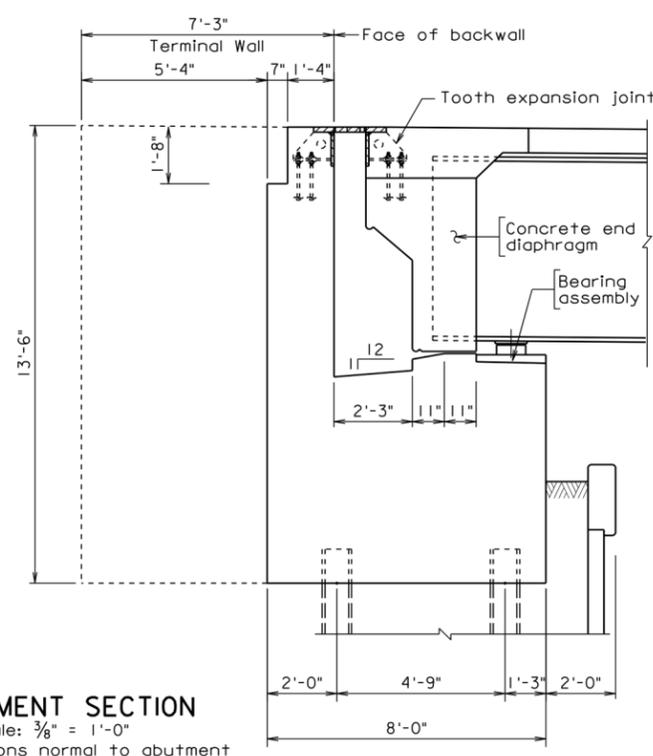


ABUTMENT B ELEVATION

Scale: $\frac{1}{8}'' = 1'-0''$
 Note: dimensions are measured along ℓ Abutment.

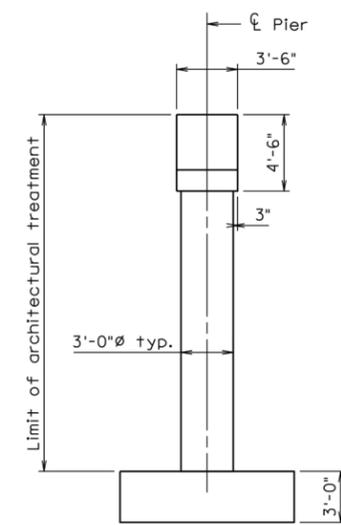
Notes:

1. Not all H-piles are shown.
2. Trough drainage connected to MSE wall drainage system through pipes.
3. Abutment B shown. Abutment A similar.



ABUTMENT SECTION

Scale: $\frac{3}{8}'' = 1'-0''$
 Note: dimensions normal to abutment



PIER END VIEW

Scale: $\frac{3}{16}'' = 1'-0''$

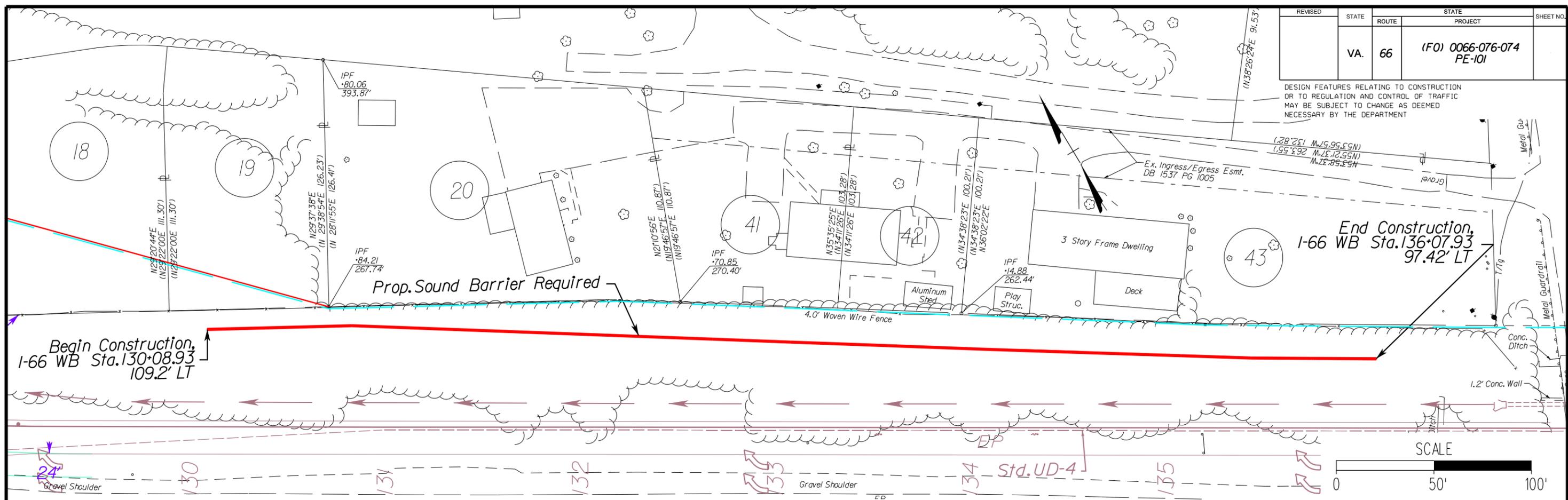
PRELIMINARY PLANS
 THESE PLANS NOT TO BE USED FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION					
STRUCTURE AND BRIDGE DIVISION					
PIERS ABUTMENTS					
No.	Description	Date	Designed:	Date	Plan No.
			Drawn:	Jan. 2014	293-90
			Checked:		3 of 3
Revisions					

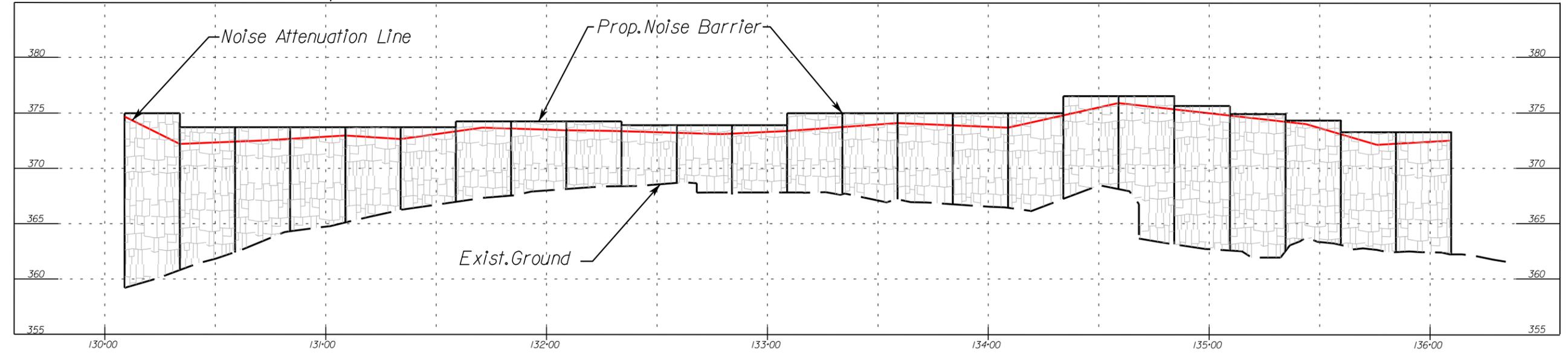
VDOT S&B DIVISION
 RICHMOND, VA
 STRUCTURAL ENGINEER

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	66	(FO) 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

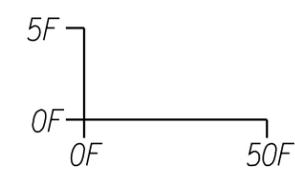


Prop. Noise Barrier, I-66 WB Sta. 130+08.93 to 136+07.93



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

Note: Architectural finish to comply with RFP Requirements and Contract Special Provisions



VDOT COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

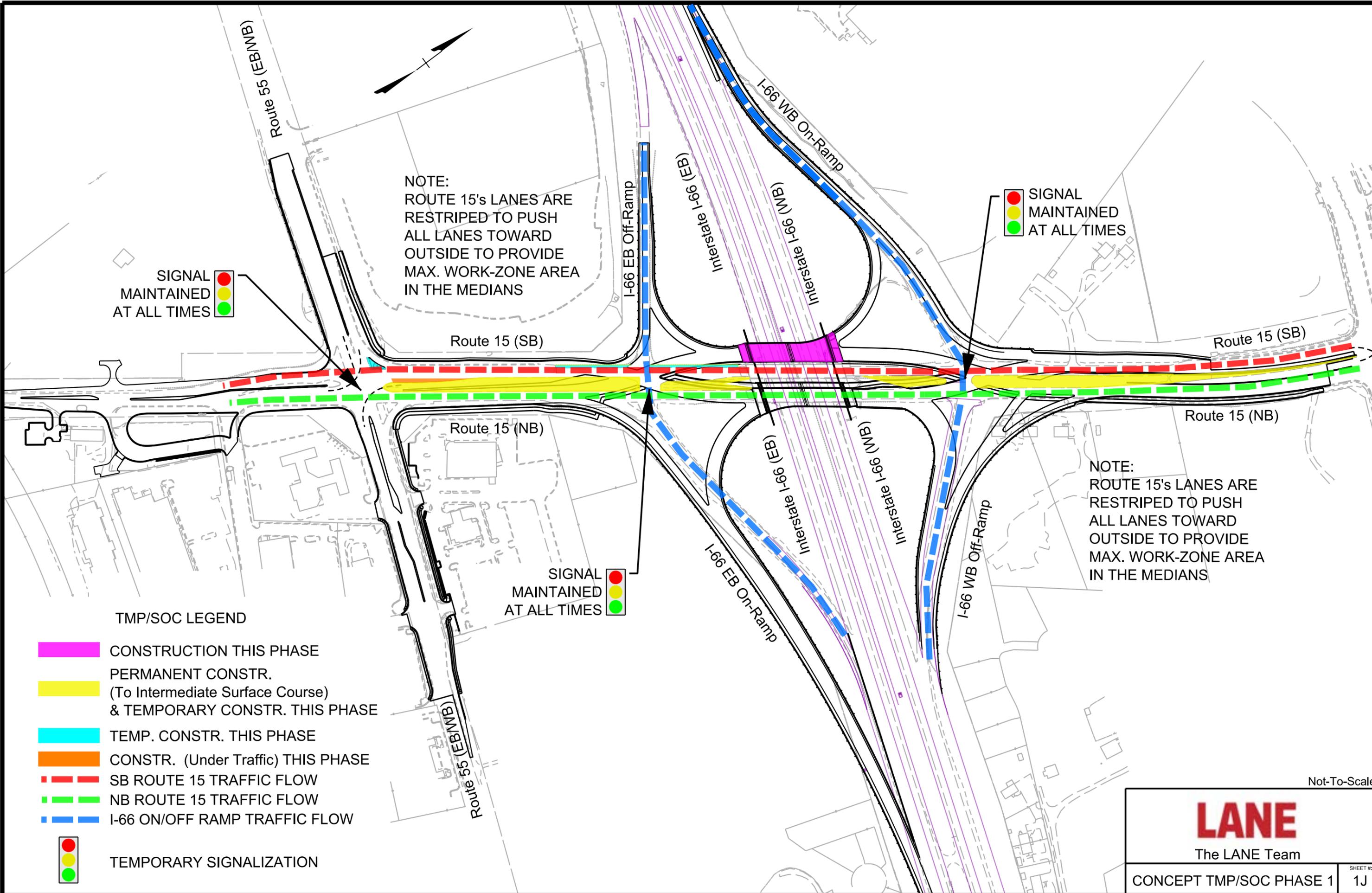
I-66/ROUTE 15 INTERCHANGE RECONSTRUCTION

LANE

PROJECT (FO) 0066-076-074
PE-101

SHEET NO.





SIGNAL
MAINTAINED
AT ALL TIMES

NOTE:
ROUTE 15's LANES ARE
RESTRIPE TO PUSH
ALL LANES TOWARD
OUTSIDE TO PROVIDE
MAX. WORK-ZONE AREA
IN THE MEDIANS

SIGNAL
MAINTAINED
AT ALL TIMES

SIGNAL
MAINTAINED
AT ALL TIMES

NOTE:
ROUTE 15's LANES ARE
RESTRIPE TO PUSH
ALL LANES TOWARD
OUTSIDE TO PROVIDE
MAX. WORK-ZONE AREA
IN THE MEDIANS

TMP/SOC LEGEND

- CONSTRUCTION THIS PHASE
- PERMANENT CONSTR.
(To Intermediate Surface Course)
& TEMPORARY CONSTR. THIS PHASE
- TEMP. CONSTR. THIS PHASE
- CONSTR. (Under Traffic) THIS PHASE
- SB ROUTE 15 TRAFFIC FLOW
- NB ROUTE 15 TRAFFIC FLOW
- I-66 ON/OFF RAMP TRAFFIC FLOW

TEMPORARY SIGNALIZATION

Not-To-Scale

<h1 style="margin: 0;">LANE</h1>	
The LANE Team	
CONCEPT TMP/SOC PHASE 1	SHEET # 1J

