



**March 14, 2014**

**ORIGINAL**

**LETTER OF SUBMITTAL**

---

**I-495 NORTHERN  
SECTION  
SHOULDER USE**

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**State Project No.: (FO) 0495-029-123, P101, C501  
Federal Project No.: STP-495-5(094)  
Contract ID No.: C00105130DB72**

**Submitted for:**



**Submitted by:**

**LANE**



**ATTACHMENT 4.0.1.1**

**I-495 Northern Section Shoulder Use in Fairfax County, Virginia**

**LETTER OF SUBMITTAL CHECKLIST AND CONTENTS**

Offerors shall furnish a copy of this Letter of Submittal Checklist, with the page references added, with the Letter of Submittal.

<b>Letter of Submittal Component</b>	<b>Form (if any)</b>	<b>RFP Part 1 Cross Reference</b>	<b>Page Reference</b>
<b>Letter of Submittal Checklist and Contents</b>	Attachment 4.0.1.1	Section 4.0.1.1	Appendix Attachment 4.0.1.1
<b>Acknowledgement of RFP, Revisions, and/or Addenda</b>	Attachment 3.4 (Form C-78-RFP)	Sections 3.4; 4.0.1.1	Appendix Attachment 3.4
<b>Letter of Submittal</b>	NA	Sections 4.1	1
Letter of Submittal on Offeror's letterhead	NA	Section 4.1.1	1
Offeror's full legal name and address	NA	Section 4.1.1	1
Authorized representative's original signature	NA	Section 4.1.1	3
Declaration of intent	NA	Section 4.1.2	1
120 day declaration	NA	Section 4.1.3	1
Point of Contact information	NA	Section 4.1.4	2
Principal Officer information	NA	Section 4.1.5	2
Offeror's Corporate Structure	NA	Section 4.1.6	2
Full Legal Name of Lead Contractor and Lead Designer	NA	Section 4.1.7	2
Offeror's VDOT prequalification information	NA	Section 4.1.8	2
DBE statement confirming Offeror is committed to achieving the required DBE goal	NA	Section 4.1.9	2

**ATTACHMENT 4.0.1.1**

**I-495 Northern Section Shoulder Use in Fairfax County, Virginia**

**LETTER OF SUBMITTAL CHECKLIST AND CONTENTS**

<b>Letter of Submittal Component</b>	<b>Form (if any)</b>	<b>RFP Part 1 Cross Reference</b>	<b>Page Reference</b>
Interim and Final Completion Date(s)	NA	Section 4.1.10	2
<b>Attachments to the Letter of Submittal</b>	NA	Section 4.2	Appendix Attachment 4.2
Affiliated and/ or Subsidiary Companies	Attachment 4.2.1	Section 4.2.1	Appendix Attachment 4.2.1
Certification Regarding Debarment Forms	Attachment 4.2.2(a) Attachment 4.2.2(b)	Section 4.2.2	Appendix Attachment 4.2.2(a) & 4.2.2(b)
Offeror's VDOT prequalification information	NA	Section 4.2.3	Appendix Attachment 4.2.3
Evidence of obtaining bonding	NA	Section 4.2.4	Appendix Attachment 4.2.4
Full size copies of DPOR licenses and SCC registrations	NA	Section 4.2.5	Appendix Attachment 4.2.5
SCC registration information - businesses	Attachment 4.2.5	Section 4.2.5.1	Appendix Attachment 4.2.5.1

**ATTACHMENT 4.0.1.1**

**I-495 Northern Section Shoulder Use in Fairfax County, Virginia**

**LETTER OF SUBMITTAL CHECKLIST AND CONTENTS**

<b>Letter of Submittal Component</b>	<b>Form (if any)</b>	<b>RFP Part 1 Cross Reference</b>	<b>Page Reference</b>
DPOR registration information - businesses	Attachment 4.2.5	Section 4.2.5.2	Appendix Attachment 4.2.5.2
Lead Contractor Work History Form	Attachment 4.2.6(a)	Section 4.2.6	Appendix Attachment 4.2.6(a)
Lead Designer Work History Form	Attachment 4.2.6(b)	Section 4.2.6	Appendix Attachment 4.2.6(b)
Conceptual Roadway Plans	NA	Section 4.2.7	Appendix Attachment 4.2.7
Offerers Technical Proposal Compliance	NA	Section 4.2.8	Appendix Attachment 4.2.8

**ATTACHMENT 3.4****COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFP NO. C00105130DB72  
PROJECT NO.: (FO) 0495-029-123, P101, C501

**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 3.4, 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 February 6, 2014– RFP  
(Date)
2. Cover letter of Addendum #1- March 6, 2014  
(Date)
3. Cover letter of Addendum, March 11, 2014  
(Date)



SIGNATURE



DATE





March 14, 2014

Mr. Bryan W. Stevenson, P.E.  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219

**RE: I-495 Northern Section Shoulder Use**

State Project No.: (FO) 0495-029-123, P101, C501; Federal Project No.: STP-495-5(094);  
Contract ID Number: C00105130DB72

Dear Mr. Stevenson:

The Lane Construction Corporation (LANE) is pleased to present this Letter of Submittal (**Section 4.1**) for the above referenced project to the Virginia Department of Transportation (VDOT). LANE was founded in 1890 and is one of the nation's top-rated heavy civil construction companies. We specialize in high quality road, bridge, mass-transit and airport construction. LANE has a long and successful history of project completion in the Commonwealth of Virginia managed from our regional office in Chantilly.

As a leader in design-build methodology (ranked as the 38<sup>th</sup> Top Design-Build Firm by *Engineering News-Record*), we appreciate the importance of partnering and have constructed nearly \$3 billion in design-build projects during the last decade. LANE's teaming and leadership experience enable us to deliver the innovative and technically sound results that VDOT and Virginia residents deserve.

LANE is the Offeror and will be the overall authority on the project as well as the Lead Contractor. We have teamed with Sabra, Wang & Associates, Inc. (Sabra Wang) as the Lead Designer. Together, we provide VDOT with a reputable team capable of completing this project on time and budget.

LANE and Sabra Wang, in conjunction with hand-selected specialty firms experienced with VDOT processes and procedures, will provide design and construction of the I-495 Northern Section Shoulder Use project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The LANE team has assembled committed personnel, with proven delivery of VDOT's requirements to meet the quality, safety and schedule demands of this Project.

**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 Price Proposal will remain in full force and effect for one hundred twenty (120) days following the date the Proposal is submitted to VDOT.

**The Lane Construction Corporation**

14500 Avion Parkway, Suite 200, Chantilly, VA 20151 USA T 703.222.5670 F 703.222.5960 LaneConstruct.com

An Equal Opportunity Employer M/F/D/V

**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 submittal.

Richard A. McDonough, Senior National Pursuits 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, Senior Vice President  
14500 Avion Parkway, Suite 200  
Chantilly, VA 20151  
Tel: (703) 222-5670 Fax: (703) 222-5960  
Email: MASchiller@laneconstruct.com

**4.1.6 Offeror's Corporate Structure:** LANE was founded in 1890 and was incorporated in the State of Connecticut on April 5, 1902. LANE will undertake the financial responsibility for the Project and has no known liability limitations. LANE's pre-qualification status/capabilities with VDOT are well in excess of the requirements of this project. LANE's co-sureties will furnish a single 100% performance bond and a single 100% payment bond.

**4.1.7 Lead Contractor and Lead Designer:** The full legal name of the Offeror is: The Lane Construction Corporation. The full legal name of the Lead Designer is: Sabra, Wang & Associates, Inc. LANE will serve as the prime/general contractor responsible for overall construction of the project and will serve as the legal entity who will execute the contract with VDOT. Sabra Wang will serve as the prime/lead design consulting firm responsible for the overall design of this Project under contract to Lane.

**4.1.8 Offeror's VDOT Prequalification Evidence:** Evidence from VDOT's online Prequalified List (L002/Active) is included in the Attachments to this Letter of Submittal and verifies that LANE is prequalified for this submission.

**4.1.9 DBE Statement:** LANE supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 11% goal for the design and construction of this Project utilizing Virginia certified DBE companies. LANE will take all necessary and reasonable steps to ensure that DBE firms have the maximum opportunity to compete for and perform services on this Design-Build contract.

**4.1.10 Final Completion Date:** In accordance with RFP Section 2.4.1, LANE proposes an Interim Milestone Date of December 31, 2014 and a Final Completion Date of June 30, 2015.

Through our proven performance, our team will deliver this Project on time and within budget. We appreciate the opportunity to submit our Letter of Submittal and look forward to working with VDOT on this important project.

**4.2.8 Offeror's Technical Proposal:** The Lane Construction Corporation'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.

The Lane Construction Corporation certifies the proposed limits of construction to include all stormwater management facilities are located within the right-of-way limits shown on the RFP Conceptual Plans with the exception of permanent and temporary easements.

The Lane Construction Corporation's design concept does not require Design Exceptions and/or Design Waivers unless they are identified or included in the RFP or Addendum(s).

Respectfully submitted,



Mark A. Schiller  
Senior Vice President

## 4.2 Attachments to the Letter of Submittal

**Attachment 4.2.1**  
**Affiliated and Subsidiary Companies of the Offeror**

**ATTACHMENT**  
**4.2.1**

**State Project No. (FO) 0495-029-123, P101, C501**

**Affiliated and Subsidiary Companies of The Lane Construction Corporation**

Offerors shall complete the table and include the addresses of affiliates or subsidiary companies as applicable. By completing this table, Offerors certify that all affiliated and subsidiary companies of the Offeror are listed.

<input type="checkbox"/> <b>The Offeror does not have any affiliated or subsidiary companies.</b>
<input checked="" type="checkbox"/> <b>Affiliated and/ or subsidiary companies of The Lane Construction Corporation are listed below.</b>

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
PARENT COMPANY	Lane Industries Incorporated	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Worldwide Infrastructure, Inc.	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Infrastructure, Inc.	90 Fieldstone Court Cheshire, CT 06410
AFFILIATE	Lane International, B.V.	Prins Bernhardplein 200 1097 JB Amsterdam The Netherlands
AFFILIATE	Lane Mideast Contracting, LLC	P.O. Box 35243 Abu Dhabi, UAE Makeen Tower Corner of 9th and 10th Streets
AFFILIATE	Lane Mideast, Qatar, LLC	Grand Hamad Street Bin Al Sheikh Bldg. 3 <sup>rd</sup> Floor Doha, Qatar
SUBSIDIARY	Lanecon Corporation	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (51% PARTNER)	Virginia Guardrail Partners	90 Fieldstone Court Cheshire, CT 06410

JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039
JOINT VENTURE (20% PARTNER)	AGL Constructors	729 West Adams Street Chicago, IL 60607
JOINT VENTURE (25% PARTNER)	Gemma-Lane Liberty Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (25% PARTNER)	Gemma-Lane Patriot Partners	769 Hebron Avenue Glastonbury, CT 06033

**Attachment 4.2.2(a)**  
**Certification Regarding Debarment Forms**  
**Primary Covered Transactions**

**ATTACHMENT 4.2.2(a)**  
**CERTIFICATION REGARDING DEBARMENT**  
**PRIMARY COVERED TRANSACTIONS**

**Project No.: (FO) 0495-029-123, P101, C501**

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

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

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

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

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

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

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



Signature

March 5, 2014

Date

Senior National Pursuits Manager

Title

The Lane Construction Corporation

Name of Firm

**Attachment 4.2.2(b)**  
**Certification Regarding Debarment Forms**  
**Lower Tier Covered Transactions**

**ATTACHMENT 4.2.2(b)**  
**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: (FO) 0495-029-123, P101, C501**

- 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	3/11/14	President Title
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Sabra, Wang & Associates, Inc.  
Name of Firm

**ATTACHMENT 4.2.2(b)**  
**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: (FO) 0495-029-123, P101, C501**

- 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.

	2/17/2014	Vice President
Signature	Date	Title

DMY Engineering Consultants Inc.  
Name of Firm

**ATTACHMENT 4.2.2(b)**  
**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: (FO) 0495-029-123, P101, C501**

- 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>Elizabeth Quinn</u>	<u>3/10/14</u>	<u>President</u>
Signature	Date	Title
<u>Quinn Consulting Services, Inc.</u>		
Name of Firm		

**ATTACHMENT 4.2.2(b)**  
**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: (FO) 0495-029-123, P101, C501**

- 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

March 4, 2014

Date

Director of Transportation

Title

**RINKER DESIGN ASSOCIATES, P.C.**

Name of Firm

**Attachment 4.2.3**  
**VDOT Prequalification Supporting Documentation**

TRANSPORT - E22  
LSPPREQ

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
PREQUALIFIED VENDORS SORTED BY VENDOR NAME  
THIS LIST INCLUDES ALL PREQUALIFIED LEVELS  
AS OF 02/14/2014  
- L -

02/14/2014  
2:02 PM  
PAGE 254

L002  
THE LANE CONSTRUCTION CORPORATION  
PREQ. EXP : 06/30/2014

--PREQ ADDRESS -----	WORK CLASSES (LISTED BUT NOT LIMITED TO)
90 FIELDSTONE COURT	002 - GRADING
CHESHIRE, CT 06410-1212	003 - MAJOR STRUCTURES
PHONE : 203-235-3351	004 - ASPHALT CONCRETE PAVING
FAX : 203-237-4260	006 - PORTLAND CEMENT CONCRETE PAVING
	007 - MINOR STRUCTURES
	045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: CAIOLA, VINCENT JAMES  
EMAIL: VAPREQUAL@LANECONSTRUCT.COM

-----DBE INFORMATION-----

DBE TYPE : N/A  
DBE CONTACT: N/A

=====

**Attachment 4.2.4**  
**Surety Letter**

**Zurich American Insurance Company**  
**Fidelity and Deposit Company of Maryland**  
**Liberty Mutual Insurance Company**

March 7, 2014

Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

RE: **The Lane Construction Corporation**  
**Request for Proposals**  
**I-495 Shoulder-North Section (UPC 105130)**  
**Project No.: (FO)0495-029-123, P101, C501 / Contract ID No. C00105130DB72**  
**Estimated Value of Project: \$20,000,000.00 - \$30,000,000.00**

To Whom It May Concern:

This letter will serve to confirm that The Lane Construction Corporation is a highly regarded and valued client of Aon Risk Services Northeast and the sureties, Zurich American Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Fidelity and Deposit Company of Maryland (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV) and Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), the 'co-sureties'. Each surety company is licensed to conduct surety business in the state of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2013.

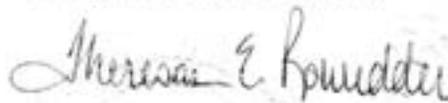
The Lane Construction Corporation has developed a strong track record of completing complex construction projects on time and within the available budget. In the recent past, the co-sureties have executed bonds on behalf of The Lane Construction Corporation for individual projects with contract values approaching \$350,000,000 and corresponding backlogs approaching \$2,000,000,000. At this time, The Lane Construction Corporation is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this Project.

Naturally, as is customary within the surety industry, the issuance of any bonds is contingent upon a favorable underwriting review of project specifics including, but not limited to, the contract terms, conditions, documents, bond forms and confirmation of complete project financing by both The Lane Construction Corporation and its co-sureties at the time a request for bonds is made. We assume no liability to third parties or to you by issuance of this letter, should bid or final bonds not be issued.

Should you need additional assurance regarding the technical ability or bonding capacity of The Lane Construction Corporation, please do not hesitate to contact this office.

Sincerely,

Zurich American Insurance Company  
Fidelity and Deposit Company of Maryland  
Liberty Mutual Insurance Company



Theresan E. Rowedder  
Attorney-in-Fact

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT, Jeffrey HENDRICKS and Jane GILSON, all of Boston, Massachusetts, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 30th day of May, A.D. 2013.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



*Eric D. Barnes*

By

*Assistant Secretary  
Eric D. Barnes*

*Thomas O. McClellan*

*Vice President  
Thomas O. McClellan*

State of Maryland  
City of Baltimore

On this 30th day of May, A.D. 2013, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Assistant Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

*Maria D. Adamski*



*Maria D. Adamski, Notary Public  
My Commission Expires: July 8, 2015*

**EXTRACT FROM BY-LAWS OF THE COMPANIES**

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

**CERTIFICATE**

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies,  
this 7<sup>th</sup> day of MARCH, 2014.



*Geoffrey Delisio*

Geoffrey Delisio, Vice President

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 8140293

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Brian Driscoll; Bryan Huff; Jane Gilson; Jean Correia; Jeffrey Hendricks; Kevin A. White; Maria Chaves; Mark P. Herendeen; Theresa E. Rowedder

all of the city of Boston state of MA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 31st day of May, 2013.



American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss  
COUNTY OF KING

On this 31st day of May, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings.** Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 7th day of MARCH, 2014.



By: David M. Carey  
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

**Attachment 4.2.5**  
**SCC and DPOR Information**

## ATTACHMENT 4.2.5

### State Project No. (FO)0495-029-123, P101, C501

#### SCC and DPOR Information

Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 4.2.5 and that all businesses listed are active and in good standing.

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFP Sections 4.2.5.1 and 4.2.5.2)</b>							
<b>Business Name</b>	<b>SCC Information (4.2.5.1)</b>			<b>DPOR Information (4.2.5.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Contractor (Class A)	2701011871	01/31/2016
Sabra, Wang & Associates, Inc.	F1343203	Foreign Corporation	Active	101 W. Broad St., Suite 301 Falls Church, VA 22046	Business Entity	0407005636	12/31/2015
Sabra, Wang & Associates, Inc.	F1343203	Foreign Corporation	Active	7066 Samuel Morse Dr. Suite 100 Columbia, MD 21046	Business Entity Branch Office	0411000839	02/29/2016
DMY Engineering Consultants Inc.	07688955	Corporation	Active	45662 Terminal Drive, Suite 110 Dulles, VA 20166	Business Entity	0407005631	12/31/2015
Quinn Consulting Services Incorporated	04925517	Corporation	Active	4094 Majestic Ln. # 281 Fairfax, VA 22033	Business Entity	0407003733	12/31/2015
Rinker Design Associates, P.C.	02270627	Corporation	Active	9385 Discovery Blvd. Suite 200 Manassas, VA 20109	Business Entity	04050005024	12/31/2015

**Attachment 4.2.5.1**  
**SCC Supporting Documentation**



THE LANE CONSTRUCTION CORPORATION

- SCC eFile
- SCC eFile Home Page
- Check Name
- Designations
- Business Entity Search
- Certificate Verification
- FAQ
- Contact Us
- Give Us Feedback
- Business Entities
- SCC or Tax Licenses
- Court Services
- Additional Services

General

SCC ID: F0254476  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: CT  
 Date of Formation/Registration: 7/24/1972  
 Status: Active  
 Shares Authorized: 11700

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Reassign registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [View efile transaction history](#)
- [Manage email notifications](#)

[New Search](#) [Home](#)

Principal Office

90 FIELSTONE COURT  
 CHESHIRE CT06410

Registered Agent/Registered Office

CT CORPORATION SYSTEM  
 4701 COX ROAD, SUITE 205  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/4/2013



SABRA, WANG & ASSOCIATES, INC.

- SCC eFile
- SCC eFile Home Page
- Check Name
- Designations
- Business Entity Search
- Certificate Verification
- FAQ
- Contact Us
- Give Us Feedback
- Business Entities
- SCC or Tax Licenses
- Court Services
- Additional Services

General

SCC ID: F1343203  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: MD  
 Date of Formation/Registration: 6/30/1998  
 Status: Active  
 Shares Authorized: 3000

Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Reassign registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [View efile transaction history](#)
- [Manage email notifications](#)

[New Search](#) [Home](#)

Principal Office

101 WEST BROAD STREET  
 SUITE 301  
 FALLS CHURCH VA22046

Registered Agent/Registered Office

RAYMOND H SUTTLE JR.  
 701 TOWN CENTER DRIVE  
 SUITE 800  
 NEWPORT NEWS VA 23606  
 NEWPORT NEWS CITY 211  
 Status: Active  
 Effective Date: 4/14/2011



**SCC eFile**

- SCC eFile Home Page
- Check Name
- Disinquirability
- Business Entity Search
- Certificate Verification
- FAQs
- Contact Us
- Give Us Feedback

**Business Entities**

- SCC or Tax Liens
- Court Services
- Additional Services

**DMY ENGINEERING CONSULTANTS INC.**

**General**

SCC ID: 07688933  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 9/6/2013  
 Status: Active  
 Shares Authorized: 10000

**Principal Office**

**Registered Agent/Registered Office**

WE11 MA  
 43662 TERMINAL DRIVE  
 SUITE 110  
 DULLES VA 20166  
 LOUDOUN COUNTY 153  
 Status: Active  
 Effective Date: 9/6/2013

**Select an action**

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(what can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

[New Search](#) [Home](#)



**SCC eFile**

- SCC eFile Home Page
- Check Name
- Disinquirability
- Business Entity Search
- Certificate Verification
- FAQs
- Contact Us
- Give Us Feedback

**Business Entities**

- SCC or Tax Liens
- Court Services
- Additional Services

**QUINN CONSULTING SERVICES INCORPORATED**

**General**

SCC ID: 04923517  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 10/24/1997  
 Status: Active  
 Shares Authorized: 5000

**Principal Office**

14160 NEWBROOK DRIVE  
 SUITE 220  
 CHANTILLY VA20151

**Registered Agent/Registered Office**

JOHN H QUINN JR  
 2208 S KNOLL ST  
 ARLINGTON VA 22202  
 ARLINGTON COUNTY 106  
 Status: Active  
 Effective Date: 10/24/1997

**Select an action**

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(what can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

[New Search](#) [Home](#)



### SCC eFile Business Entity Details

[Help](#)

#### Rinker Design Associates, P.C.

##### SCC eFile

- [SCC eFile Home Page](#)
- [Check Name](#)
- [Distinguishability](#)
- [Business Entity Search](#)
- [Certificate Verification](#)
- [FAQs](#)
- [Contact Us](#)
- [Give Us Feedback](#)

##### Business Entities

##### MCC or Tax Liens

##### Court Services

##### Additional Services

##### General

SCC ID: 02270627  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 2/24/1992  
 Status: Active  
 Shares Authorized: 20000

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Design as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

[New Search](#) [Home](#)

##### Principal Office

9385 DISCOVERY BOULEVARD  
 SUITE 200  
 MANASSAS VA 20109

##### Registered Agent/Registered Office

JOHN S WISJACKAS

**Attachment 4.2.5.2**  
**DPOR Supporting Documentation**



Department of Professional and Occupational Regulation

- License Lookup
- Online Renewal & Services
- Boards
- Professions & Occupations
- Forms & Applications
- Fair Housing Office
- Community Associations
- Report a Licensee
- Records & Documents
- State & Information

### Details of license number 2701011871

Name:	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
Doing Business As:	VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
License Number:	2701011871
License Descriptions:	Contractor Class A
Class Definitions:	
Business Type:	Corporation
Address:	90 FIELDSTONE COURT CHESHIRE, CT 06410
Specialties/Classifications:	Building (BLD)
Classification Definitions:	Highway / Heavy (H/H)
Specialty Definitions:	
Initial Certification Date:	1972-10-12
Expiration Date:	2016-01-31



Department of Professional and Occupational Regulation

- License Lookup
- Online Renewal & Services
- Boards
- Professions & Occupations
- Forms & Applications
- Fair Housing Office
- Community Associations

### Details of license number 0407005636

Name:	SABRA YIANG & ASSOCIATES INC
License Number:	0407005636
License Descriptions:	Business Entity Registration
Business Type:	CORP
Address:	101 W BROAD ST SUITE 301 FALLS CHURCH, VA 22046
Initial Certification Date:	2010-03-12
Expiration Date:	2015-12-31



Department of Professional and Occupational Regulation

- License Lookup
- Online Renewal & Services
- Boards
- Professions & Occupations
- Forms & Applications
- Fair Housing Office
- Community Associations

### Details of license number 0411000839

Name:	SABRA WANG & ASSOCIATES INC
License Number:	0411000839
License Description:	Business Entity Branch Office Registration
Business Name:	SABRA WANG & ASSOCIATES INC
Business Type:	CORP
Address:	7055 SAMUEL MORSE DRIVE SUITE 100 COLUMBIA, MD 21046
Initial Certification Date:	2011-06-17
Expiration Date:	2016-02-29



Department of Professional and Occupational Regulation

- License Lookup
- Online Renewal & Services
- Boards
- Professions & Occupations
- Forms & Applications
- Fair Housing Office
- Community Associations

### Details of license number 0407005631

Name:	DMY ENGINEERING CONSULTANTS INC
License Number:	0407005631
License Description:	Business Entity Registration
Business Type:	CORP
Address:	45662 TERMINAL DRIVE SUITE 110 DULLES, VA 20166
Initial Certification Date:	2010-03-10
Expiration Date:	2015-12-31



Department of Professional and Occupational Regulation

Home > License Lookup > License Lookup & Disciplinary Actions

- License Lookup
- Online Renewal & Services
- Boards
- Professions & Occupations
- Forms & Applications
- Fair Housing Office

### Details of license number 0407003733

Name:	QUINN CONSULTING SERVICES INC
License Number:	0407003733
License Description:	Business Entity Registration
Address:	4094 MAJESTIC LN # 281 FAIRFAX, VA 22033
Initial Certification Date:	1998-03-05
Expiration Date:	2015-12-31

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION  
COMMONWEALTH OF VIRGINIA**

EXPIRES ON  
12-31-2015

9960 Mayland Dr., Suite 400, Richmond, VA 23233  
Telephone: (804) 367-8500

NUMBER  
0405000502

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS  
AND LANDSCAPE ARCHITECTS  
PROFESSIONAL CORPORATION REGISTRATION

PROFESSIONS: ENG, LS

RINKER DESIGN ASSOCIATES PC  
9385 DISCOVERY BOULEVARD  
SUITE 200  
MANASSAS, VA 20109



*Gordon N. Ecken*  
Gordon N. Ecken, Director

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

**Attachment 4.2.6(a)**  
**Lead Contractor Work History Form**

**ATTACHMENT 4.2.6(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
<b>I-495 EXPRESS LANES</b> Fairfax County, Virginia	<b>HNTB</b>	Name of Client./ Owner: <b>Virginia Department of Transportation</b> Phone: <b>571.483.2600</b> Project Manager: <b>John Lynch, P.E.</b> Phone: <b>571.238.2970</b> Email: <b>John.Lynch@vdot.virginia.gov</b>	<b>12/2012</b>	<b>11/2012</b> <b>(early delivery)</b>	<b>\$1,346,560</b>	<b>\$1,481,670</b>	<b>\$642,000</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Design-Build project
- Surveying
- Asphalt paving
- Underlying concrete joint repairs
- Signing and striping
- Overhead sign structures and associated lighting
- Dynamic message signs
- Overhead lane control system
- ITS devices/systems (DMS, CCTV, detection, video analytics, lane control)
- Electrical,communications, and fiber optic conduit, wiring, and hook-ups
- Configuring, integrating, and testing new ATM field devices
- Field support for system software integration and testing
- Drainage, erosion and sediment control
- Stormwater management
- Concrete barrier and pier protection
- Extensive MOT
- Inspection, testing, quality assurance and control

**KEY PERSONNEL ON PROJECT**

- Kaushik Vyas, QA Manager
- Nagy Abdelwahed, QC Manager
- Daryoush Parendeh, QA Inspector
- Dennis Rodkey, Superintendent

**PROJECT SCOPE**

Construction of four new general-purpose traffic lanes (two in each direction) outside of the existing lanes on the Capital Beltway. Work included the reconstruction of ramps, interchanges, frontage roads, overpasses and underpasses, bridges and other necessary crossings.

VDOT began studying short and long-term solutions to growing traffic congestion on the Capital Beltway in the late 1980s. By 1994 it had concluded High Occupancy Vehicle (HOV) lanes were needed. A private developer submitted plans for High Occupancy Toll (HOT) lanes in 2002 to the Commonwealth, which resulted in selecting that alternative in 2005.

The Express Lanes project is the most significant package of improvements to the Capital Beltway in a generation. They provide drivers with the option of paying a toll for a faster, more predictable trip. Drivers using the Express Lanes have access to (HOV) lanes usually limited to vehicles with multiple occupants.

**PROJECT DESCRIPTION**

LANE constructed two new lanes in each direction on a 14-mile stretch of I-495 from the Springfield Interchange to just north of the Dulles Toll Road. The project encompassed the replacement of more than \$260 million of aging infrastructure, including more than 50 bridges and overpasses. Three new access points to the Capital Beltway at Rte. 29/Lee Highway, Westpark Bridge and Jones Branch Drive were designed and constructed as well as upgrades to 12 key interchanges. LANE also built more than 70,000 linear feet of sound walls to double the existing protection for local neighborhoods.

LANE managed the ITS, communications and toll systems performed by subcontractors. LANE's Virginia Sign and Lighting division performed significant electronic sign and highway electrical work.

**PROJECT BENEFITS**

The new Express Lanes offer faster travel choices and congestion relief for motorists in the northern Virginia/Washington, D.C. region. Benefits to drivers, carpoolers, public transportation users and the business community already include:

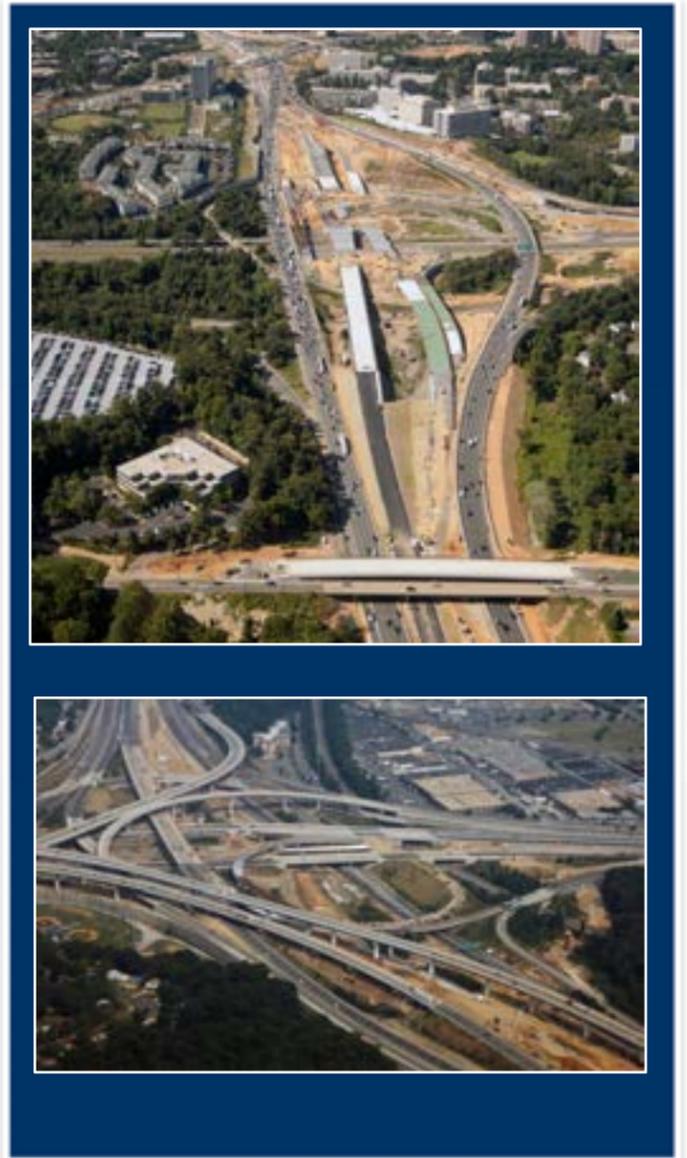
- Less stop-and-go traffic
- Improved opportunities for reliable bus service for public transportation users
- Reduced cut-through traffic on local neighborhood streets
- Positive environmental impact because vehicles move through the area more quickly, reducing emissions

**EVIDENCE OF PERFORMANCE**

"A solid experienced company that has built to standard and worked well under difficult traffic and space constraints to minimize impact on travel."  
- **Garrett Moore, P.E., VDOT Chief Engineer**

"Project was built over four years under traffic as high as 200,000 vpd and achieved 5 million safe work hours as of September 2012 without a lost-time incident, making it among the safest heavy civil projects ever built in the U.S." - **Public Works Financing Newsletter, December 2012**

The I-495 Express Lanes project has been the recipient of numerous awards including a safety award for more than 5,000,00 manhours without lost time incidents ... and most recently was one of the Construction Management Association of America's 2013 project award winners.



**ATTACHMENT 4.2.6(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
<b>NORTH AREA ROADS IMPROVEMENT Dulles, VA</b>	<b>JMT</b>	Name of Client./ Owner: <b>MWAA</b> Phone: <b>703.417.8647</b> Project Manager: <b>David Swennes</b> Phone: <b>703.417.8647</b> Email: <b>david.swennes@mwaa.com</b>	<b>03/2008</b>	<b>11/2007 (early delivery)</b>	<b>\$29,681</b>	<b>\$29,681</b>	<b>\$29,681</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Surveying
- Asphalt paving
- Underlying concrete joint repairs
- Signing and striping
- Overhead sign structures and associated lighting
- Dynamic message signs
- Overhead lane control system
- ITS devices/systems (DMS, CCTV, detection, video analytics, lane control)
- Electrical, communications, and fiber optic conduit, wiring, and hook-ups
- Configuring, integrating, and testing new ATM field devices
- Field support for system software integration and testing
- Drainage, erosion and sediment control
- Stormwater management
- Concrete barrier and pier protection
- Maintenance of traffic
- Inspection, testing, quality assurance and control

**KEY PERSONNEL**

Ken Prince, DB Project Manager  
Nagy Abdelwahed, QC Manager

**PROJECT DESCRIPTION**

The North Area Roads Improvement project focused on the Dulles Area Access Highway (DIAAH) and associated areas and included:

- The construction of a new Collector-Distributor (C-D) Roadway system for the section of the DIAAH between Saarinen Circle and Route 28. The new C-D Roadway separates the Route 28 exiting traffic from DIAAH traffic destined for further on, thereby reducing the traffic congestion at three interchanges.
- Widening of the DIAAH from a four-lane to a six-lane highway to provide sufficient capacity for future DIAAH traffic.

The project included the existing roadway demolition and the reconstruction and widening of 1.25 miles of the DIAAH entering and exiting the airport including bituminous concrete roadways, a 60±-foot span steel girder bridge, drainage improvements and storm water management facilities, overhead sign structures, and related traffic control, lighting and safety features.

The project also included the widening of an existing bridge (inbound DIAAH over Horsepen Run) and the construction of a new bridge (inbound Collector-Distributor Road over Horsepen Run). The bridge required construction of a 60', two-lane span with an integrated back wall and mechanically stabilized earth wall and included short and medium span steel plate girder designs . The project involved the construction of one large 8' by 4' by 295' long concrete box culvert and a smaller 8' by 4' by 69' long concrete box culvert. Two retaining walls were also included to allow the widening eastbound of the DIAAH and the construction of the inbound Collector-Distributor roadways to pass under existing bridges without reconstructing those bridges.

The ultimate goal of the North Area Roads Improvement project was to create a roadway system capable of providing efficient access to Dulles International Airport that is easy for airport patrons to understand and use.

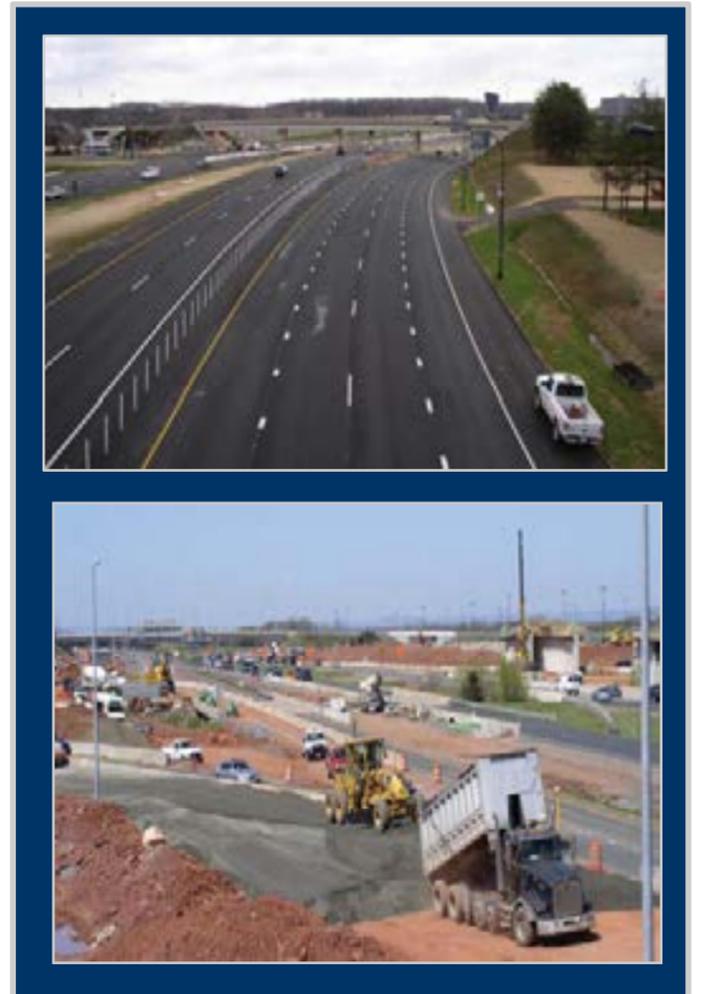
**PROJECT BENEFITS**

- Provides airport passengers with better access to rental car facilities and long term parking lots
- Reduces traffic congestion and delays
- Improves traffic flow and roadway connectivity
- Improves passenger service

**EVIDENCE OF PERFORMANCE**

LANE completed this project four months ahead of schedule.

Dulles Airport presented the project with the "Outstanding Safety Record Award" for the fourth quarter of 2006.



**ATTACHMENT 4.2.6(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
<b>I-66 SPOT IMPROVEMENTS</b> Arlington County, VA	<b>HNTB</b>	Name of Client/Owner: <b>VDOT</b> Phone: <b>703.259.3240</b> Project Manager: <b>Charles Mel Harvey</b> Phone: <b>703.259.3240</b> Email: <b>charles.harvey@vdot.virginia.gov</b>	<b>12/2011</b>	<b>12/2011</b>	<b>\$10,200</b>	<b>\$9,800</b>	<b>\$9,800</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Surveying
- Asphalt paving
- Underlying concrete joint repairs
- Signing and striping
- Overhead sign structures and associated lighting
- Dynamic message signs
- Overhead lane control system
- ITS devices/systems (DMS, CCTV, detection, video analytics, lane control)
- Electrical,communications, and fiber optic conduit, wiring, and hook-ups
- Configuring, integrating, and testing new ATM field devices
- Field support for system software integration and testing
- Drainage, erosion and sediment control
- Stormwater management
- Concrete barrier and pier protection
- Maintenance of traffic
- Inspection, testing, quality assurance and control

**PROJECT SCOPE**

This project consisted of the construction of a third lane on I-66 from the Fairfax Drive on ramp to the Sycamore Street off-ramp.

**PROJECT DESCRIPTION**

LANE performed as the Lead Contractor on this first of three spot improvements on I-66 to reduce congestion and increase safety along westbound I-66 inside the Capital Beltway. This project added a third lane between the interchanges of the Fairfax Drive on-ramp (just west of George Mason Drive) to the existing deceleration lane at the Sycamore Street off-ramp (1.9 miles). The westbound acceleration and deceleration lane between Fairfax Drive and Sycamore Street was lengthened to form a continuous auxiliary lane between the two ramps.

A new 12-foot-wide shoulder was constructed with full-strength pavement capable of carrying traffic during emergencies. LANE integrated ATMS elements into the existing VDOT system. The work included: sight distance improvements, variable and static message signs, traffic management systems, roadway lighting and landscaping in selected areas. All work was performed within the existing right-of-way.

A multi-phased (three phases) construction approach was implemented to minimize the inconvenience to the traveling public through the area and get the completed road under traffic prior to inclement weather. Although motorists were expected to experience periodic lane closures until the project was complete, all lane closures were at night (no daytime, weekend or holiday closures) and the lack of disruption on this heavily-traveled interstate was notable.

This project included similar circumstances to the I-495 Shoulder Use project and added much needed capacity to a heavily congested commuter thoroughfare. This enhancement also served the local population well for their everyday access through the community. The project also included site access and egress challenges as well as tight work areas. In order to mitigate any impediments to the project, LANE worked closely with VDOT to establish MOTplans and conducted extensive orientation and training for supervisors and workers.

**PROJECT BENEFITS**

This project added much needed capacity to this heavily congested commuter thoroughfare. This enhancement also serves the local population well for their everyday access through the community.

**EVIDENCE OF PERFORMANCE**

The project was completed on time and the additional lane opened to traffic on December 5, 2011.



**Attachment 4.2.6(b)**  
**Lead Designer Work History Form**

**ATTACHMENT 4.2.6(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Completion Date (Original)	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
<b>I-95 SECTION 100 EXPRESS TOLL LANES I-895 TO MD 43 DESIGN</b> Baltimore, MD	<b>Cherry Hill</b>	Name of Client: <b>Maryland Transportation Authority (MdTA)</b> Phone: <b>410.537.7848</b> Project Manager: <b>Dave LaBella, P.E.</b> Phone: <b>410.537.7848</b> Email: <b>dlabela@mdta.state.md.us</b>	<b>Fall/2014</b>	<b>Fall/2014</b>	<b>\$142,600</b>	<b>\$142,600</b>	<b>\$3,200</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

**Sabra, Wang & Associates, Inc. performed all of the design work out of their Falls Church, VA office.**

**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Surveying
- Asphalt paving
- Underlying concrete joint repairs
- Signing and striping
- Overhead sign structures and associated lighting
- Dynamic message signs
- ITS devices/systems (DMS, CCTV, detection, video analytics, lane control)
- Electrical, communications, and fiber optic conduit, wiring, and hook-ups
- Configuring, integrating, and testing new ATM field devices
- Concrete barrier and pier protection
- Maintenance of traffic
- Inspection, testing, quality assurance and control

**PROPOSED PERSONNEL FOR I-495 SHOULDER USE**

Keith Riniker, PE, PTOE  
Bill Monroe, TSOS  
Jyothi Paladugu, PE, PTOE

**PROJECT SCOPE**

Construction of Express Toll Lanes (ETLs) on the most congested portion of I-95 north of Baltimore City. This 8-mile segment stretches from the I-895 (N) split in east Baltimore City, to north of MD 43 in White Marsh. When completed there will be two ETLs and four general-purpose lanes in each direction. Drivers traveling from north of MD 43 through to I-895 will have the choice of using the general-purpose lanes at no cost or paying a toll to use the ETLs. In addition, ETL access for drivers traveling on MD 43 will be provided to and from the south along I-95. The tolls will be managed to maintain relatively congestion-free traffic flow. The toll for using the ETLs will vary depending on the time of day and amount of traffic on the road.

**PROJECT DESCRIPTION**

As a subconsultant, Sabra, Wang & Associates, Inc. (SWA), prepared a multitude of ITS, highway design, traffic engineering design and traffic analyses.

**I-95 Express Toll Lanes Planning and Preliminary Engineering:** SWA performed Highway Capacity Manual analyses for the IAPA report including Basic Freeway Segments, Weaving, and Ramps. SWA prepared micro simulation using VISSIM of the proposed geometrics of I-95 Section 100. The simulation models consisted of eight interchanges and over 15 miles of interstate highways. The simulation was prepared for 2025 Build conditions and 2010 Build and No-Build conditions. SWA prepared the signing concept plans for I-95 section 100, which consists of eleven miles of highway (I-95) and five interchanges with both general purpose and managed (toll) travel lanes. The work included inventory and evaluation of existing signing, development of 24 base plans, development of conceptual layouts, meeting with MdTA and the GEC to refine the concepts, development of final plans including sign size layout, detailed location design and support type selection.

**I-95 Final ITS Design:** SWA prepared ITS design for I-95 Section 100 that included 20 DMS signs, 15 CCTV Cameras, 2 Automatic Traffic Recorders, 8 Toll Rate Signs, Over Height Vehicle Detection Systems, Road Weather Information Systems (RWIS), and prepared details for conduit layout for ITS devices on five Toll Gantries. The ITS design included power and communications design for the ITS devices, Automatic Gate Control Systems, Toll Gantries, Over Height Vehicle Detection Systems, RWIS, and HAR. SWA prepared lighting and sign lighting design along I-95 from I-695 to north of MD 43, including point by point calculations photometric analysis on the proposed pavement surface, light trespass calculations, and veiling luminance calculations. SWA prepared traffic signalization design for two Baltimore City intersections. In addition, SWA developed the ITS standards, special provisions, and structural design and mounting details. SWA is also responsible for all sighting analysis of all CCTV, DMSs, RWIS, and HARs designed under contract including coordination with various utility companies including electrical, telephone and fiber optic.

**PROJECT BENEFITS**

The addition of toll lanes addresses the capacity and safety needs on Section 100 and thereby improves access, mobility, and safety for local, regional, and inter-regional traffic, including passenger, freight, and transit vehicles.

**EVIDENCE OF PERFORMANCE**

The I-95 Express Toll Lanes Project has received 14 awards for the work on this project, ranging from National to Local awards for Quality in Engineering, Construction, Partnering in Planning, Structures, Pavement, and others. The full list is available here: <http://www.i-95expresstolllanes.com/contractor/awards.asp>



Images courtesy [www.i-95expresstolllanes.com](http://www.i-95expresstolllanes.com)

**ATTACHMENT 4.2.6(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Completion Date (Original)	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
<b>INTERCOUNTY CONNECTOR (ICC) CONTRACT A</b> Montgomery County, MD	<b>INTERCOUNTY CONSTRUCTORS,</b> A JOINT VENTURE OF GRANITE CONSTRUCTION COMPANY, CORMAN CONSTRUCTION, INC., AND G.A. & F.C. WAGMAN, INC.	Name of Client: <b>Maryland State Highway Administration</b> Phone: <b>410.545.8772</b> Project Manager: <b>Melinda Peters, P.E.</b> Phone: <b>410.545.8772</b> Email: <b>mpeters@sha.state.md.us</b>	<b>12/2010</b>	<b>12/2010</b>	<b>\$478,700</b>	<b>\$478,700</b>	<b>\$2,400</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Design-Build
- Surveying
- Asphalt Paving
- Signing and Striping
- Overhead Sign Structures and Associated Lighting
- Dynamic Message Signs
- Overhead Lane Control System
- ITS Devices/Systems
- Electrical, Communications, Fiber Optic Conduit, Wiring and Hook-ups
- MOT
- Inspection, Testing, QA & C

**PROPOSED PERSONNEL FOR I-495 SHOULDER USE**

Keith Riniker, PE  
Bill Monroe, TSOS

**PROJECT SCOPE**

Contract A was the first and westernmost portion of the ICC, extending seven miles from I-370 to just east of MD 97 in Montgomery County. The Intercounty Connector linked existing and developed areas between the I-270/I-370 and I-95/US 1 corridors within central and eastern Montgomery County and northwestern Prince George's County with a state-of-the-art, multi-modal east-west highway that limits access and accommodates the movement of passengers and goods.

**PROJECT DESCRIPTION**

As a Subconsultant, Sabra, Wang & Associates, Inc. (SWA) was responsible for the preparation of traffic engineering design plans. The work included extensive coordination with the Contractor and the State Highway Administration General Engineering Consultant for design modifications to provide better value and increased safety, while facilitating construction activities and minimizing costs. A majority of the design work was done out of the Design-Build Team's project office with some aspects being performed in SWA's Columbia, MD office. SWA's work on this project consisted of the following:

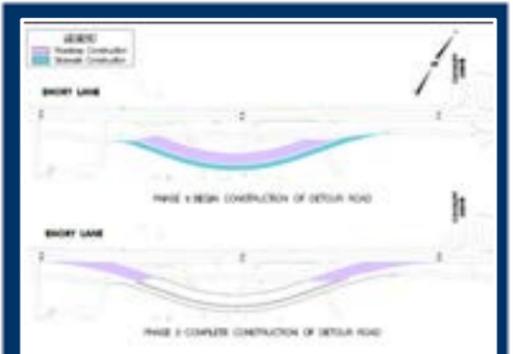
- A multi-staged MOT design with more than 90 plan sheets and included modifications to six miles of existing interstate roadway, construction of six miles of new interstate roadway with two new interchanges, modifications to four miles of arterial roadways, and seven bridges along roadways crossing over the ICC. The design included temporary channelization devices, signs, temporary roadways and markings and involved close coordination with the Contractor to improve constructability and reduce construction costs and duration.
- A Transportation Management Plan that evaluated MOT impacts to vehicular and pedestrian traffic, sequencing of construction, haul routes, impacts to/from nearby construction projects and impacts to emergency response. It included preparing conceptual MOT phasing in coordination with the contractor and MOT traffic analyses to evaluate traffic impacts during construction
- Prepared more than 150 sheets of signing and marking plans for six miles of new interstate roadway, six miles of signing modifications to existing interstate roadways, six interchanges, and five miles of signing modifications to arterial roadways. SWA was also responsible for the structural design for several of the proposed overhead and cantilever sign structures where the use of standard sign structures was not possible.
- Traffic signal and interconnect design for six intersections on three corridors including temporary signal and interconnect designs for MOT
- Signal warrant analyses based on MD MUTCD warrants for six intersections, corridor-wide CORSIM models for ICC and the intersecting arterials, intersection Level of Service and simulation analyses using Synchro/SimTraffic, and coordination of signal timing plans using Synchro and Montgomery County policies and traffic analyses for construction impacts.
- Temporary and permanent lighting designs, including lighting for two interchanges, continuous lighting along cross streets, underpass lighting, culvert lighting, tunnel lighting, and sign lighting. including photometric analyses with point-by-point calculations on the proposed pavement surface, light trespass calculations and veiling luminance calculations.

**PROJECT BENEFITS**

This project provided a much-needed connection between MD 97 and the I-270 corridor reducing congestion on several local arteries and making them safer by removing conflicts between cross-county commuters, trucks and local residents.

**EVIDENCE OF PERFORMANCE**

The ICC team including Sabra, Wang & Associates, Inc. was awarded Engineering News Record's (ENR) Northeast Region Best Project of 2011 for the successful completion of the ICC Contract A Project. Subsequent contracts B,C, and D/E, which SWA was designer on, have since won 16 major national awards to date.



**ATTACHMENT 4.2.6(b)**

**LEAD DESIGNER - WORK HISTORY FORM**

**(LIMIT 1 PAGE PER PROJECT)**

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Completion Date (Original)	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
<b>CITY OF BALTIMORE ATMS CONTRACT NO. 880 Baltimore, MD</b>	<b>MASTEC</b>	Name of Client: <b>City of Baltimore</b> Phone: <b>443.984.2158</b> Project Manager: <b>Raj Sharma</b> Phone: <b>443.984.2158</b> Email: <b>Raj.Sharma@baltimorecity.gov</b>	<b>2013</b>	<b>Fall 2013</b>	<b>\$42,500</b>	<b>\$42,500</b>	<b>\$4,500</b>

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

**SIMILARITIES IN SCOPE AND COMPLEXITY**

- Surveying
- Signing and striping
- Dynamic message signs
- ITS devices/systems (DMS, CCTV, detection, video analytics, lane control)
- Electrical, communications, and fiber optic conduit, wiring, and hook-ups
- Configuring, integrating, and testing new ATM field devices
- Field support for system software integration and testing
- Inspection, testing, quality assurance and control

**PROPOSED PERSONNEL FOR I-495 SHOULDER USE**

Keith Riniker, PE, PTOE  
Bill Monroe, TSOS  
Jyothi Paladugu, PE, PTOE  
Ziad Sabra, Ph.D., PE, PTOE  
Dustin Schlipp, PE

**PROJECT SCOPE**

Sabra, Wang & Associates, Inc. (SWA) provided a multitude of traffic engineering, planning and design services for the upgrade of the signal system, which is currently in operation and controlling 960 signals in the City. All design work was done out of SWA's Baltimore, MD office (which has since moved to Columbia, MD) and consisted of the following:

**PROJECT DESCRIPTION**

**Traffic Signal System & Signal Timing Upgrades:** SWA provided functional specifications to replace 1,300 signal controllers, construction plans and specifications to replace 17 communication hubs, technical specifications to replace the existing Transportation Management Center, technical specifications for a professional services contract for system integration to replace the signal system hardware and software including electronic test equipment and test procedures, and construction management and inspection services for the replacement of signal controllers. Following the completion of the ATMS upgrade, SWA retimed the City traffic signals in two phases and included traffic data collection, traffic engineering analysis, signal timing design, and field implementation and fine tuning of the optimized signal timing plans.

**Transportation Management Center:** SWA performed TMC planning, procurement, and central signal system integration. Under the construction management services, SWA was responsible for the day-to-day reporting of construction activities, preparing daily inspection reports, reviewing and approving invoices on behalf of City staff, representing the City of Baltimore at meetings with contractors, acting as a liaison between City agencies and contractors, and coordinating and conducting progress meetings with contractors and City of Baltimore managers and subordinates.

**ITS Design & Communication Upgrades:** SWA prepared \$6.5 M Federal Aid Job-Order-Contracts (bid book specifications) and final engineering plans for the construction of ten CCTV cameras and eleven Dynamic Message Signs in the City of Baltimore. SWA prepared the specifications for cameras, encoders, copper and fiber communication equipment, poles and cabinets, quantities and estimates. SWA also prepared CCTV design including bucket truck sighting analyses, photo renderings for DMS, location design, power and communication design, and design support during construction.

**Traffic Signal Design:** SWA prepared \$4M Federal Aid Job-Order-Contracts (bid book specifications) for Signal Reconstruction, Signal Rewiring and Detector Replacement. Prepared 34 traffic signal designs and 20 detector replacements including wireless, video and inductive loops. Signal work included preparation of base plans including as-builds of signal equipment and surveys, field review of existing equipment, utility and ROW research, signal design and pedestrian detection, and ADA ramp design. SWA also prepared the City's signal design checklist.

**PROJECT BENEFITS**

This project provided a new TMC to the City, new CCTV cameras, Dynamic Message Signs, new traffic signal infrastructure, and improved signal timings.

**EVIDENCE OF PERFORMANCE**

"Now that this project is concluded, we all feel the improvement in signal timing progression, lesser delays and the obvious reduction in stops in and around the City of Baltimore Central Business District and gateway arterials. The success of this project is attributed to the hard work, commitment, technical skills of your staff, and the leadership Sabra, Wang & Associates, Inc. has exhibited on this contract."

– **Raj Sharma, Engineering Supervisor, Signal Section Traffic Division, City of Baltimore**



*DMS Design*



*CCTV Upgrade*



*Signal Upgrade*



*Transportation Management Center*

**Attachment 4.2.7**  
**Conceptual Roadway Plans**

PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman, Requardt & Associates (703) 293-9717

# '95 CADD LEVEL STRUCTURE

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	495			

## SURVEY

- LEVEL 1 CENTERLINE, TRAVERSE, CONTROL STATION
- LEVEL 2 BRIDGES
- LEVEL 3 EDGE OF PAVEMENT, GRAVEL, CONCRETE, ASPHALT PARKING LOT
- LEVEL 4 CURB AND GUTTER
- LEVEL 5 CURB & CONCRETE ISLANDS
- LEVEL 6 PAVED & GRAVEL SHOULDER
- LEVEL 7 SIDEWALK (ALONG ROADS), WHEELCHAIR RAMPS
- LEVEL 8 BUILDINGS, PORCHES, DECKS, PATIOS & SWIMMING POOLS
- LEVEL 9 WALKS (AROUND HOUSES & BUILDINGS)
- LEVEL 10 STEPS
- LEVEL 11 FENCES & GATES
- LEVEL 12 WOOD LINE, TREES, SHRUBS, HEDGEROWS
- LEVEL 13 RETAINING WALLS
- LEVEL 14 CONCRETE SLABS, BALLARDS, COLUMNS, SIGNS, POSTS, GAS ISLANDS & PLAYSETS
- LEVEL 15 ABOVE GROUND TANKS, DUMPSTERS, PROPANE TANKS
- LEVEL 16 GUARDRAIL & JERSEY BARRIER
- LEVEL 17 BODIES OF WATER, STREAMS, LAKES, ETC.
- LEVEL 18 PAVED DITCHES, RIPRAP
- LEVEL 19 DRAINAGE ITEMS DAMS, ENDWALLS & ENDSECTIONS CATCH BASINS, DROP INLETS & DI MANHOLES CULVERT PIPES
- LEVEL 20 ALL RAILROAD ITEMS, RAILROAD TIES
- LEVEL 21 SEPTIC TANKS, DRAIN FIELDS, WELLS
- LEVEL 22 CEMETERY LOCATION & GRAVES
- LEVEL 23 RIGHT OF WAY AND RIGHT OF WAY MONUMENTS
- LEVEL 24 PROPERTY LINES, TEMPORARY EASEMENT, PERMANENT EASEMENT, PROPERTY PINS
- LEVEL 25 STATE, COUNTY AND CITY BOUNDARY LINES
- LEVEL 26 UTILITY EASEMENTS
- LEVEL 27 WELANDS
- LEVEL 28 GAS PUMPS, GAS TANKS, FILLER CAPS, MONITORING WELLS, VENT PIPES, ETC.
- LEVEL 29 MINE INFORMATION
- LEVEL 30 EXISTING NOISE BARRIER WALLS
- LEVEL 31-60 ANNOTATION FOR LEVELS 1-30
- LEVEL 61 TRAFFIC SIGNS IN R/W, BASE PLAN SHEET, NORTH ARROW, SCALE BAR, ETC.
- LEVEL 62 GRID AND LABELS, ELEVATION TICKS, PROJECT NOTES
- LEVEL 63 NOT ASSIGNED

## DESIGN

- LEVEL 1 BASELINE & SUB-TANGENTS
- LEVEL 2 BRIDGES
- LEVEL 3 EDGE OF PAVEMENT & PRIVATE ENTRANCES
- LEVEL 4 CURB AND GUTTER
- LEVEL 5 CURB
- LEVEL 6 PAVED SHOULDER
- LEVEL 7 SIDEWALK AND/OR BICYCLE TRAIL
- LEVEL 8 NOT ASSIGNED
- LEVEL 9 NOT ASSIGNED
- LEVEL 10 STEPS
- LEVEL 11 FENCES
- LEVEL 12 DIRECTIONAL ARROWS, PAVEMENT STRIPING & FLUSH MEDIAN DELINEATION
- LEVEL 13 RETAINING WALLS
- LEVEL 14 CONCRETE SLABS, COLUMNS, SIGNS, POSTS
- LEVEL 15 NOT ASSIGNED
- LEVEL 16 GUARDRAIL & JERSEY BARRIER
- LEVEL 17 NOT ASSIGNED
- LEVEL 18 PAVED DITCHES
- LEVEL 19 RESERVED FOR MISC. DRAIN. ITEMS TO BE PLACED BY ROAD DESIGNERS
- LEVEL 20 RAILROADS, ETC.
- LEVEL 21 NOT ASSIGNED
- LEVEL 22 LIMITS OF CONSTRUCTION
- LEVEL 23 RIGHT-OF-WAY, TEMP. & PERM. EASEMENTS
- LEVEL 24 NOT ASSIGNED
- LEVEL 25-29 NOT ASSIGNED
- LEVEL 30 PROPOSED NOISE BARRIER WALLS & ANNOTATION
- LEVEL 31-54 ANNOTATION FOR LEVELS 1-24
- LEVEL 55-60 NOT ASSIGNED
- LEVEL 61 BASE PLAN SHEET, SCALE BAR, NORTH ARROW, MATCH LINES, SEALING & SIGNING BLOCKS
- LEVEL 62 NOT ASSIGNED
- LEVEL 63 NOT ASSIGNED

## HYDRAULICS - DRAINAGE

- LEVEL 1 PIPES FROM 4" TO 42" (CUSTOM LINE STYLES)
- LEVEL 2 PIPES 48" AND LARGER (CUSTOM LINE STYLE)
- LEVEL 3 STANDARD BOX CULVERTS LC-0, WT-5
- LEVEL 4 ENDWALLS (CELLS)
- LEVEL 5 END SECTIONS (CELLS)
- LEVEL 6 DITCHES AND FLUMES WT-4, LC-0 (CUSTOM LINE STYLE)
- LEVEL 7 ENERGY DISSIPATORS, PIPE SPILLOUT AND SPRING BOXES (CELLS)
- LEVEL 8 MANHOLES AND JUNCTION BOXES (CELLS)
- LEVEL 9 DROP INLETS DI-1, DI-5 AND DI-9 SERIES (CELLS)
- LEVEL 10 DROP INLETS DI-2 SERIES (CELLS)
- LEVEL 11 DROP INLETS DI-3 SERIES (CELLS)
- LEVEL 12 DROP INLETS DI-4 SERIES (CELLS)
- LEVEL 13 DROP INLETS DI-7 SERIES (CELLS)
- LEVEL 14 DROP INLETS DI-10 SERIES (CELLS)
- LEVEL 15 DROP INLETS DI-11 AND DI-13 SERIES (CELLS)
- LEVEL 16 DROP INLETS DI-12 SERIES (CELLS)
- LEVEL 17 DROP INLETS DI-14 SERIES (CELLS)
- LEVEL 18 SPECIAL DESIGN ITEMS (ENDWALLS, INLETS, ETC.)
- LEVEL 19 UNDERDRAINS (CD-1 & 2, UD-1, UD-2, ETC.) (CUSTOM LINE STYLE)
- LEVEL 20 UNDERDRAIN OUTLET PIPE AND EW-12 ENDSECTIONS (CUSTOM LINE STYLE & CELLS)
- LEVEL 21 STONE & OUTLET PROTECTION (EC-1, RIPRAP CHANNEL, ETC.) (CELLS)
- LEVEL 22 SWM BASIN ITEMS (BASIN, RISERS, WEIRS, ETC.)
- LEVEL 23 SWM BASIN (BASELINE/ALIGNMENT)
- LEVEL 24 SWM BASIN (PLAN VIEW/CONTOURS)
- LEVEL 25 SWM BASIN (MISCELLANEOUS/ITEMS)
- LEVEL 26 SWM BASIN (DESCRIPTIONS/NOTES)
- LEVEL 27 TYPICAL DITCH DETAILS
- LEVEL 28-30 NOT ASSIGNED
- LEVEL 31-60 ANNOTATION FOR LEVELS 1-30 NOTE: ALL DRAINAGE STRUCTURE LABELS ON LEVEL 31
- LEVEL 61 BASE PLAN SHEET, SCALE BAR, NORTH ARROW, MATCH LINES, ETC. WT-5, LC-0
- LEVEL 62 NOT ASSIGNED
- LEVEL 63 PROJECT NOTES

## EROSION & SEDIMENT CONTROL

- LEVEL 1 PHASE I - EROSION CONTROL ITEMS (TFB, TSF, TURB, CURTAIN) (CUSTOM LINE STYLE)
- LEVEL 2 PHASE I - EROSION CONTROL DITCH ITEMS (EC-2, EC-3, ETC.) (CUSTOM LINE STYLE)
- LEVEL 3 PHASE I - EROSION CONTROL STONE (EC-1, RIPRAP, CHECK DAMS) (CELLS)
- LEVEL 4 PHASE I - EROSION CONTROL ITEMS (SEDIMENT TRAPS & BASINS)
- LEVEL 5 PHASE I - EROSION CONTROL ITEMS (DIVERSION DIKES & DITCHES) (CUSTOM LINE STYLE)
- LEVEL 6 PHASE I - EROSION CONTROL ITEMS (TEMPORARY DIVERSION CHANNELS) (CUSTOM LINE STYLE)
- LEVEL 7 PHASE I - EROSION CONTROL ITEMS (MISCELLANEOUS DIVERSION ITEMS)
- LEVEL 8 PHASE I - EROSION CONTROL ITEMS (BRUSH BARRIERS, LEVEL SPREADERS, ETC.)
- LEVEL 9 PHASE I - MISCELLANEOUS EROSION CONTROL ITEMS
- LEVEL 10 PHASE I - TEMPORARY DRAINAGE (PIPES) (CUSTOM LINE STYLE)
- LEVEL 11 PHASE I - PROPOSED DRAINAGE (PIPES) (CUSTOM LINE STYLE)
- LEVEL 12 PHASE I - PROPOSED DRAINAGE (SWM)
- LEVEL 13 PHASE I - EXISTING CONTOURS (LC-1, WT-1)
- LEVEL 14 PHASE I - PROPOSED CONTOURS
- LEVEL 15 PHASE I - SYMBOLS, LEGEND AND NOTES
- LEVEL 16 PHASE II - EROSION CONTROL ITEMS (TFB, TSF, TURB, CURTAIN) (CUSTOM LINE STYLE)
- LEVEL 17 PHASE II - EROSION CONTROL DITCH ITEMS (EC-2, EC-3, ETC.) (CUSTOM LINE STYLE)
- LEVEL 18 PHASE II - EROSION CONTROL STONE (EC-1, RIPRAP, CHECK DAMS) (CELLS)
- LEVEL 19 PHASE II - EROSION CONTROL ITEMS (SEDIMENT TRAPS & BASINS)
- LEVEL 20 PHASE II - EROSION CONTROL ITEMS (DIVERSION DIKES & DITCHES) (CUSTOM LINE STYLE)
- LEVEL 21 PHASE II - EROSION CONTROL ITEMS (TEMPORARY DIVERSION CHANNELS) (CUSTOM LINE STYLE)
- LEVEL 22 PHASE II - EROSION CONTROL ITEMS (MISCELLANEOUS DIVERSION ITEMS)
- LEVEL 23 PHASE II - EROSION CONTROL ITEMS (BRUSH BARRIERS, LEVEL SPREADERS, ETC.)
- LEVEL 24 PHASE II - MISCELLANEOUS EROSION CONTROL ITEMS
- LEVEL 25 PHASE II - TEMPORARY DRAINAGE (PIPES) (CUSTOM LINE STYLE)
- LEVEL 26 PHASE II - PROPOSED DRAINAGE (PIPES) (CUSTOM LINE STYLE)
- LEVEL 27 PHASE II - PROPOSED DRAINAGE (SWM)
- LEVEL 28 PHASE II - EXISTING CONTOURS (LC-1, WT-1)
- LEVEL 29 PHASE II - PROPOSED CONTOURS
- LEVEL 30 PHASE II - SYMBOLS, LEGEND AND NOTES
- LEVEL 31-60 ANNOTATION FOR LEVELS 1-30
- LEVEL 61 BASE PLAN SHEET, SCALE BAR, NORTH ARROW, ETC. WT-5, LC-0
- LEVEL 62 NOT ASSIGNED
- LEVEL 63 PROJECT NOTES

## TRAFFIC ENGINEERING

- LEVEL 1 PROPOSED AND EXISTING SIGNAL FACES & NUMBERS SIGN FACES & NUMBERS (Legend)
- LEVEL 2 PROPOSED UNDERGROUND SIGNAL EQUIPMENT CONDUIT, JUNCTION BOXES, MANHOLES
- LEVEL 3 UNDERGROUND EQUIPMENT LABELS CONDUIT, WIRE, JUNCTION BOXES
- LEVEL 4 PROPOSED ABOVE GROUND MINOR SIGNAL EQUIPMENT SIGNS ON SPANWIRE, MAST ARMS, POLES, SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, ETC.
- LEVEL 5 ABOVE GROUND EQUIPMENT LABELS SIGNAL POLE LABELS SIGNAL HEAD LABELS, SIGN LABELS, PHASE INFO, SIGNAL POLE DETAIL
- LEVEL 6 PROPOSED LOOPS/VIDEO DETECTION ZONES LOOPS, VIDEO DETECTION ZONES, MICROLOOP PROBE
- LEVEL 7 SIGNAL CHARTS COLOR SEQUENCE CHART, PHASING DIAGRAM, PREEMPTION DIAGRAM, TIMING CHART
- LEVEL 8 OVERHEAD UTILITY HEIGHT INFORMATION
- LEVEL 9 EXISTING UNDERGROUND SIGNAL EQUIPMENT CONDUIT, JUNCTION BOXES, MANHOLES
- LEVEL 10 EXISTING ABOVE GROUND MINOR SIGNAL EQUIPMENT POLE, MAST ARM, SPAN WIRE, SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, CONTROLLER/CABINET & FOUNDATION, ETC.
- LEVEL 11 EXISTING LOOPS/VIDEO DETECTION ZONES LOOPS, VIDEO DETECTION ZONES, MICROLOOP PROBES
- LEVEL 12 EXISTING PAVEMENT MARKINGS (LONGITUDINAL)
- LEVEL 13 EXISTING TRANSVERSE MARKINGS (STOP BARS & CROSSWALKS)
- LEVEL 14 EXISTING HATCHING
- LEVEL 15 EXISTING LETTERS/ARROWS/SYMBOLS
- LEVEL 16 GUARDRAIL AND JERSEY BARRIER
- LEVEL 17 PROPOSED PAVEMENT MARKINGS (LONGITUDINAL)
- LEVEL 18 PROPOSED TRANSVERSE MARKINGS (STOP BARS & CROSSWALKS)
- LEVEL 19 PROPOSED HATCHING
- LEVEL 20 PROPOSED LETTERS/ARROWS/SYMBOLS
- LEVEL 21 PAVEMENT MARKINGS LABELS
- LEVEL 22 DIRECTIONAL ARROWS (LANE ARRANGEMENTS ARROWS)
- LEVEL 23 EXISTING AND PROPOSED ROW PROPOSED R/W FOR TCD'S, LABELS AND LEADERS
- LEVEL 24 EXISTING SIGN LOCATIONS INCLUDING STRUCTURES (SYMBOLS)
- LEVEL 25 EXISTING SIGN FACES & LEADERS EXISTING SIGN FACES, EXISTING SIGN LEADERS, 'X' FOR EXISTING SIGNS TO BE REMOVED
- LEVEL 26 PROPOSED SIGN LOCATIONS, INCLUDING STRUCTURES (SYMBOLS)
- LEVEL 27 PROPOSED SIGN FACES & LEADERS, PROPOSED SIGN FACES, PROPOSED SIGN LEADERS
- LEVEL 28 SIGN NUMBER/CALL-OUTS PROPOSED SIGN CALL-OUT, EXISTING SIGN CALL-OUT
- LEVEL 29 SIGN DETAIL SHEET
- LEVEL 30 SIGN SCHEDULE SHEET
- LEVEL 31 OVERHEAD SIGN SUPPORT DATA SUMMARY & NOTES
- LEVEL 32 VA AND VIA STRUCTURE SHEET
- LEVEL 33 PROPOSED ABOVE GROUND EQUIPMENT POLES, LUMINAIRES, ARMS, ELECTRICAL SERVICE, CONTROL CENTER
- LEVEL 34 PROPOSED UNDERGROUND EQUIPMENT CONDUIT, JUNCTION BOXES, FOUNDATIONS, DUCT CABLE
- LEVEL 35 PROPOSED UNDER BRIDGE LIGHTING

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

- LEVEL 36 LIGHTING LABELS POLE LOCATION LABEL, LUMINAIRE LABEL, CONDUIT/CABLE IDENTIFIER LABEL, EXIST. CONDUIT/CABLE IDENTIFIER LABEL
- LEVEL 37 EXISTING ABOVE GROUND EQUIPMENT -- LIGHTING LUMINAIRES (INCLUDING UNDER BRIDGE), POLES, CONTROL CENTER, ELECTRICAL SERVICE, ARMS
- LEVEL 38 EXISTING UNDERGROUND EQUIPMENT -- LIGHTING CONDUIT, JUNCTION BOXES, DUCT CABLE
- LEVEL 39 SIGNAL LEGEND
- LEVEL 40 SIGNAL POLE LEGEND
- LEVEL 41 SIGNING LEGEND
- LEVEL 42 PAVEMENT MARKING LEGEND
- LEVEL 43 LIGHTING LEGEND
- LEVEL 44 SUMMARY OF QUANTITIES
- LEVEL 45 GENERAL NOTES & PLAN NOTES
- LEVEL 46 LOCATION INFORMATION ROADWAY NAMES, BASELINE NAME, DIRECTIONAL ARROWS, DIRECTIONAL ARROW TEXT
- LEVEL 47 DIMENSIONS, TERMINATORS
- LEVEL 48 PROP. ABOVE GROUND MAJOR SIGNAL EQUIPMENT POLE - MAST ARM, COMBO MAST ARM, STRAIN, COMBO STRAIN, PF-2, PF-3 MAST ARM, SPAN WIRE, CONTROLLER/ CABINET & FOUNDATION, UTILITY POLES
- LEVEL 49 EXIST. ABOVE GROUND MAJOR SIGNAL EQUIPMENT POLE - MAST ARM, COMBO MAST ARM, STRAIN, COMBO STRAIN, PF-2, PF-3 MAST ARM, SPAN WIRE, CONTROLLER/ CABINET & FOUNDATION, UTILITY POLES
- LEVEL 50 'CLIP MASK' BOUNDARIES
- LEVEL 51 'CLIP BOUNDARY' BOUNDARIES
- LEVEL 52 PROPOSED SIGNAL POLES FOUNDATIONS
- LEVEL 53 CLEARZONE TEMPLATES FOR SIGNAL/LIGHT POLES
- LEVEL 54 SIGNAL HEAD SIGHT LINES - NB
- LEVEL 55 SIGNAL HEAD SIGHT LINES - SB
- LEVEL 56 SIGNAL HEAD SIGHT LINES - EB
- LEVEL 57 SIGNAL HEAD SIGHT LINES - WB
- LEVEL 58 SIGNAL DESIGNER WORKING LEVEL PAVEMENT MARKING LAYOUTS, SIGNAL WORKING LEVEL, LIGHTING WORKING LEVEL, SIGNING WORKING LEVEL
- LEVEL 59 STAGING AREAS DIRECTIONAL BORE STAGING AREA, JACKING PIT - 20' PIPE SLEEVE JACKING PIT - 10' PIPE SLEEVE
- LEVEL 60 BORDER TEXT - FILL-IN PRELIMINARY PLANS TITLE
- LEVEL 61 SHEET INFORMATION NORTH ARROW, SCALE BAR, MATCHLINES, BORDER, STANDARD BORDER TEXT, VDOT LOGO, CONSULTANT LOGO
- LEVEL 62 BORDER SNAP LOCATIONS
- LEVEL 63 PRINT BOUNDARY

NOTE: Survey Utility Information will be in a separate file, Digital Terrain Information will be in separate files.

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

LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

**LANE**

The LANE Team

EXHIBIT

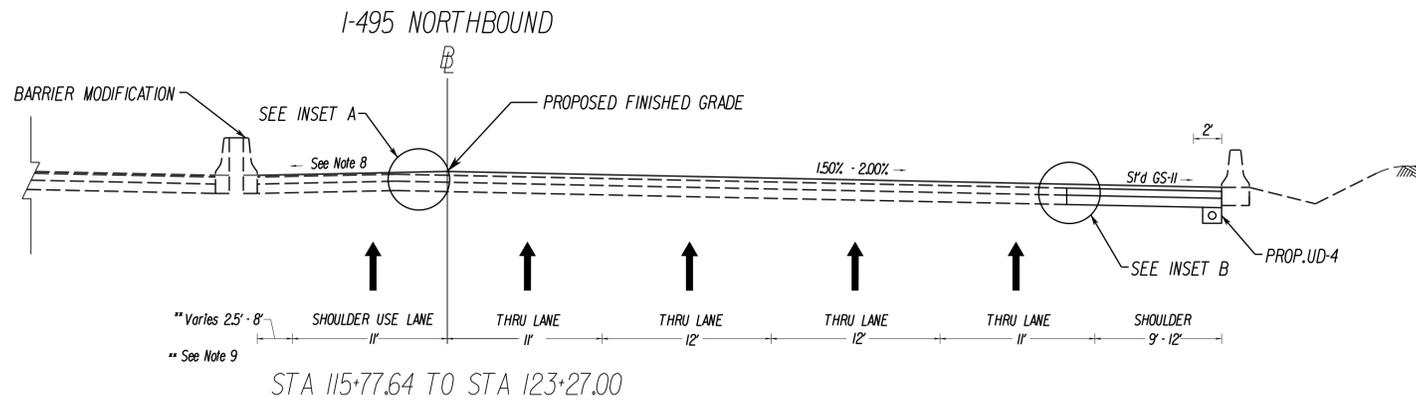
1F

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltham Reardon & Associates (703) 293-9717

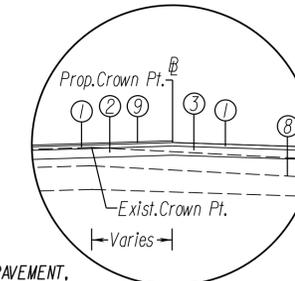
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	2A(1)

# TYPICAL SECTIONS

NOT TO SCALE

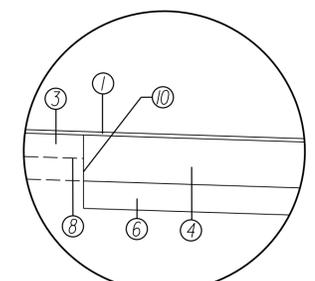


INSET A



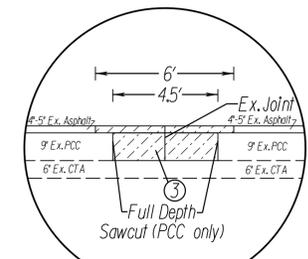
NOT TO SCALE

INSET B



NOT TO SCALE

## FULL DEPTH PATCH/ JOINT REPAIR



NOT TO SCALE

**NOTES:**

- FOR LIMITS OF MILL AND OVERLAY AND FULL DEPTH PAVEMENT, REFER TO PLAN SHEETS.
- REFER TO GEOTECHNICAL ENGINEERING DATA REPORT FOR PAVEMENT DESIGN.
- VARIABLE DEPTH MILL AND OVERLAY MAY BE NECESSARY FOR SLOPE CORRECTION.
- FULL DEPTH/JOINT REPAIRS ARE TO BE PERFORMED ON THE FULL WIDTH OF PAVEMENT AND SHOULDER PRIOR TO THE PLACEMENT OF FINAL SURFACE LAYERS OF ASPHALT.
- ALL CRACKS SHALL BE CLEANED OF ALL DEBRIS AFTER MILLING AND SEALED WITH TYPE B CRACK SEALANT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR SEALING CRACKS IN AC OR PCC PAVEMENT.
- FINAL SURFACE TO BE PLACED UNIFORMLY ACROSS THE ENTIRE PAVEMENT.
- WHEN LIQUID ASPHALT IS USED AS A CURING MATERIAL FOR THE CEMENT STABILIZED COURSE, IT SHALL BE LIQUID ASPHALT CRS-1, CRS-1H OR CMS-2 APPLIED AT A RATE OF 0.2 GAL/SY. WHERE NECESSARY FOR MAINTENANCE OF TRAFFIC COVER MATERIAL CONSISTING OF NO.10 AGGREGATE OR GRADING B SAND SHALL BE APPLIED AT A RATE OF 10 LB/SY.
- ON HIGH SIDE OF SUPERELEVATION THE SLOPE IS TO MATCH THE SUPERELEVATION WITHOUT A ROLLOVER. ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE SHALL MATCH EXISTING, BUT MAINTAIN MAXIMUM 5% ROLLOVER.
- ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE OF THE LATERAL OFFSET SHALL MATCH THE SHOULDER USE LANE SLOPE. ON THE HIGH SIDE OF SUPERELEVATION THE SLOPE SHALL MAINTAIN MAXIMUM 5% ROLLOVER AT THE EDGE OF THE SHOULDER USE LANE.

- Surface - 1.5' Stone Matrix Asphalt, SMA-9.5 (PG 76-22)
- 2.5' Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Variable Depth Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Base - 14" Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Base - 12" Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Subbase - 8" Aggregate Base Material, Type 1, Size No.21B
- Subbase - 6" Aggregate Base Material, Type 1, Size No.21A pugmill mixed with 4% hydraulic cement by weight
- Mill and Overlay Existing Pavement Minimum Depth of 4"
- High Friction Surface Coating To Delineate Shoulder Use Lane
- Full depth sawcut at edge of existing mainline pavement to expose existing full strength pavement with PCC or expose existing edge of PCC pavement

**NOTES:**

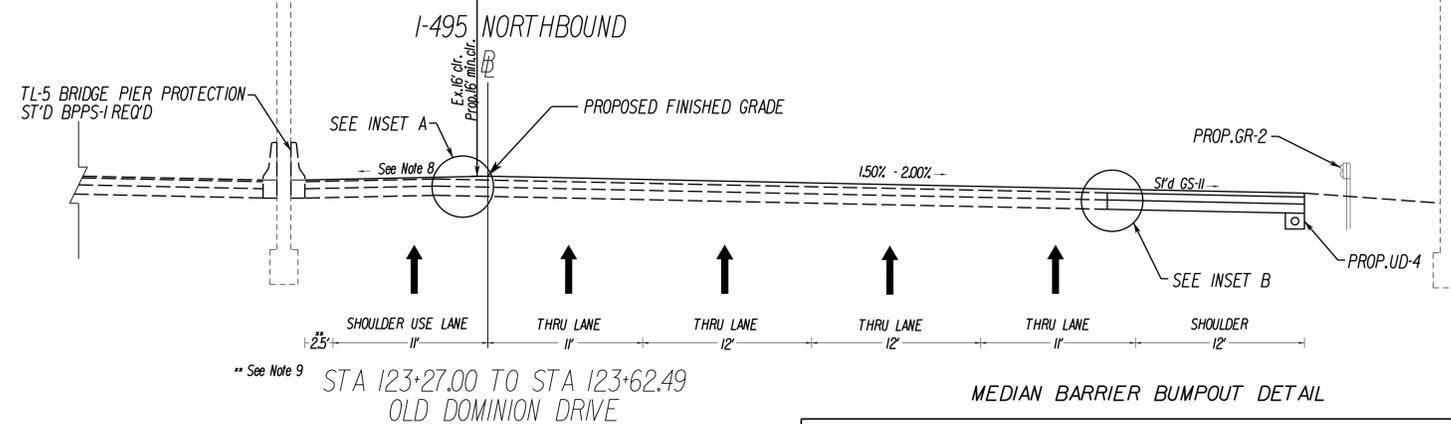
- BARRIER GLARE SHIELDS SHALL BE REPLACED.
- BARRIER MODIFICATIONS SHALL HAVE A LONGITUDINAL TAPER RATE OF 26:1.

## LANE CONSTRUCTION CONCEPT DESIGN PLANS

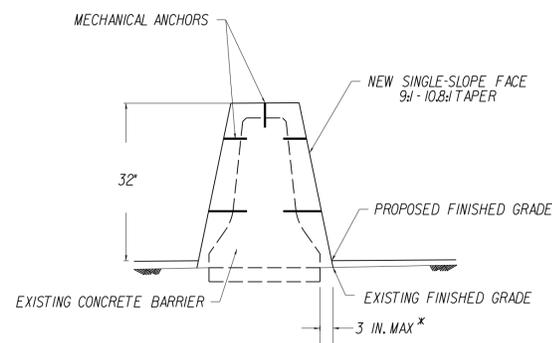
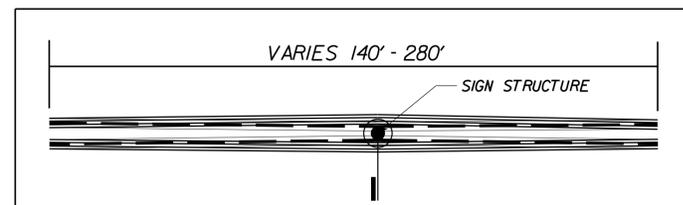
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

# LANE

The LANE Team

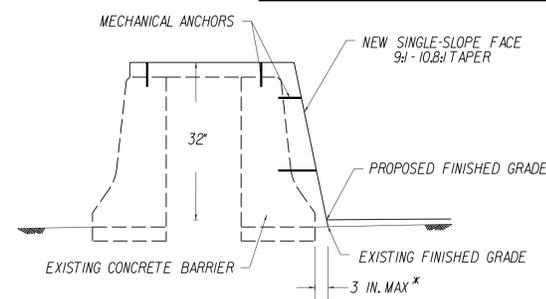


MEDIAN BARRIER BUMPOUT DETAIL



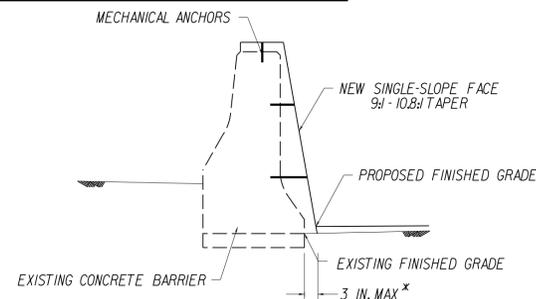
\* MEASURED FROM EXISTING FACE OF BARRIER

BARRIER MODIFICATION DETAIL 1  
FOR USE WHEN MEDIAN IS SINGLE BARRIER



\* MEASURED FROM EXISTING FACE OF BARRIER

BARRIER MODIFICATION DETAIL 2  
FOR USE WHEN MEDIAN IS DOUBLE BARRIER



\* MEASURED FROM EXISTING FACE OF BARRIER

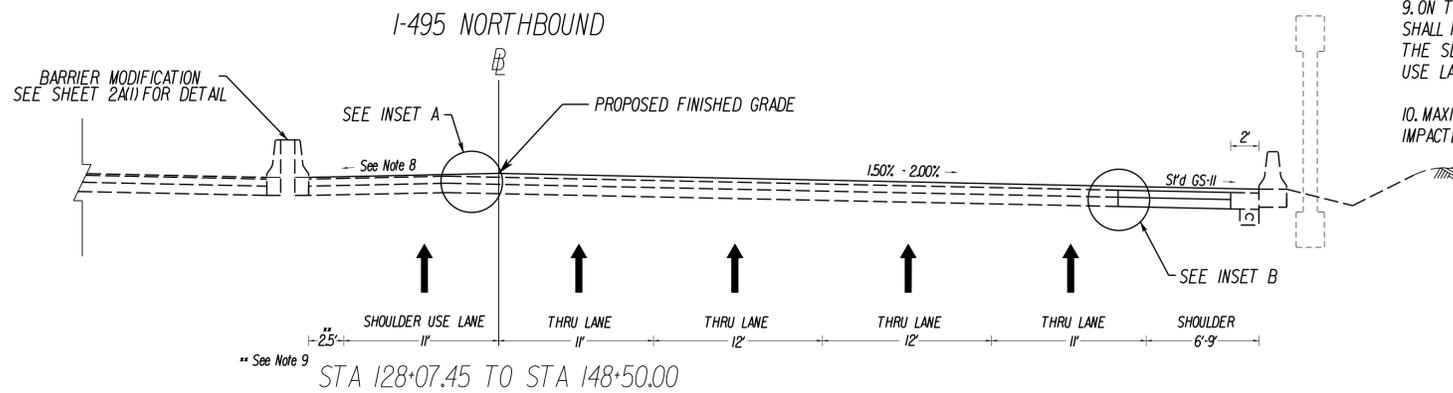
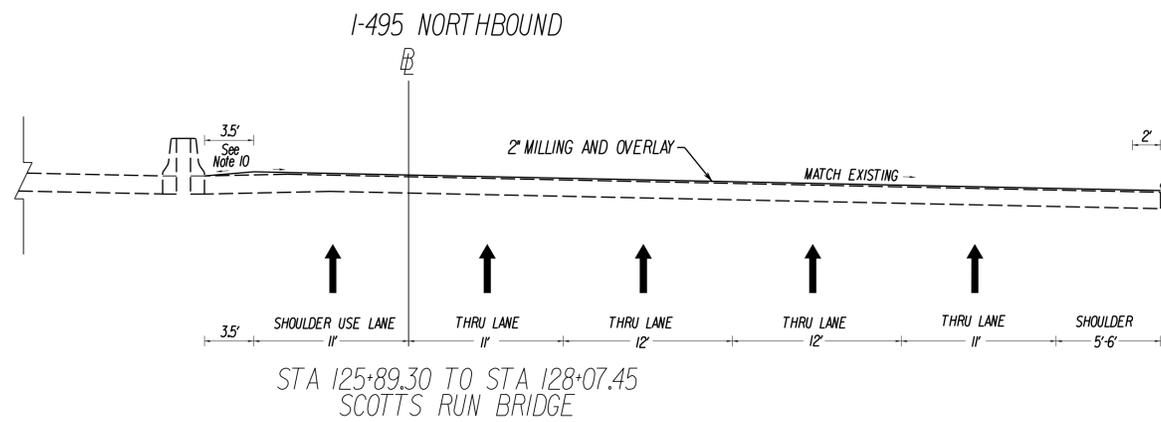
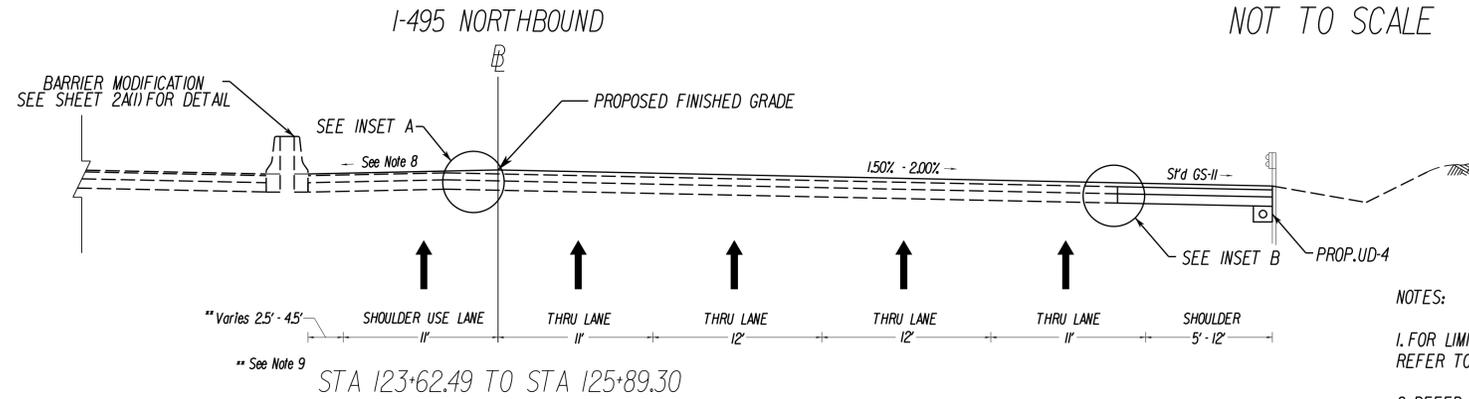
BARRIER MODIFICATION DETAIL 3  
FOR USE WHEN MEDIAN IS BIFURCATED

PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Requardt & Associates (703) 293-9717

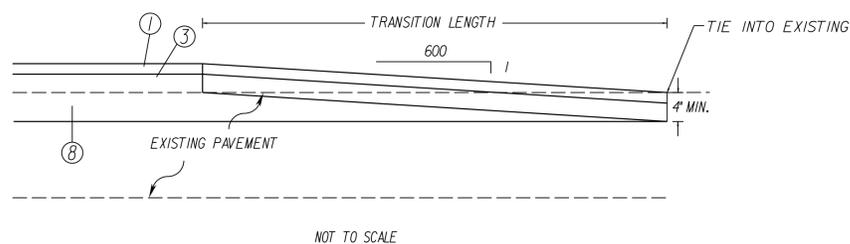
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	2A(2)

# TYPICAL SECTIONS

NOT TO SCALE



## PAVEMENT TIE-IN

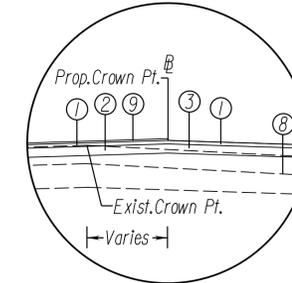


NOT TO SCALE

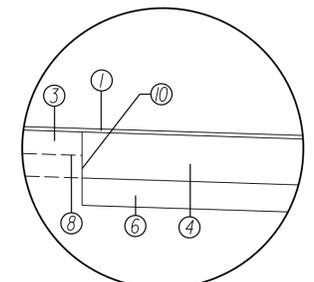
### NOTES:

- FOR LIMITS OF MILL AND OVERLAY AND FULL DEPTH PAVEMENT, REFER TO PLAN SHEETS.
- REFER TO GEOTECHNICAL ENGINEERING DATA REPORT FOR PAVEMENT DESIGN.
- VARIABLE DEPTH MILL AND OVERLAY MAY BE NECESSARY FOR SLOPE CORRECTION.
- FULL DEPTH/JOINT REPAIRS ARE TO BE PERFORMED ON THE FULL WIDTH OF PAVEMENT AND SHOULDER PRIOR TO THE PLACEMENT OF FINAL SURFACE LAYERS OF ASPHALT.
- ALL CRACKS SHALL BE CLEANED OF ALL DEBRIS AFTER MILLING AND SEALED WITH TYPE B CRACK SEALANT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR SEALING CRACKS IN AC OR PCC PAVEMENT.
- FINAL SURFACE TO BE PLACED UNIFORMLY ACROSS THE ENTIRE PAVEMENT.
- WHEN LIQUID ASPHALT IS USED AS A CURING MATERIAL FOR THE CEMENT STABILIZED COURSE, IT SHALL BE LIQUID ASPHALT CRS-1, CRS-1H OR CMS-2 APPLIED AT A RATE OF 0.2 GAL/SY. WHERE NECESSARY FOR MAINTENANCE OF TRAFFIC, COVER MATERIAL CONSISTING OF NO.10 AGGREGATE OR GRADING B SAND SHALL BE APPLIED AT A RATE OF 10 LB/SY.
- ON HIGH SIDE OF SUPERELEVATION THE SLOPE IS TO MATCH THE SUPERELEVATION WITHOUT A ROLLOVER. ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE SHALL MATCH EXISTING, BUT MAINTAIN MAXIMUM 5% ROLLOVER.
- ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE OF THE LATERAL OFFSET SHALL MATCH THE SHOULDER USE LANE SLOPE. ON THE HIGH SIDE OF SUPERELEVATION THE SLOPE SHALL MAINTAIN MAXIMUM 5% ROLLOVER AT THE EDGE OF THE SHOULDER USE LANE.
- MAXIMUM 5% ROLLOVER. EXISTING EXPANSION JOINT TO BE REPLACED WHERE IMPACTED DUE TO PAVEMENT BUILDUP.

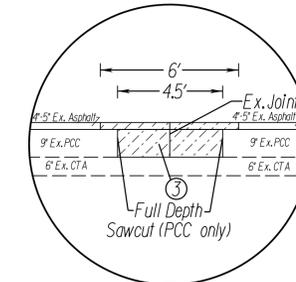
## INSET A



## INSET B



## FULL DEPTH PATCH/ JOINT REPAIR



NOT TO SCALE

- Surface - 1.5" Stone Matrix Asphalt, SMA-9.5 (PG 76-22)
- 2.5" Asphalt Concrete Type BM-25.0D • 0.4 (HMHB, PG 70-22)
- Variable Depth Asphalt Concrete Type BM-25.0D • 0.4 (HMHB, PG 70-22)
- Base - 1.4" Asphalt Concrete Type BM-25.0D • 0.4 (HMHB, PG 70-22)
- Base - 1.2" Asphalt Concrete Type BM-25.0D • 0.4 (HMHB, PG 70-22)
- Subbase - 8" Aggregate Base Material, Type I, Size No.21B
- Subbase - 6" Aggregate Base Material, Type I, Size No.21A pugmill mixed with 4% hydraulic cement by weight
- Mill and Overlay Existing Pavement Minimum Depth of 4"
- High Friction Surface Coating To Define Shoulder Use Lane
- Full depth sawcut at edge of existing mainline pavement to expose existing full strength pavement with PCC or expose existing edge of PCC pavement

### NOTES:

- PAVEMENT TIE-IN SHALL BE USED TO PROVIDE A SMOOTH TRANSITION BETWEEN PAVEMENT OVERLAY AND EXISTING PAVEMENT AT SCOTT'S RUN BRIDGE, AT RAMP TIE-INS AND AT THE BEGINNING/END OF PROJECT. TRANSITION LENGTH SHALL BE 150' MINIMUM.
- PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315.05(C) OF THE SPECIFICATION EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE DESIGNED USING A 10-FOOT STRAIGHT EDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315.07(A) OF THE SPECIFICATIONS. THE VARIATION FROM THE TESTING EDGE OF THE STRAIGHT EDGE BETWEEN ANY TWO CONTACT POINTS WITH THE PAVEMENT SURFACE SHALL NOT EXCEED 1/4".

## LANE CONSTRUCTION CONCEPT DESIGN PLANS

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# LANE

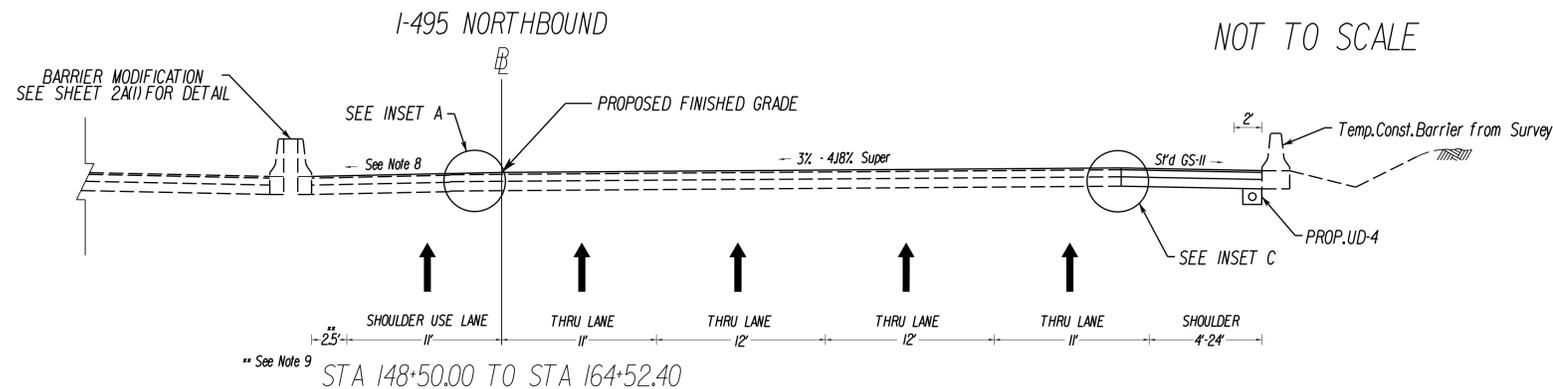
The LANE Team

PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltham Reardon & Associates (703) 293-9717

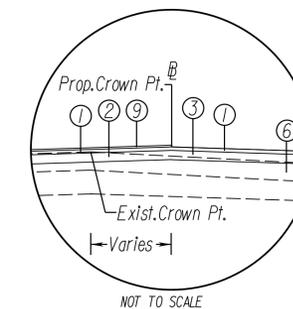
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	2A(3)

# TYPICAL SECTIONS

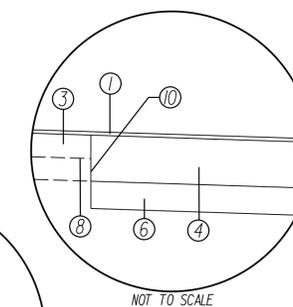
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



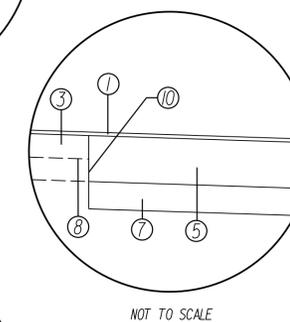
INSET A



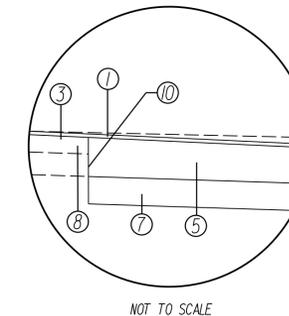
INSET B



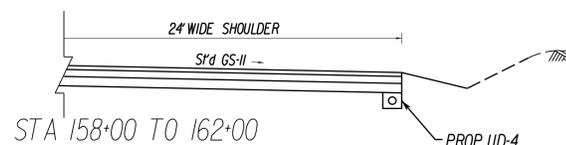
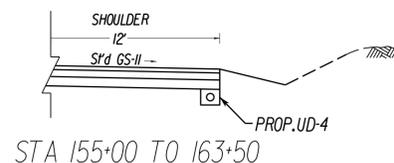
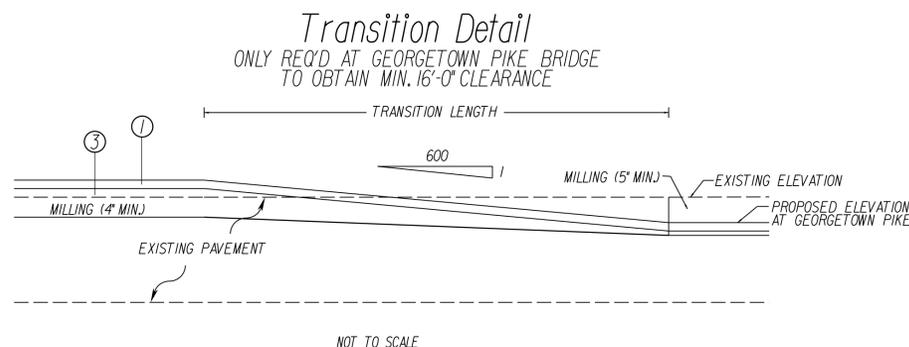
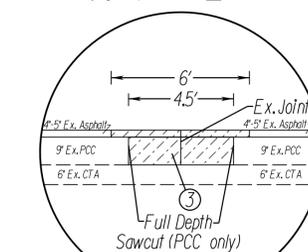
INSET C



INSET D



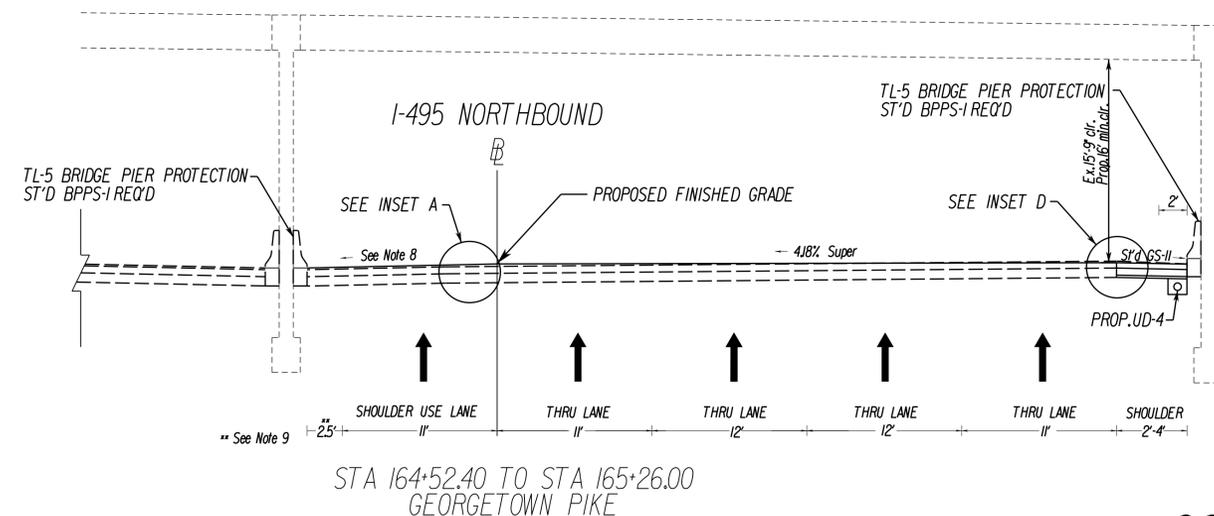
FULL DEPTH PATCH/  
JOINT REPAIR



NOTES:

- FOR LIMITS OF MILL AND OVERLAY AND FULL DEPTH PAVEMENT, REFER TO PLAN SHEETS.
- REFER TO GEOTECHNICAL ENGINEERING DATA REPORT FOR PAVEMENT DESIGN.
- VARIABLE DEPTH MILL AND OVERLAY MAY BE NECESSARY FOR SLOPE CORRECTION.
- FULL DEPTH/JOINT REPAIRS ARE TO BE PERFORMED ON THE FULL WIDTH OF PAVEMENT AND SHOULDER PRIOR TO THE PLACEMENT OF FINAL SURFACE LAYERS OF ASPHALT.
- ALL CRACKS SHALL BE CLEANED OF ALL DEBRIS AFTER MILLING AND SEALED WITH TYPE B CRACK SEALANT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR SEALING CRACKS IN AC OR PCC PAVEMENT.
- FINAL SURFACE TO BE PLACED UNIFORMLY ACROSS THE ENTIRE PAVEMENT.
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- ON HIGH SIDE OF SUPERELEVATION THE SLOPE IS TO MATCH THE SUPERELEVATION WITHOUT A ROLLOVER. ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE SHALL MATCH EXISTING, BUT MAINTAIN MAXIMUM 5% ROLLOVER.
- ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE OF THE LATERAL OFFSET SHALL MATCH THE SHOULDER USE LANE SLOPE. ON THE HIGH SIDE OF SUPERELEVATION THE SLOPE SHALL MAINTAIN MAXIMUM 5% ROLLOVER AT THE EDGE OF THE SHOULDER USE LANE.

- Surface - 1.5" Stone Matrix Asphalt, SMA-9.5 (PG 76-22)
- 2.5" Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Variable Depth Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Base - 1.4" Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Base - 1.2" Asphalt Concrete Type BM-25.0D +0.4 (HMHB, PG 70-22)
- Subbase - 8" Aggregate Base Material, Type I, Size No. 21B
- Subbase - 6" Aggregate Base Material, Type I, Size No. 21A pugmill mixed with 4% hydraulic cement by weight
- Mill and Overlay Existing Pavement Minimum Depth of 4"
- High Friction Surface Coating To Delineate Shoulder Use Lane
- Full depth sawcut at edge of existing mainline pavement to expose existing full strength pavement with PCC or expose existing edge of PCC pavement



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

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# LANE

The LANE Team

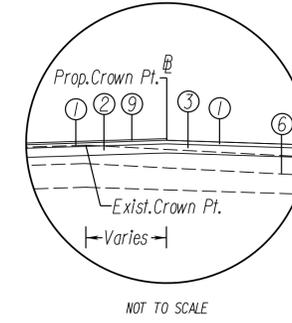
PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman, Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	2A(4)

# TYPICAL SECTIONS

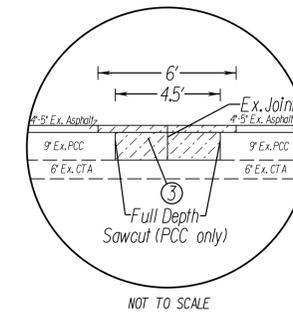
NOT TO SCALE

INSET A



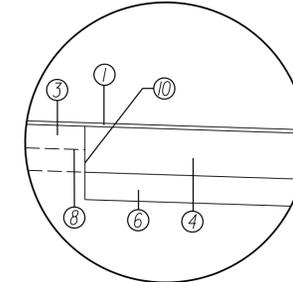
NOT TO SCALE

FULL DEPTH PATCH/  
JOINT REPAIR



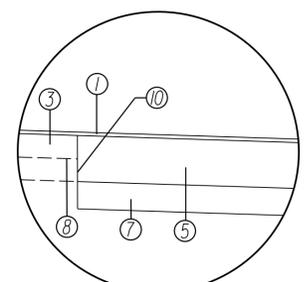
NOT TO SCALE

INSET B



NOT TO SCALE

INSET C



NOT TO SCALE

- ① Surface - 1.5" Stone Matrix Asphalt, SMA-9.5 (PG 76-22)
- ② 2.5" Asphalt Concrete Type BM-25.0D + 0.4 (HMHB, PG 70-22)
- ③ Variable Depth Asphalt Concrete Type BM-25.0D + 0.4 (HMHB, PG 70-22)
- ④ Base - 1.4" Asphalt Concrete Type BM-25.0D + 0.4 (HMHB, PG 70-22)
- ⑤ Base - 1.2" Asphalt Concrete Type BM-25.0D + 0.4 (HMHB, PG 70-22)
- ⑥ Subbase - 8" Aggregate Base Material, Type I, Size No. 21B
- ⑦ Subbase - 6" Aggregate Base Material, Type I, Size No. 21A pugmill mixed with 4% hydraulic cement by weight
- ⑧ Mill and Overlay Existing Pavement Minimum Depth of 4"
- ⑨ High Friction Surface Coating To Delineate Shoulder Use Lane
- ⑩ Full depth sawcut at edge of existing mainline pavement to expose existing full strength pavement with PCC or expose existing edge of PCC pavement

NOTES:

1. FOR LIMITS OF MILL AND OVERLAY AND FULL DEPTH PAVEMENT, REFER TO PLAN SHEETS.
2. REFER TO GEOTECHNICAL ENGINEERING DATA REPORT FOR PAVEMENT DESIGN.
3. VARIABLE DEPTH MILL AND OVERLAY MAY BE NECESSARY FOR SLOPE CORRECTION.
4. FULL DEPTH/JOINT REPAIRS ARE TO BE PERFORMED ON THE FULL WIDTH OF PAVEMENT AND SHOULDER PRIOR TO THE PLACEMENT OF FINAL SURFACE LAYERS OF ASPHALT.
5. ALL CRACKS SHALL BE CLEANED OF ALL DEBRIS AFTER MILLING AND SEALED WITH TYPE B CRACK SEALANT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR SEALING CRACKS IN AC OR PCC PAVEMENT.
6. FINAL SURFACE TO BE PLACED UNIFORMLY ACROSS THE ENTIRE PAVEMENT.
7. WHEN LIQUID ASPHALT IS USED AS A CURING MATERIAL FOR THE CEMENT STABILIZED COURSE, IT SHALL BE LIQUID ASPHALT CRS-1, CRS-1H OR CMS-2 APPLIED AT A RATE OF 0.2 GAL/SY. WHERE NECESSARY FOR MAINTENANCE OF TRAFFIC, COVER MATERIAL CONSISTING OF NO. 10 AGGREGATE OR GRADING SAND SHALL BE APPLIED AT A RATE OF 10 LB/SY.
8. ON HIGH SIDE OF SUPERELEVATION THE SLOPE IS TO MATCH THE SUPERELEVATION WITHOUT A ROLLOVER. ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE SHALL MATCH EXISTING, BUT MAINTAIN MAXIMUM 5% ROLLOVER.
9. ON TANGENT AND LOW SIDE OF SUPERELEVATION THE SLOPE OF THE LATERAL OFFSET SHALL MATCH THE SHOULDER USE LANE SLOPE. ON THE HIGH SIDE OF SUPERELEVATION THE SLOPE SHALL MAINTAIN MAXIMUM 5% ROLLOVER AT THE EDGE OF THE SHOULDER USE LANE.

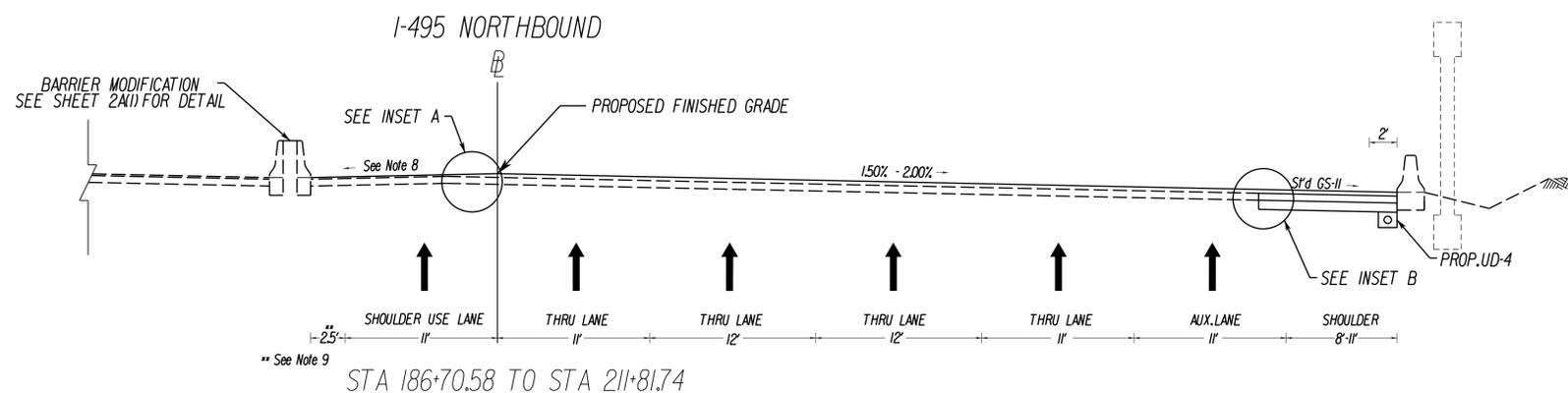
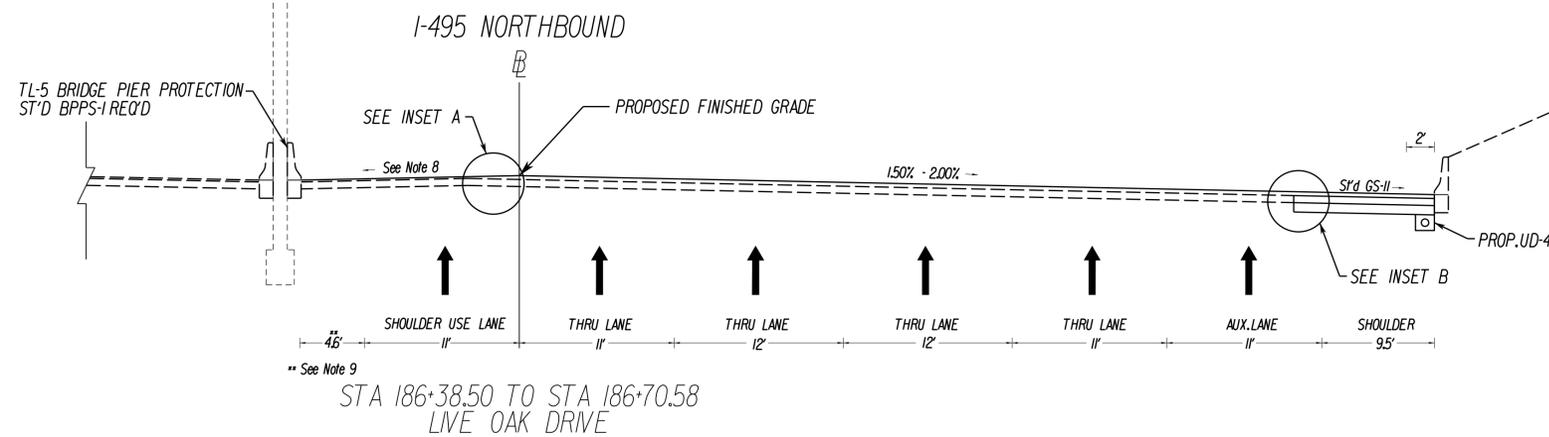
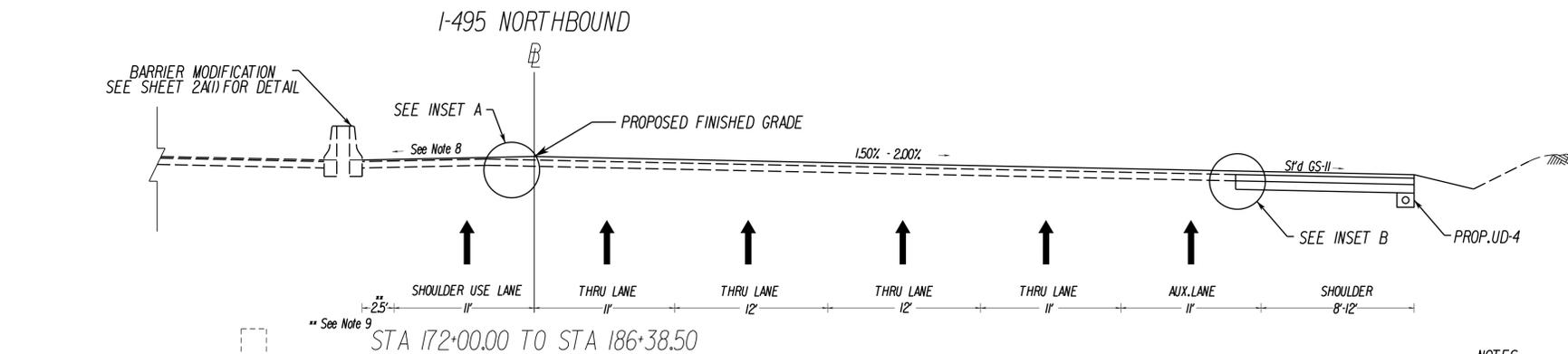
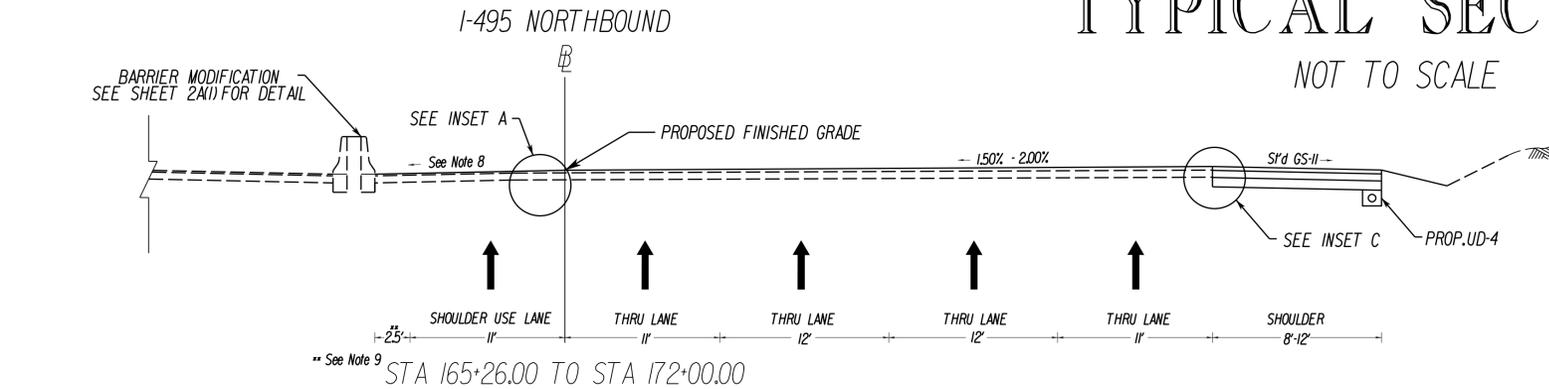
## LANE CONSTRUCTION CONCEPT DESIGN PLANS

# LANE

The LANE Team

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

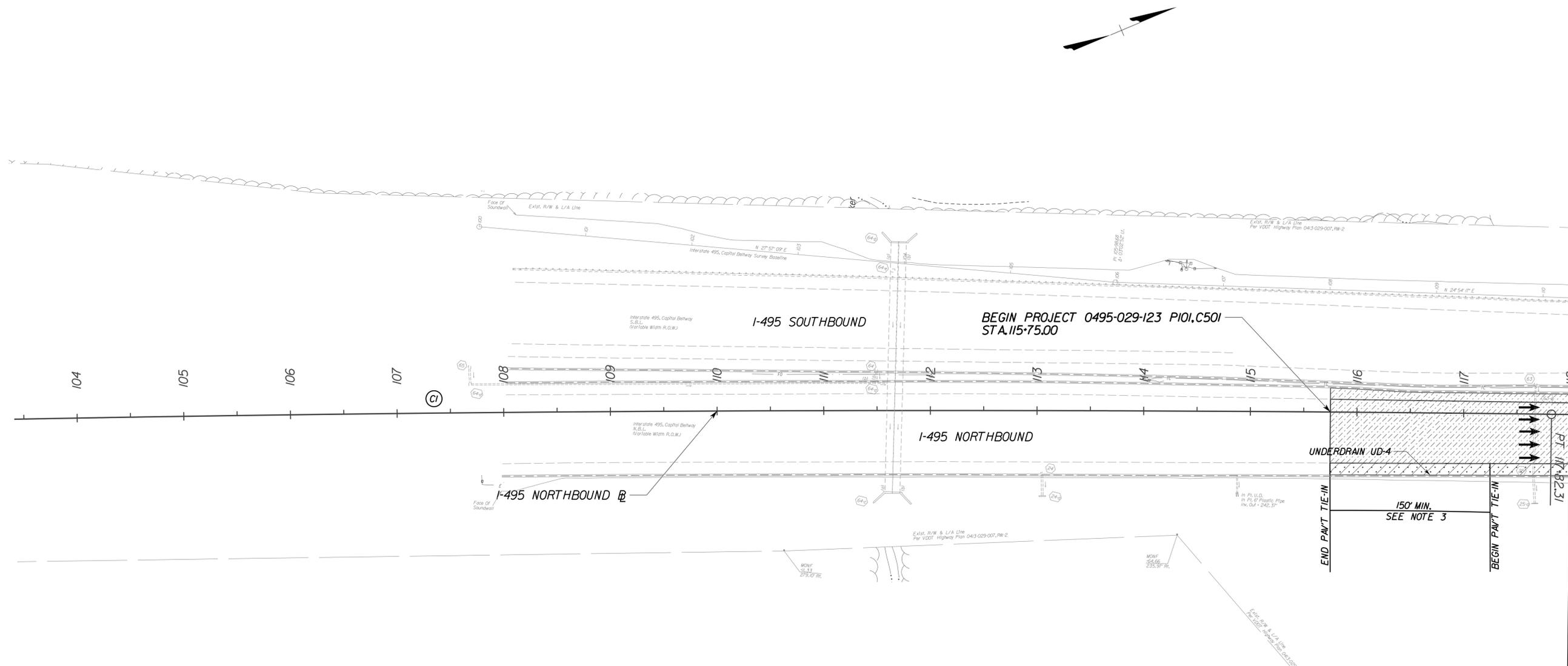
EXHIBIT 2A(4)



PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Reardon & Associates (703) 293-9717

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	495	0495-029-123 C501	3

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



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

### LEGEND

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/ Joint Repair Location and Joint Repair Number

(C1) Curve NBB001  
PI = 108+91.27  
DELTA = 2° 13' 04.40" (RT)  
D = 0° 07' 28"  
T = 891.27'  
L = 1782.31'  
R = 46,043.27'  
PC = 100+00.00  
PT = 117+82.31  
E = MATCH EXISTING  
V = 70 MPH

- NOTES:
- FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.
  - SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.
  - FOR TRANSVERSE PAVEMENT TIE-IN DETAIL SEE TYPICAL SECTION SHEET 2A(2).
  - MOVABLE MEDIAN BARRIER SHALL BE PLACED AT A LOCATION APPROVED BY VDOT (SEE SPECIAL PROVISION).



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

# LANE

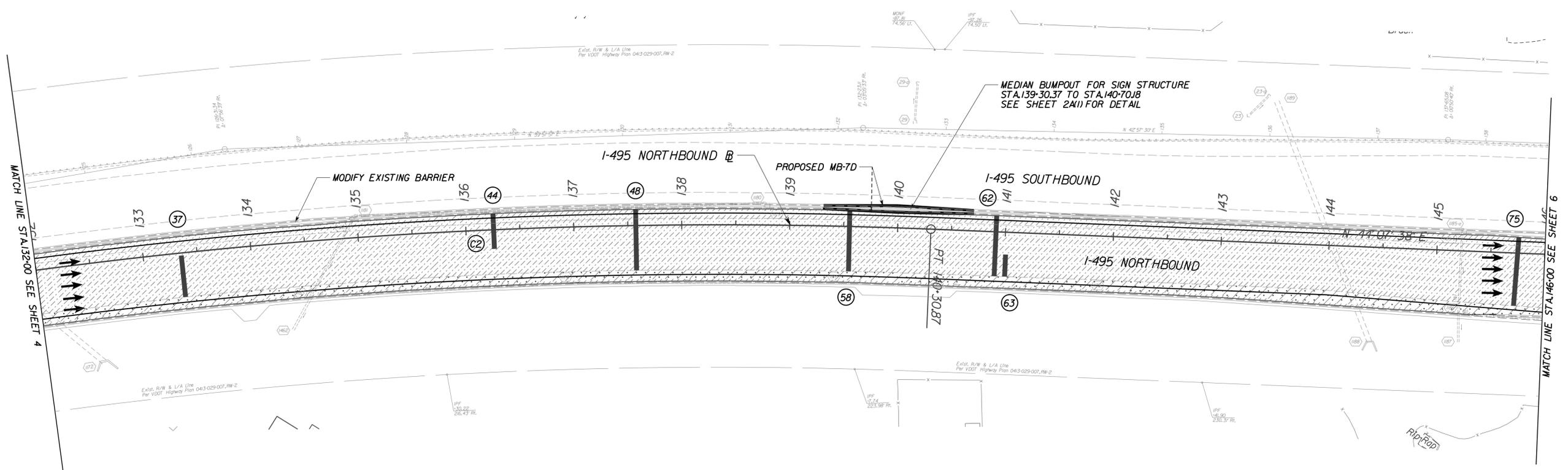
The LANE Team



PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY WaiTan Reardon & Associates (703) 293-9717

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	495	0495-029-123 C501	5

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

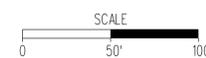


**LEGEND**

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/ Joint Repair Location and Joint Repair Number

(C2) Curve NBB002  
PI • 131+87.79  
DELTA • 20° 28' 27.99" (RT)  
D • 112' 04"  
T • 86.46'  
L • 1,704.54'  
R • 4,770.00'  
PC • 123+26.33  
PT • 140+30.87  
E • 4.23%  
V • 70 MPH

- NOTES:**
- FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.
  - SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.
  - MOVABLE MEDIAN BARRIER SHALL BE PLACED AT A LOCATION APPROVED BY VDOT (SEE SPECIAL PROVISION).



LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

**LANE**

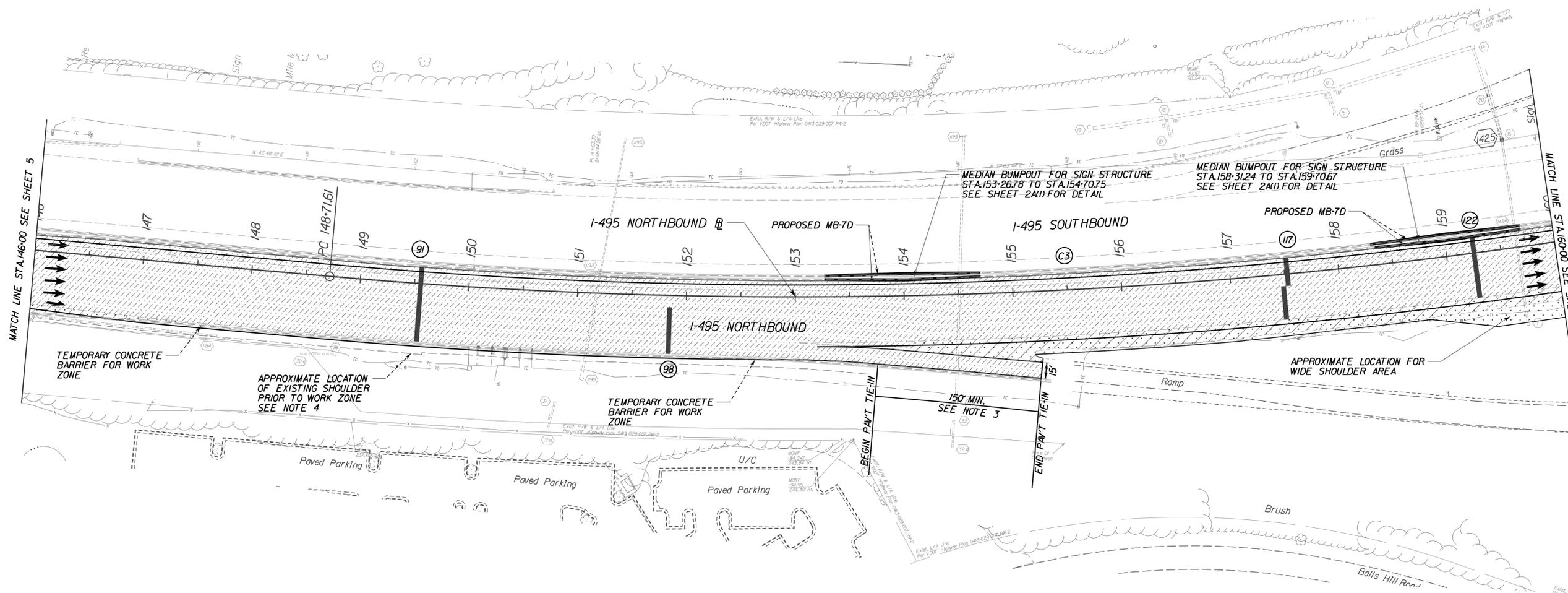
The LANE Team

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PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waitman Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	6

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



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

### LEGEND

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/ Joint Repair Location and Joint Repair Number

(C3) Curve NBB003  
PI • 160+34.88  
DELTA • 27° 04' 57.77" (LT)  
D • 1' 11" 10"  
T • 1163.27'  
L • 2,283.06'  
R • 4,830.00'  
PC • 148+71.61  
PT • 171+54.66  
E • 4.18%  
V • 70 MPH

### NOTES:

1. FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.
2. SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.
3. FOR TRANSVERSE PAVEMENT TIE-IN DETAIL SEE TYPICAL SECTION SHEET 2A(2).
4. FINAL FULL DEPTH SHOULDER WIDTH TO BE DETERMINED AT TIME OF CONSTRUCTION.
5. MOVABLE MEDIAN BARRIER SHALL BE PLACED AT A LOCATION APPROVED BY VDOT (SEE SPECIAL PROVISION).



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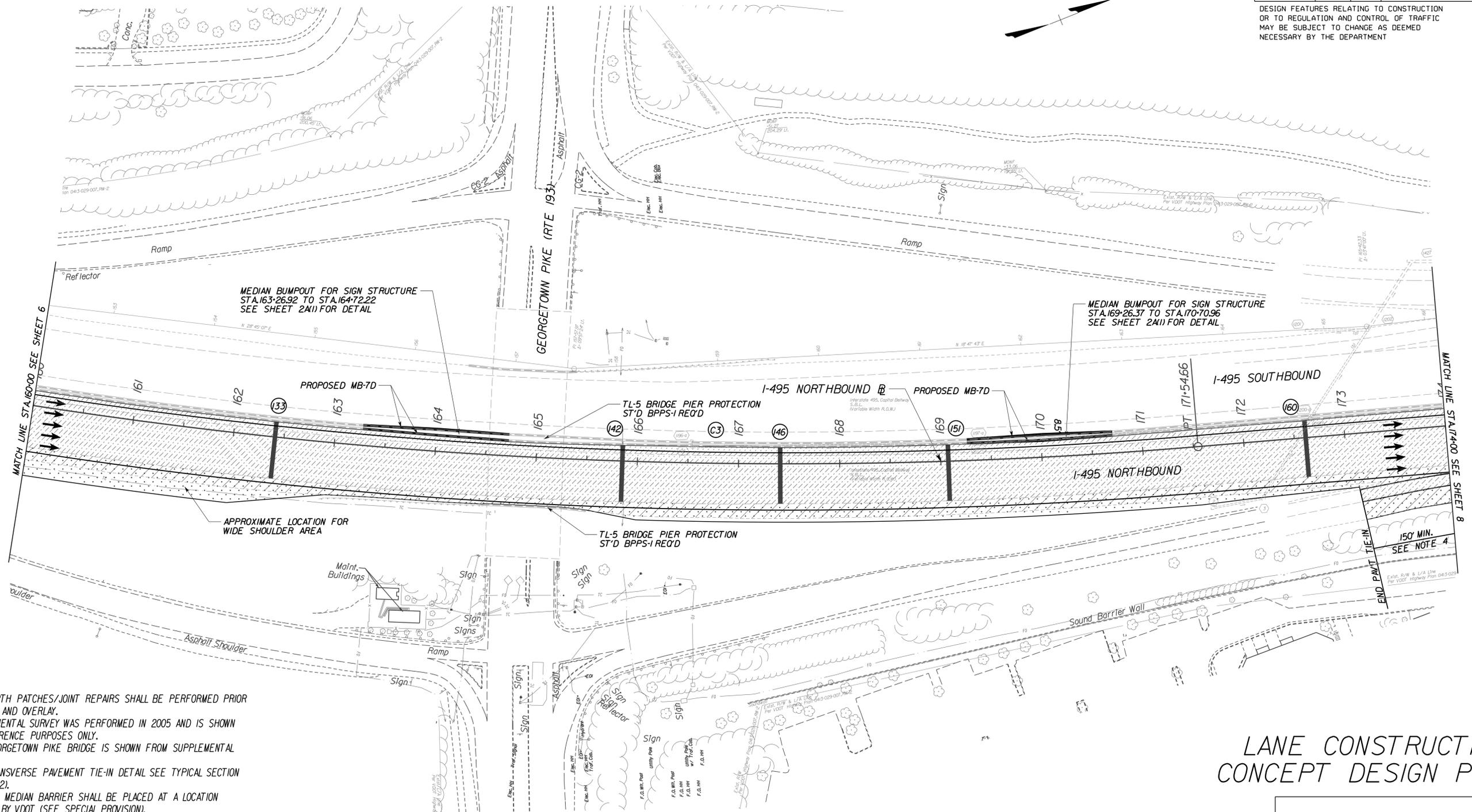
# LANE

The LANE Team

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman, Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	7

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



- NOTES:
1. FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.
  2. SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.
  3. THE GEORGETOWN PIKE BRIDGE IS SHOWN FROM SUPPLEMENTAL SURVEY.
  4. FOR TRANSVERSE PAVEMENT TIE-IN DETAIL SEE TYPICAL SECTION SHEET 2A21.
  5. MOVABLE MEDIAN BARRIER SHALL BE PLACED AT A LOCATION APPROVED BY VDOT (SEE SPECIAL PROVISION).

**LEGEND**

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/ Joint Repair Location and Joint Repair Number

(C3) Curve NBB003  
 PI • 160+34.88  
 DELTA • 27° 04' 57.77" (LT)  
 D • 111' 10"  
 T • 1163.27'  
 L • 2283.06'  
 R • 4830.00'  
 PC • 148+71.61  
 PT • 171+54.66  
 E • 4.18%  
 V • 70 MPH



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LANE CONSTRUCTION CONCEPT DESIGN PLANS

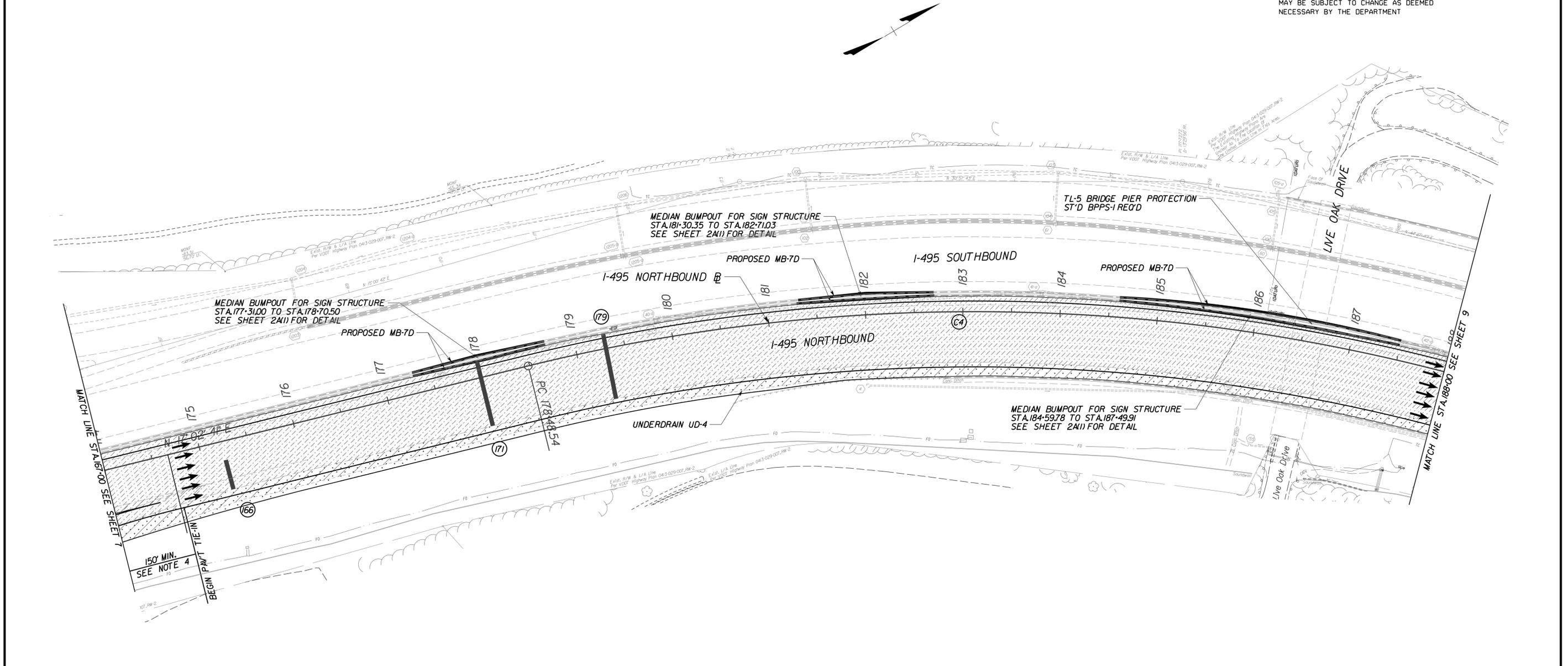
**LANE**

The LANE Team

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	8

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



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

### LEGEND

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/ Joint Repair Location and Joint Repair Number

(C4) Curve NBB004  
PI • 186+04.22  
DELTA • 43° 10' 17.84" (RT)  
D • 2° 59' 59"  
T • 755.68'  
L • 1,439.16'  
R • 1,910.00'  
PC • 178+48.54  
PT • 192+87.70  
E • 7.95%  
V • 70 MPH

NOTES:  
1. FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.  
2. SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.  
3. MOVABLE MEDIAN BARRIER SHALL BE PLACED AT A LOCATION APPROVED BY VDOT (SEE SPECIAL PROVISION).



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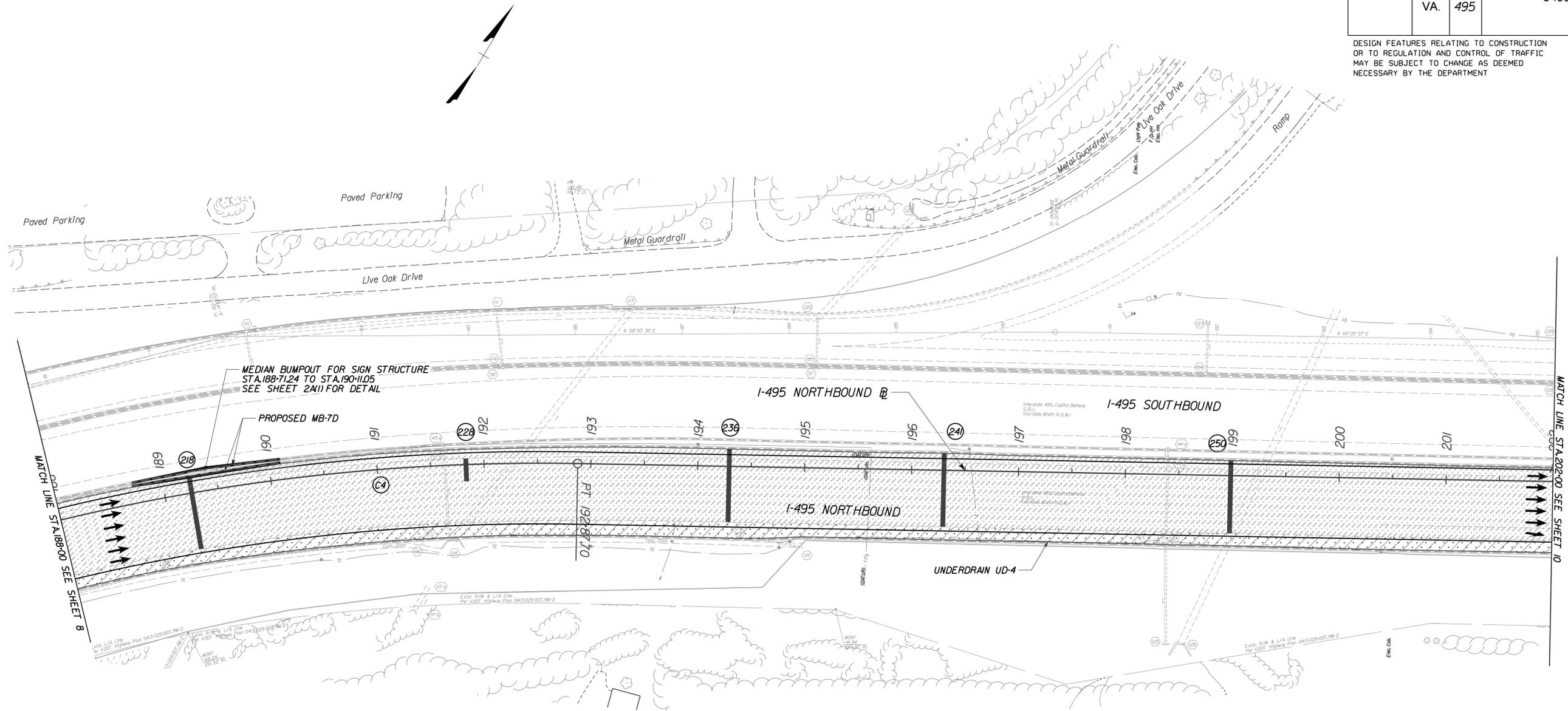
# LANE

The LANE Team

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waitman Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	

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



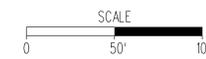
## LANE CONSTRUCTION CONCEPT DESIGN PLANS

### LEGEND

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/Joint Repair Location and Joint Repair Number

Curve NBB004  
PI • 186+04.22  
DELTA • 43° 10' 17.84" (RT)  
D • 2' 59' 59"  
T • 755.68'  
L • 1,439.16'  
R • 1,910.00'  
PC • 178+48.54  
PT • 192+87.70  
E • 7.95%  
V • 70 MPH

NOTES:  
1. FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.  
2. SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.  
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# LANE

The LANE Team

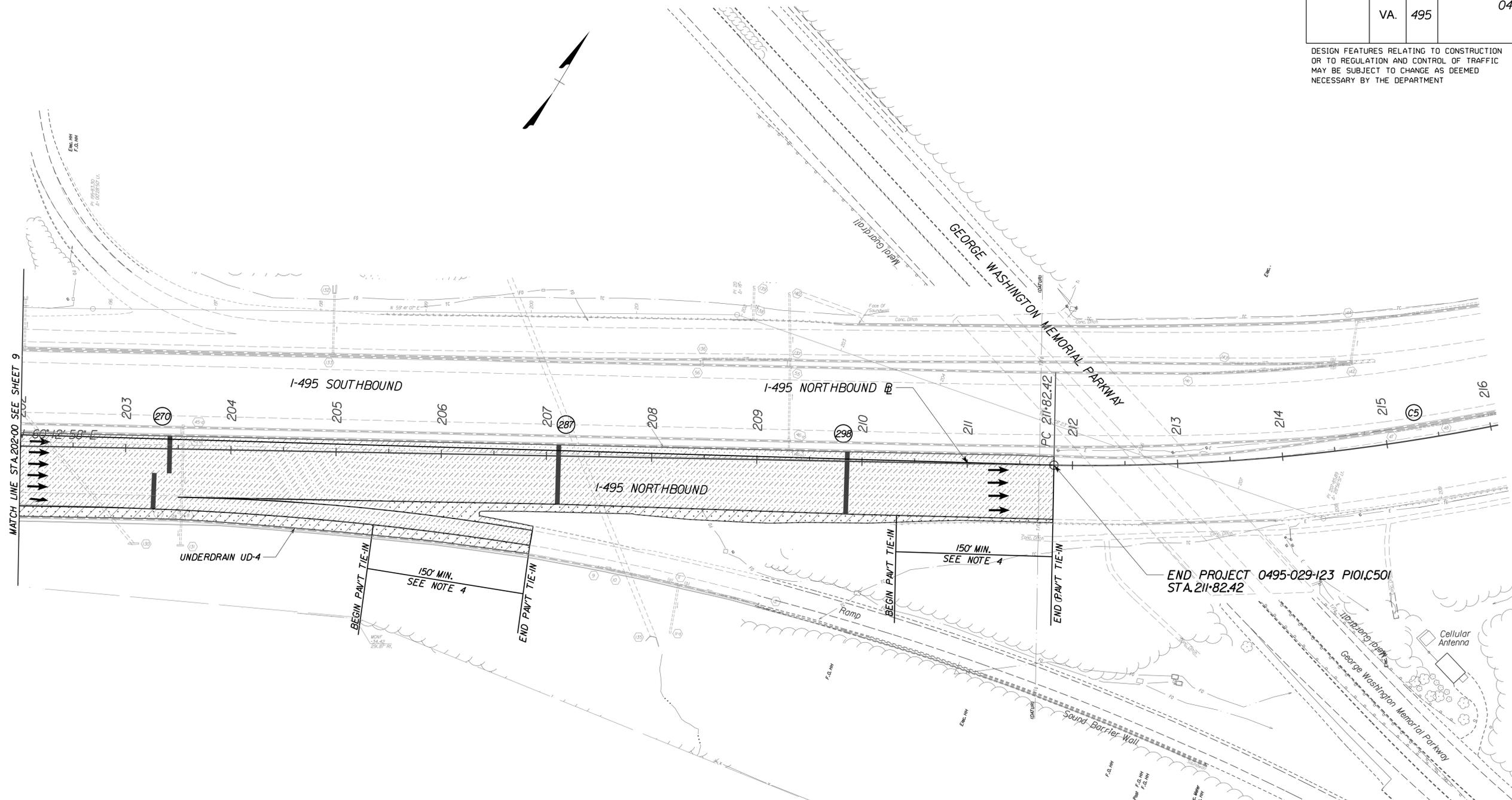
EXHIBIT

9

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Requardt & Associates (703) 293-9717

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	495	0495-029-123 C501	10

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



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

### LEGEND

- Denotes Proposed Pavement
- Denotes Resurfacing of Pavement
- Denotes Demolition of Pavement
- Denotes Full Depth Patch/ Joint Repair Location and Joint Repair Number

(C5) Curve NBB005  
PI • 221+05.40  
DELTA • 50° 39' 31.36" (LT)  
D • 2' 56" 18"  
T • 922.98'  
L • 1724.11'  
R • 1,950.00'  
PC • 211+82.42  
PT • 229+06.54  
E • MATCH EXISTING  
V • 70 MPH

- NOTES:
1. FULL DEPTH PATCHES/JOINT REPAIRS SHALL BE PERFORMED PRIOR TO MILLING AND OVERLAY.
  2. SUPPLEMENTAL SURVEY WAS PERFORMED IN 2005 AND IS SHOWN FOR REFERENCE PURPOSES ONLY.
  3. THE GEORGE WASHINGTON MEMORIAL PARKWAY BRIDGE IS SHOWN FROM SUPPLEMENTAL SURVEY.
  4. FOR TRANSVERSE PAVEMENT TIE-IN DETAIL SEE TYPICAL SECTION SHEET 2A(2).
  5. MOVABLE MEDIAN BARRIER SHALL BE PLACED AT A LOCATION APPROVED BY VDOT (SEE SPECIAL PROVISION).

SCALE  
0 50' 100'

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# LANE

The LANE Team

EXHIBIT

10

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Wilmann Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO
	VA.	495	0495-029-123 C501	

FOR INDEX OF SHEETS SEE SHEET 1B

FHWA 534 DATA 4A144

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 WAS DEVELOPED UTILIZING THE DEPARTMENT'S ENGINEERING DESIGN PACKAGE (GEOPAK).  
GEOPAK Computer Identification No. 105130

# LANE CONSTRUCTION CONCEPT DESIGN PLANS

## COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION

# PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

## FAIRFAX COUNTY I-495 NORTHERN SECTION SHOULDER USE PROJECT FROM: SOUTH OF OLD DOMINION DRIVE TO: GEORGE WASHINGTON MEMORIAL PARKWAY

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
I-495 NORTHBOUND (GS-5) - LEVEL	
	FR: SOUTH OF OLD DOMINION DRIVE TO: GEORGE WASHINGTON MEMORIAL PARKWAY
ADT (2013)	109,000 (ONE WAY)
ADT (2035)	177,400 (ONE WAY)
DHV	11,000 (ONE WAY)
D (%) (design hour)	100%
T (%) (design hour)	4.3%
V (MPH)	70 MPH

DESIGN EXCEPTIONS TO INTERSTATE 495			
REDUCED NORTHBOUND LANE AND SHOULDER WIDTHS			
Sta. to Sta.	Widths	Reasons for Exception	Approval Date
Sta. 122+00 to Sta. 207+00	Varies 0.5'-12'	Provide width for Shoulder Use Lane	
INSIDE SHOULDER WIDTH SOUTHBOUND AT SIGN STRUCTURES			
Sta. to Sta.	Shoulder Width	Reasons for Exception	Approval Date
Sta. 122+00 to Sta. 207+00	Varies 6'-8'	Barrier modification for sign structures	
HORIZONTAL SIGHT DISTANCE NORTHBOUND INSIDE SHOULDER USE, OUTSIDE AND AUXILIARY LANES			
Sta. to Sta.	Sight Distance	Reasons for Exception	Approval Date
Sta. 150+00 to Sta. 207+00	495' & 645'	Shoulder Use Lane during Peak Hours	

### 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	-----

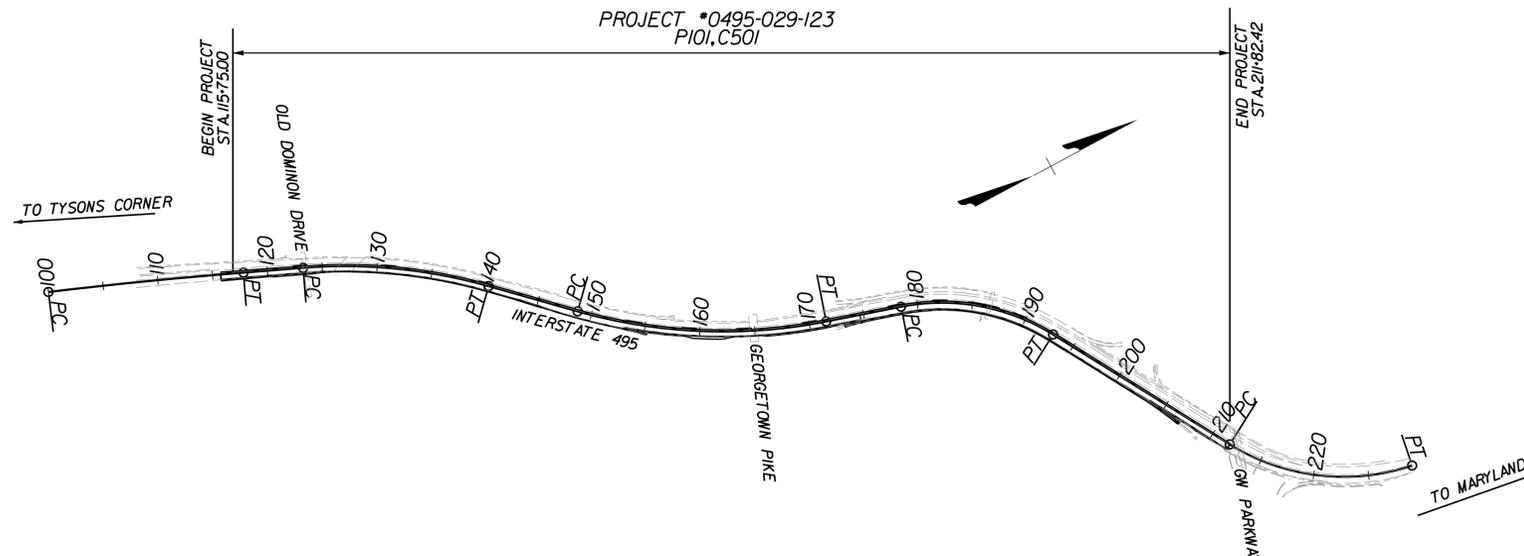
THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, HAS BEEN SEALED AND SIGNED USING DIGITAL SIGNATURES AND THE OFFICIAL PLAN ASSEMBLY IN ELECTRONIC FORMAT IS STORED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. 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 5.11R, EXCEPT WHERE OTHERWISE NOTED.

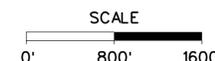
THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, ARE FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.



Fairfax County Population 1,109,725 (2012 Census)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	EQUALITIES		LENGTH INCLUDING BRIDGE(S)		LENGTH EXCLUDING BRIDGE(S)		BRIDGE PROJECT NO.	TYPE PROJECT	DESCRIPTION
					FEET	MILES	FEET	MILES	FEET	MILES			
0495-029-123	P-101	STP-495-5(094)	PENG	105130	---	1.82	---	1.82			PRELIM. ENG.	FROM: SOUTH OF OLD DOMINION DR TO: GW MEMORIAL PARKWAY	
	C-501	STP-495-5(094)	F000	105130	---	1.82	---	1.82			CONSTRUCTION	FROM: SOUTH OF OLD DOMINION DR TO: GW MEMORIAL PARKWAY	

Project Lengths are based on Construction Baseline.



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

ALL CONSTRUCTION IS TO BE PERFORMED WITHIN EXISTING RIGHT OF WAY

### TIER 2 PROJECT

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	PROGRAMMING DIVISION DIRECTOR
DATE	STATE LOCATION AND DESIGN ENGINEER
DATE	STATE STRUCTURE AND BRIDGE ENGINEER
DATE	CHIEF OF PROGRAMMING AND PLANNING

APPROVED FOR CONSTRUCTION	
DATE	CHIEF ENGINEER

APPROVED	
DATE	DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

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# LANE

The LANE Team

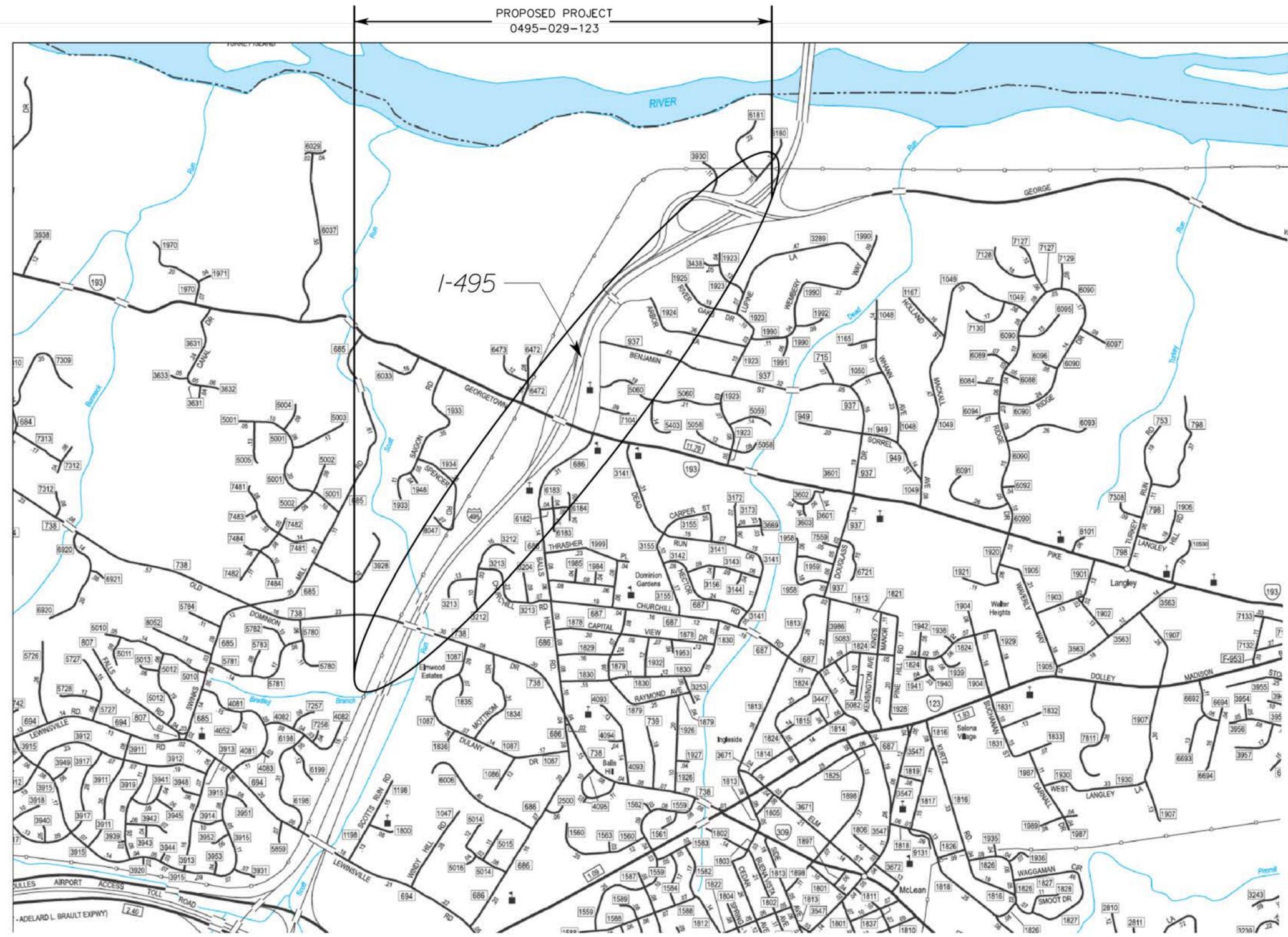
PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman, Requardt & Associates (703) 293-9717

# LOCATION MAP

## FAIRFAX COUNTY

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	1A

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



LANE CONSTRUCTION  
CONCEPT DESIGN PLANS



The LANE Team

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PROJECT MANAGER *Paul Nishimoto (57) 483:2622*  
 SURVEYED BY, DATE *\_VDOT\_*  
 DESIGN BY *Whitman Requardt & Associates (703) 293-9717*

# INDEX OF SHEETS

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	495	0495-029-123 C501	1B

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

SHEET NO.	DESCRIPTION	STATIONS
1	TITLE SHEET	
1A	LOCATION MAP	
1B	INDEX OF SHEETS	
1D	SURVEY ALIGNMENT DATA SHEET	
1E(1) - 1E(5)	CONSTRUCTION ALIGNMENT DATA SHEET	
1F	CADD LEVEL STRUCTURE SHEET	
2A	TYPICAL SECTIONS	
3-10	PLAN SHEETS	104+00 to 216+00
12(1) - 12(11)	SIGNING PLANS	

## LANE CONSTRUCTION CONCEPT DESIGN PLANS

# LANE

The LANE Team

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 ACQUISITION OF RIGHT OF WAY.

EXHIBIT

1B

PROJECT MANAGER *Paul Nishimoto (571) 483-2622*  
 SURVEYED BY, DATE *VDOIT*  
 DESIGN BY *Walter Reardon & Associates (703) 293-9717*

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	495	0495-029-123 C501	1D

# SURVEY ALIGNMENT DATA SHEET

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

SURVEY ALIGNMENTS					
POINT ID.	STATION	BEARING	PROJECT NORTH (Y)	COORDINATES EAST (X)	ELEV. (Z)
	100+00.00		466,998.7713	3,649,265.7743	272.47'
	105+98.68	N 27° 57' 09" E	467,527.6104	3,649,546.4007	252.07'
	112+44.02	N 24° 54' 17" E	468,112.9335	3,649,818.1577	243.81'
	118+87.26	N 25° 53' 00" E	468,691.6486	3,650,098.9594	243.64'
	126+31.34	N 31° 55' 18" E	469,323.2010	3,650,492.3972	262.07'
	132+23.11	N 39° 51' 57" E	469,777.4178	3,650,871.7212	278.42'
	137+65.08	N 42° 57' 30" E	470,174.0557	3,651,241.0525	291.77'
	143+63.39	N 43° 48' 10" E	470,605.8755	3,651,655.1931	303.30'
	151+24.67	N 37° 03' 44" E	471,213.3587	3,652,113.9988	300.87'
	157+57.97	N 28° 45' 07" E	471,768.5812	3,652,418.6271	294.74'
	165+42.33	N 18° 47' 43" E	472,511.1143	3,652,671.3366	285.07'
	173+17.42	N 15° 00' 42" E	473,259.7521	3,652,872.0979	278.73'
	177+72.72	N 30° 57' 43" E	473,650.1754	3,653,106.3356	267.88'
	182+71.51	N 44° 27' 40" E	474,006.1774	3,653,455.7015	258.62'
	190+48.68	N 58° 50' 36" E	474,408.2711	3,654,120.7729	234.19'
	195+83.30	N 60° 09' 57" E	474,674.2367	3,654,584.5329	221.87'
	201+95.65	N 59° 41' 07" E	474,983.3218	3,655,113.1578	207.63'
	207+85.89	N 78° 23' 39" E	475,102.0647	3,655,691.3254	198.19'
	212+42.58	N 49° 26' 48" E	475,398.9838	3,656,038.3180	186.50'
	221+02.47	N 15° 36' 41" E	476,227.1529	3,656,269.7243	152.75'

LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

**LANE**

The LANE Team

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

EXHIBIT

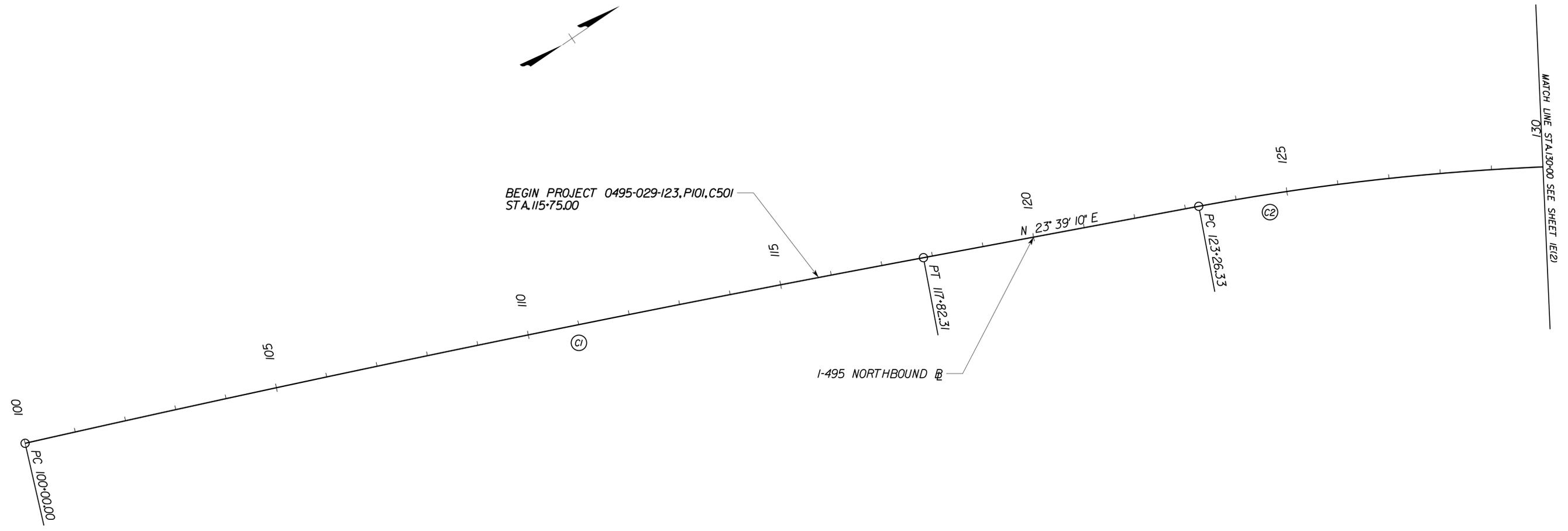
1D

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Requardt & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	1E(1)

# CONSTRUCTION ALIGNMENT DATA SHEET

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



(C1) Curve NBB001  
 PI • 108+91.27  
 DELTA • 2° 13' 04.40" (RT)  
 D • 0' 07" 28"  
 T • 891.27'  
 L • 1782.31'  
 R • 46,043.27'  
 PC • 100+00.00  
 PT • 117+82.31  
 E • MATCH EXISTING

(C2) Curve NBB002  
 PI • 131+87.79  
 DELTA • 20° 28' 27.99" (RT)  
 D • 1' 12" 04"  
 T • 861.46'  
 L • 1704.54'  
 R • 4770.00'  
 PC • 123+26.33  
 PT • 140+30.87  
 E • 4.23%  
 V • 70 MPH



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

# LANE

The LANE Team

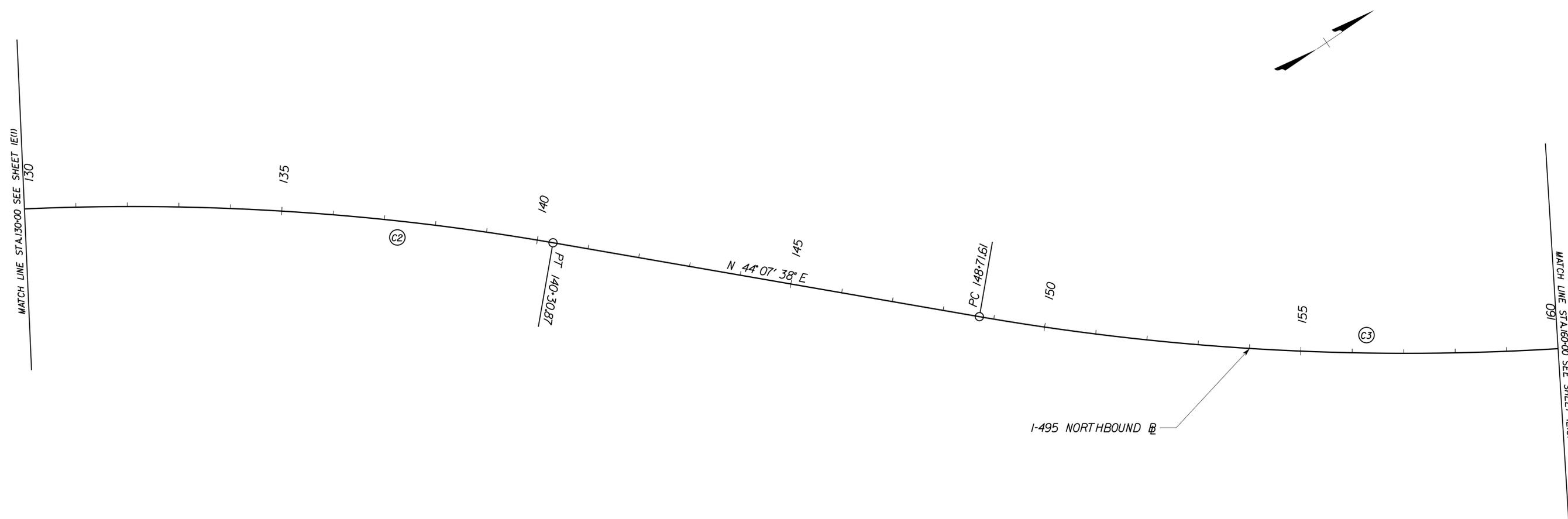
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman Requardt & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	1E(2)

# CONSTRUCTION ALIGNMENT DATA SHEET

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



I-495 NORTHBOUND

- Ⓒ<sup>2</sup> Curve NBB002  
 PI • 131+87.79  
 DELTA • 20° 28' 27.99" (RT)  
 D • 112' 04"  
 T • 861.46'  
 L • 1704.54'  
 R • 4770.00'  
 PC • 123+26.33  
 PT • 140+30.87  
 E • 4.23%  
 V • 70 MPH
- Ⓒ<sup>3</sup> Curve NBB003  
 PI • 160+34.88  
 DELTA • 27° 04' 57.77" (LT)  
 D • 111' 10"  
 T • 1163.27'  
 L • 2283.06'  
 R • 4830.00'  
 PC • 148+71.61  
 PT • 171+54.66  
 E • 4.18%  
 V • 70 MPH



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LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

**LANE**

The LANE Team

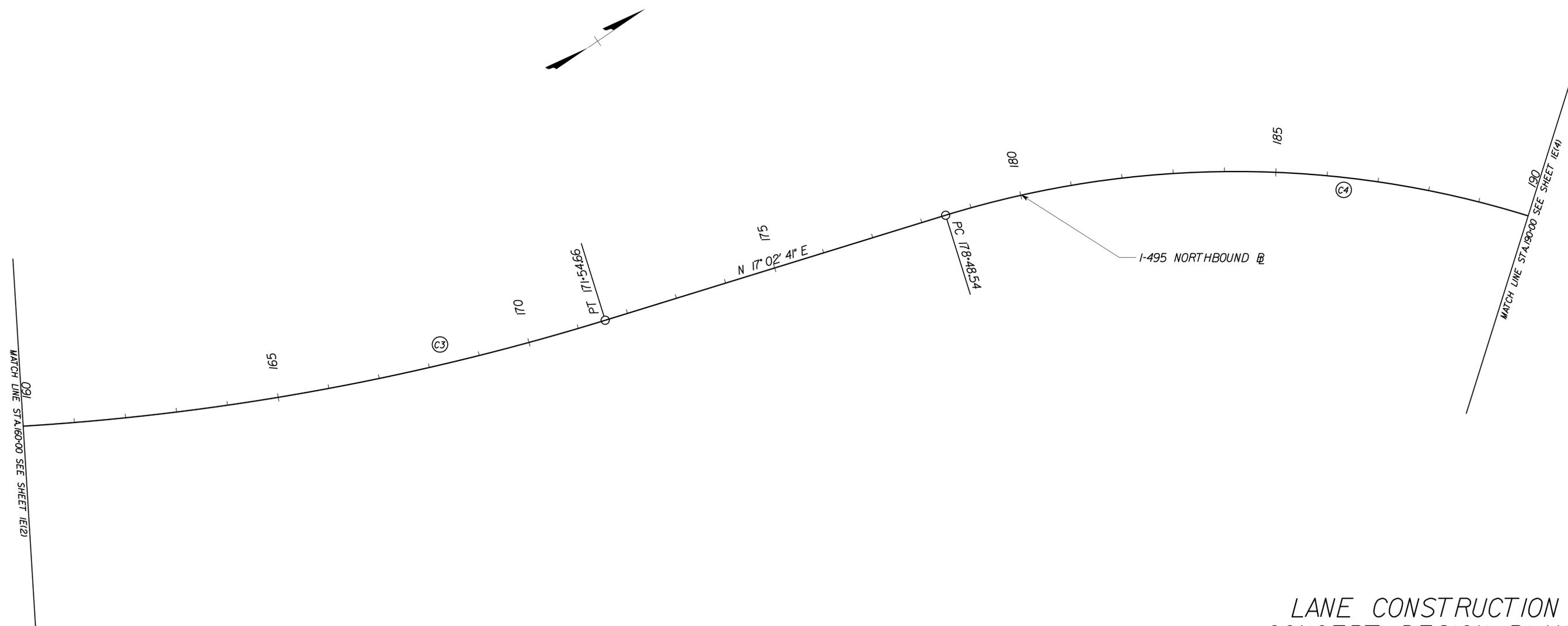
EXHIBIT 1E(2)

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	1E(3)

# CONSTRUCTION ALIGNMENT DATA SHEET

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



**(C3)** Curve NBB003  
 PI • 160+34.88  
 DELTA • 27° 04' 57.77" (LT)  
 D • 111' 10"  
 T • 1463.27'  
 L • 2283.06'  
 R • 4830.00'  
 PC • 148+71.61  
 PT • 171+54.66  
 E • 4.18%  
 V • 70 MPH

**(C4)** Curve NBB004  
 PI • 186+04.22  
 DELTA • 43° 10' 17.84" (RT)  
 D • 2' 59' 59"  
 T • 755.68'  
 L • 1439.16'  
 R • 1910.00'  
 PC • 178+48.54  
 PT • 192+87.70  
 E • 7.95%  
 V • 70 MPH



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LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

**LANE**

The LANE Team

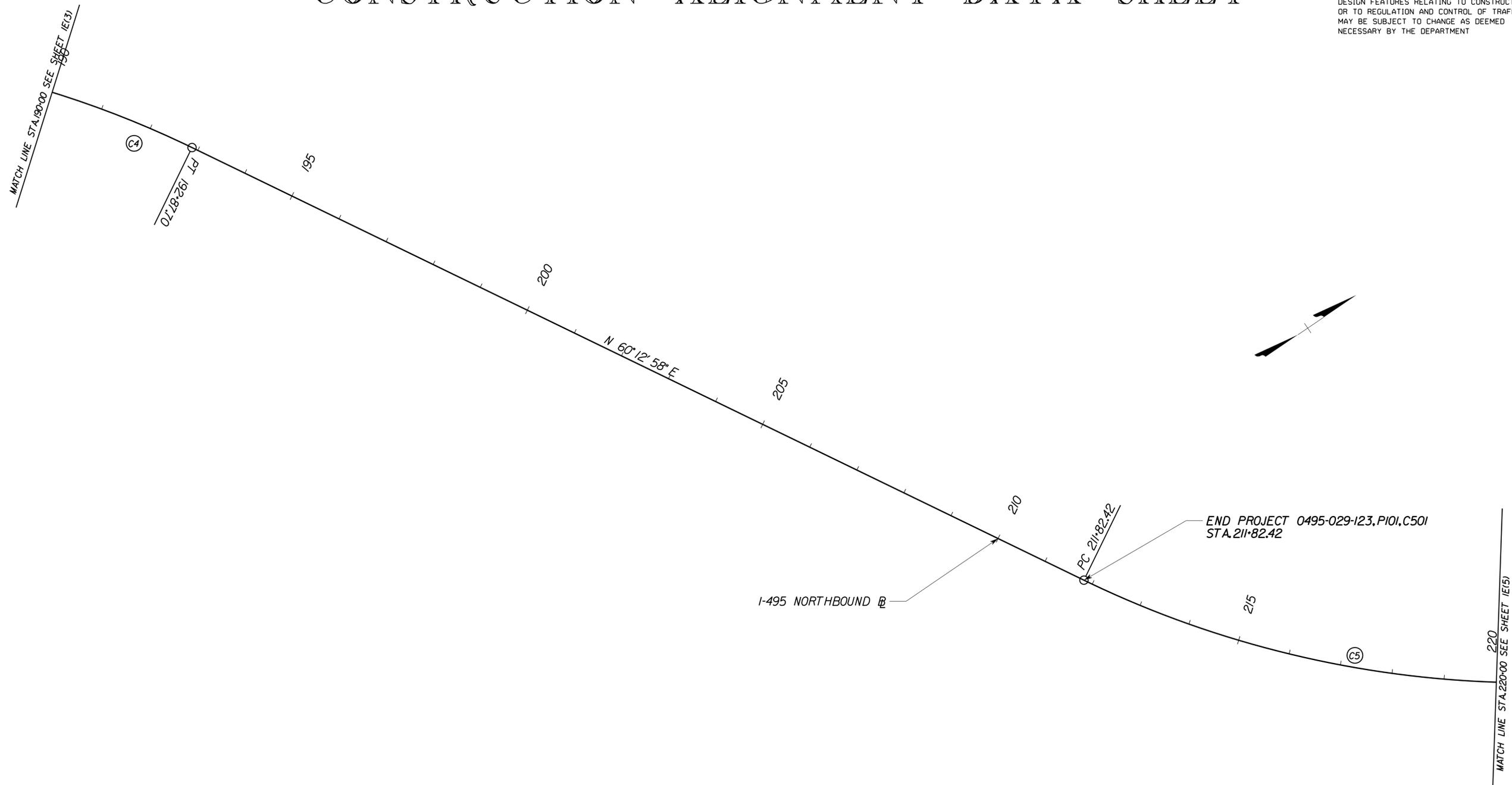
EXHIBIT 1E(3)

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman Requardt & Associates (703) 293-9717

REVISED	STATE		PROJECT	SHEET NO.
	STATE	ROUTE		
	VA.	495	0495-029-123 C501	1E(4)

# CONSTRUCTION ALIGNMENT DATA SHEET

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



**(C4)** Curve NBB004  
PI • 186+04.22  
DELTA • 43°10' 17.84" (RT)  
D • 2' 59" 59"  
T • 755.68'  
L • 1439.16'  
R • 1910.00'  
PC • 178+48.54  
PT • 192+87.70  
E • 7.95%  
V • 70 MPH

**(C5)** Curve NBB005  
PI • 221+05.40  
DELTA • 50° 39' 31.36" (LT)  
D • 2' 56" 18"  
T • 922.98'  
L • 1724.11'  
R • 1950.00'  
PC • 211+82.42  
PT • 229+06.54  
E • MATCH EXISTING  
V • 70 MPH



LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

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**LANE**

The LANE Team

EXHIBIT 1E(4)

PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman, Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	1E(5)

# CONSTRUCTION ALIGNMENT DATA SHEET

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

## I-495 NORTHBOUND CONSTRUCTION BASELINE

Beginning chain 495REV2 description

Curve Data			
(C1)	Curve NBBO01	P.I. Station	108+91.27 N 467,039.26 E 3,649,462.59
		Delta	= 2° 13' 04.40" (RT)
		Degree	= 0° 07' 27.98"
		Tangent	= 891.27
		Length	= 1,782.31
		Radius	= 46,043.27
		External	= 8.63
		Long Chord	= 1,782.20
		Mid. Ord.	= 8.62
		P.C. Station	100+00.00 N 466,209.64 E 3,649,136.88
		P.T. Station	117+82.31 N 467,855.66 E 3,649,820.17
		C.C. N	449,383.33 E 3,691,995.46
		Back	= N 21° 26' 06.04" E
		Ahead	= N 23° 39' 10.44" E
		Chord Bear	= N 22° 32' 38.24" E

Course from PT NBBO01 to PC NBBO02 N 23° 39' 10.44" E Dist 544.02

Curve Data			
(C2)	Curve NBBO02	P.I. Station	131+87.79 N 469,143.06 E 3,650,384.04
		Delta	= 20° 28' 27.99" (RT)
		Degree	= 1° 12' 04.21"
		Tangent	= 861.46
		Length	= 1,704.54
		Radius	= 4,770.00
		External	= 77.17
		Long Chord	= 1,695.49
		Mid. Ord.	= 76.94
		P.C. Station	123+26.33 N 468,353.98 E 3,650,038.42
		P.T. Station	140+30.87 N 469,761.41 E 3,650,983.83
		C.C. N	466,440.28 E 3,654,407.71
		Back	= N 23° 39' 10.44" E
		Ahead	= N 44° 07' 38.43" E
		Chord Bear	= N 33° 53' 24.43" E

Course from PT NBBO02 to PC NBBO03 N 44° 07' 38.43" E Dist 840.73

Curve Data			
(C3)	Curve NBBO03	P.I. Station	160+34.88 N 471,199.88 E 3,652,379.13
		Delta	= 27° 04' 57.77" (LT)
		Degree	= 1° 11' 10.49"
		Tangent	= 1,163.27
		Length	= 2,283.06
		Radius	= 4,830.00
		External	= 138.11
		Long Chord	= 2,261.86
		Mid. Ord.	= 134.27
		P.C. Station	148+71.61 N 470,364.89 E 3,651,569.20
		P.T. Station	171+54.66 N 472,312.05 E 3,652,720.10
		C.C. N	473,727.80 E 3,648,102.25
		Back	= N 44° 07' 38.43" E
		Ahead	= N 17° 02' 40.66" E
		Chord Bear	= N 30° 35' 09.55" E

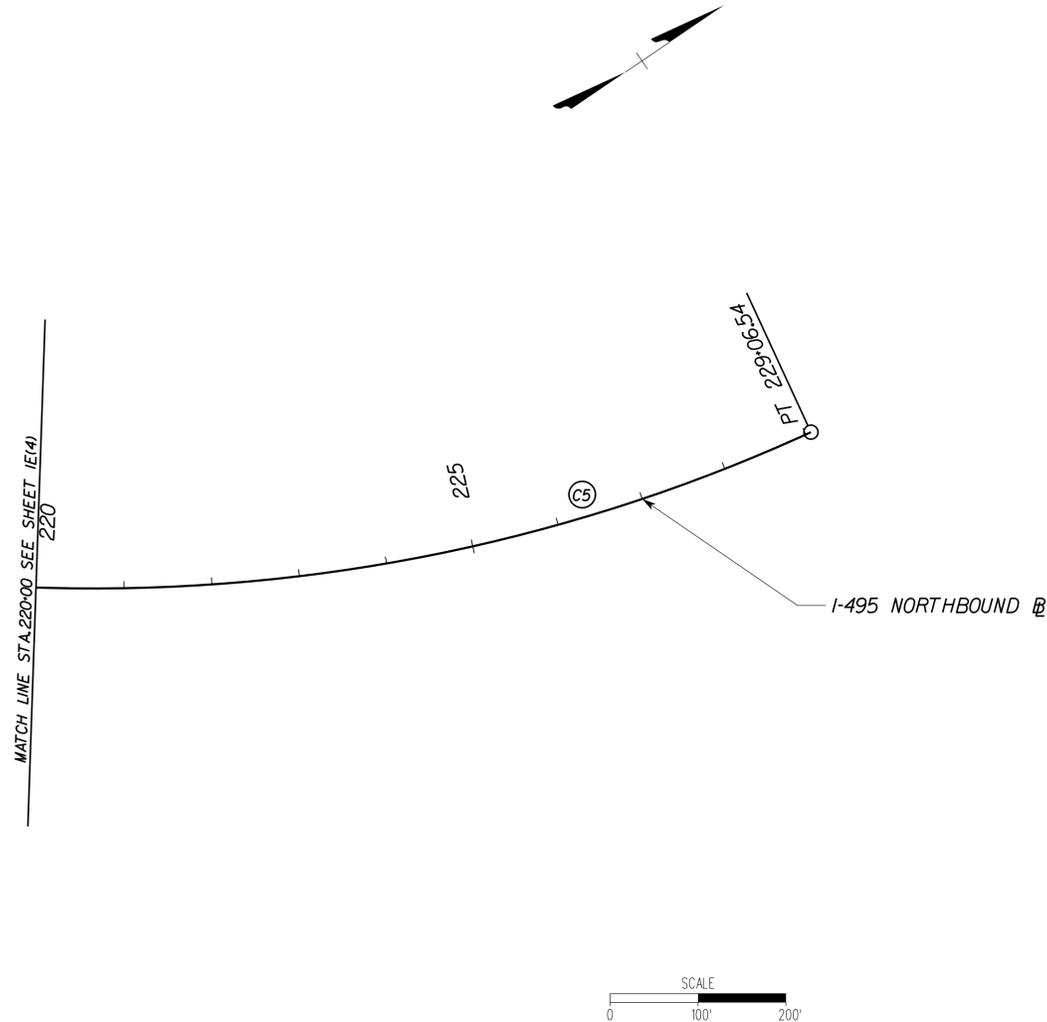
Course from PT NBBO03 to PC NBBO04 N 17° 02' 40.66" E Dist 693.88

Curve Data			
(C4)	Curve NBBO04	P.I. Station	186+04.22 N 473,697.93 E 3,653,144.99
		Delta	= 43° 10' 17.84" (RT)
		Degree	= 2° 59' 59.20"
		Tangent	= 755.68
		Length	= 1,439.16
		Radius	= 1,910.00
		External	= 144.06
		Long Chord	= 1,405.36
		Mid. Ord.	= 133.95
		P.C. Station	178+48.54 N 472,975.45 E 3,652,923.49
		P.T. Station	192+87.70 N 474,073.30 E 3,653,800.84
		C.C. N	472,415.60 E 3,654,749.59
		Back	= N 17° 02' 40.66" E
		Ahead	= N 60° 12' 58.50" E
		Chord Bear	= N 38° 37' 49.58" E

Course from PT NBBO04 to PC NBBO05 N 60° 12' 58.50" E Dist 1,894.72

Curve Data			
(C5)	Curve NBBO05	P.I. Station	221+05.40 N 475,472.93 E 3,656,246.35
		Delta	= 50° 39' 31.36" (LT)
		Degree	= 2° 56' 17.68"
		Tangent	= 922.98
		Length	= 1,724.11
		Radius	= 1,950.00
		External	= 207.41
		Long Chord	= 1,668.50
		Mid. Ord.	= 187.47
		P.C. Station	211+82.42 N 475,014.46 E 3,655,445.28
		P.T. Station	229+06.54 N 476,383.10 E 3,656,399.60
		C.C. N	476,706.88 E 3,654,476.66
		Back	= N 60° 12' 58.50" E
		Ahead	= N 9° 33' 27.14" E
		Chord Bear	= N 34° 53' 12.82" E

Ending chain 495REV2 description



(C5) Curve NBBO05  
PI = 221+05.40  
DELTA = 50° 39' 31.36" (LT)  
D = 2° 56' 18"  
T = 922.98'  
L = 1,724.11'  
R = 1,950.00'  
PC = 211+82.42  
PT = 229+06.54  
E = MATCH EXISTING  
V = 70 MPH

LANE CONSTRUCTION  
CONCEPT DESIGN PLANS

**LANE**

The LANE Team

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

EXHIBIT

1E(5)

PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman, Reardon & Associates (703) 293-9717

**SIGN & ITS SUPPORT LEGEND**

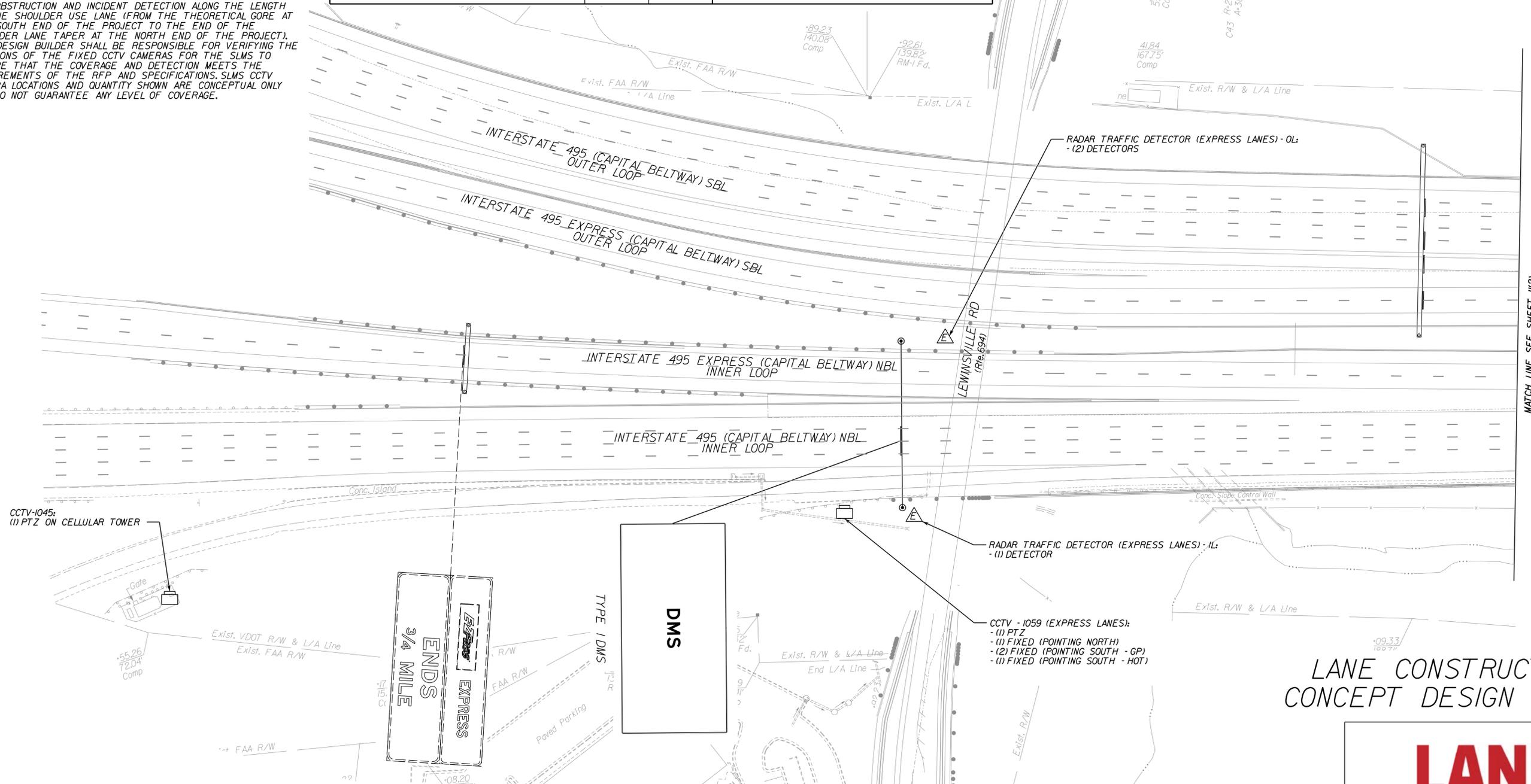
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	11(1)

**SIGN/ITS NOTES:**

1. PROPOSED SIGN/ITS STRUCTURES AND LOCATIONS ARE CONCEPTUAL. THE DESIGN-BUILDER SHALL REFER TO THE RFP TECHNICAL INFORMATION AND REQUIREMENTS (PART 2 OF THE RFP) FOR ALL SIGNING AND ITS REQUIREMENTS.
2. THE DESIGN BUILDER SHALL BE RESPONSIBLE FOR VERIFYING 100% CCTV CAMERA VIEWING COVERAGE OF I-495 NB AND SB TRAFFIC AND ALL LANE USE CONTROL SIGNALS AND DMSs WITHIN THE PROJECT LIMITS DURING ALL SEASONAL CONDITIONS. CCTV CAMERA LOCATIONS SHOWN ARE CONCEPTUAL ONLY AND DO NOT GUARANTEE ANY LEVEL OF COVERAGE.
3. A SHOULDER LANE MONITORING SYSTEM (SLMS) SHALL BE PROVIDED FOR OBSTRUCTION AND INCIDENT DETECTION ALONG THE LENGTH OF THE SHOULDER USE LANE (FROM THE THEORETICAL GORE AT THE SOUTH END OF THE PROJECT TO THE END OF THE SHOULDER LANE TAPER AT THE NORTH END OF THE PROJECT). THE DESIGN BUILDER SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF THE FIXED CCTV CAMERAS FOR THE SLMS TO ENSURE THAT THE COVERAGE AND DETECTION MEETS THE REQUIREMENTS OF THE RFP AND SPECIFICATIONS. SLMS CCTV CAMERA LOCATIONS AND QUANTITY SHOWN ARE CONCEPTUAL ONLY AND DO NOT GUARANTEE ANY LEVEL OF COVERAGE.

SUPPORTS	SYMBOL		SIGNS
	PROPOSED	EXISTING	
Single Post Sign/ITS Support			Existing Sign to Remain or to be Relocated
Double Post Sign/ITS Support			Existing Sign to be Removed
O/H Cantilever Sign/ITS Support			Proposed Sign Panel
O/H Span Sign/ITS Support			Proposed Shoulder Lane Control Signal (LCS)
O/H Butterfly Sign/ITS Support			

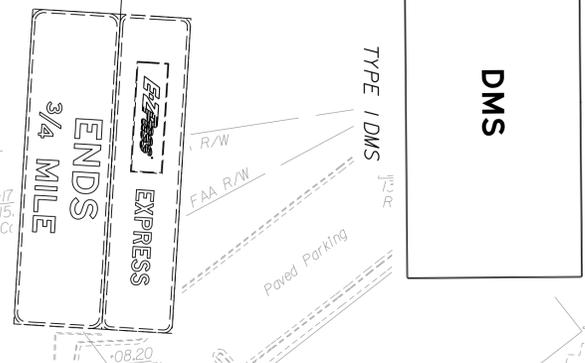
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



CCTV-1045:  
(1) PTZ ON CELLULAR TOWER

RADAR TRAFFIC DETECTOR (EXPRESS LANES) - IL:  
- (1) DETECTOR

CCTV - 1059 (EXPRESS LANES):  
- (1) PTZ  
- (1) FIXED (POINTING NORTH)  
- (2) FIXED (POINTING SOUTH - GP)  
- (1) FIXED (POINTING SOUTH - HOT)

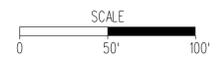


**LANE CONSTRUCTION CONCEPT DESIGN PLANS**

**LANE**

The LANE Team

ITS LEGEND	PLAN SYMBOL	
	PROPOSED	EXISTING
TRAFFIC DETECTOR SITE (EXPRESS LANES OR VDOT OWNED)		
CCTV CAMERA SITE		
FIXED CCTV CAMERA FOR SHOULDER LANE MONITORING SYSTEM		

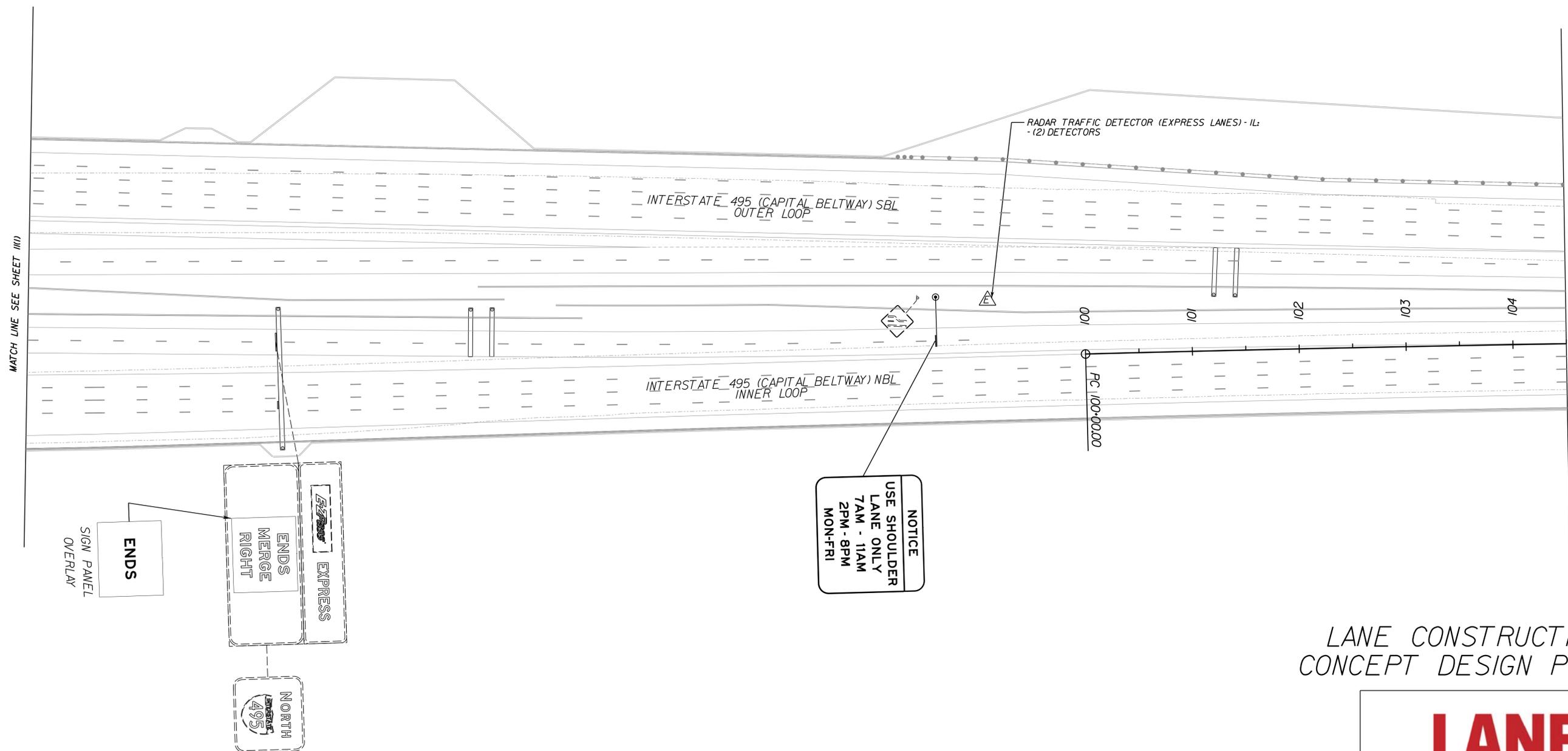


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PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman Requardt & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
		VA.	495	

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

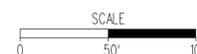


## LANE CONSTRUCTION CONCEPT DESIGN PLANS

# LANE

The LANE Team

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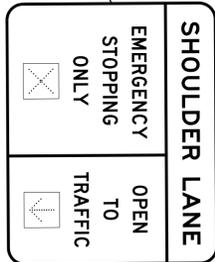
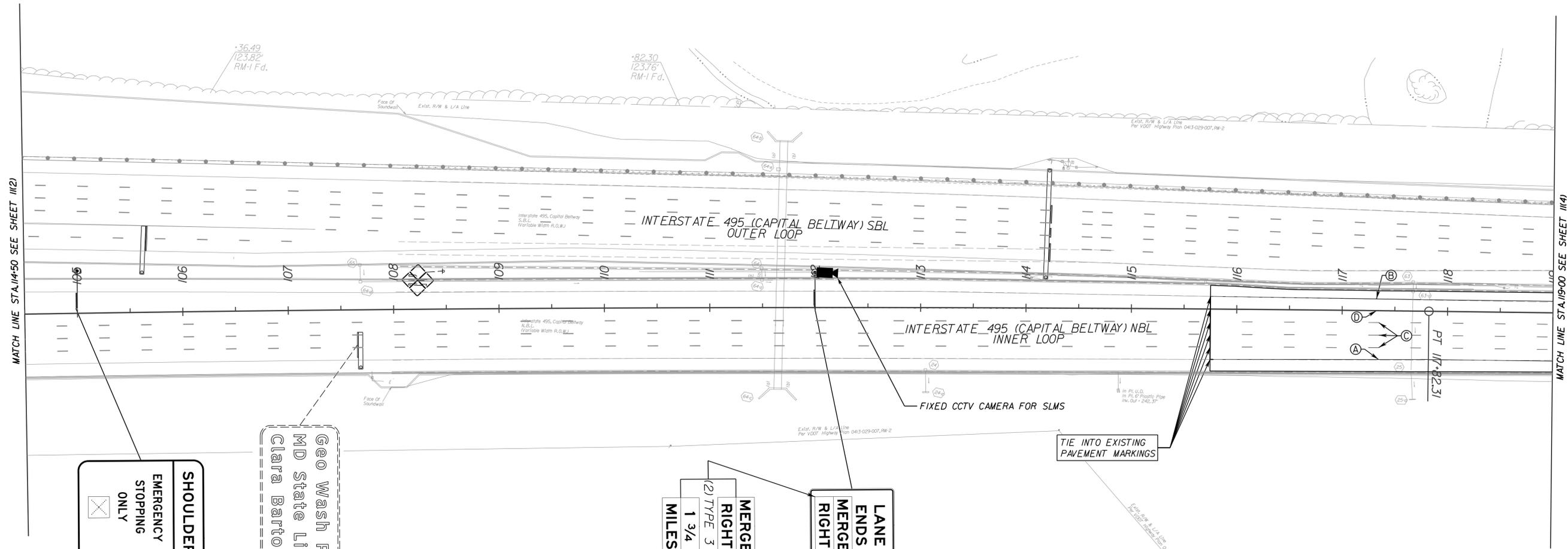
PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman Requardt & Associates (703) 293-9717

**PAVEMENT MARKING LEGEND**

- Ⓐ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH
- Ⓑ TYPE B, CLASS VI, YELLOW PAVEMENT LINE MARKING, 6" WIDTH
- Ⓒ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (10' LINE, 30' SPACE)
- Ⓓ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (2' LINE, 4" SPACE)
- Ⓔ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- Ⓕ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (3' LINE, 9' SPACE)
- Ⓖ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 12" WIDTH (3' LINE, 9' SPACE)
- Ⓗ TYPE B, CLASS VI, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- Ⓙ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- Ⓚ TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH (45 DEGREES)

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	495	0495-029-123 C501	11(3)

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



Geo Wash Pkwy 2  
MD State Line 2 1/4  
Clara Barton Pkwy 3

LANE ENDS MERGE RIGHT  
MESSAGE 1 (SHOULDER CLOSED)  
MESSAGE 2 (SHOULDER OPEN)  
1 3/4 MILES

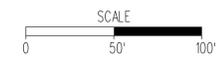
LANE ENDS MERGE RIGHT

**LANE CONSTRUCTION CONCEPT DESIGN PLANS**

**LANE**

The LANE Team

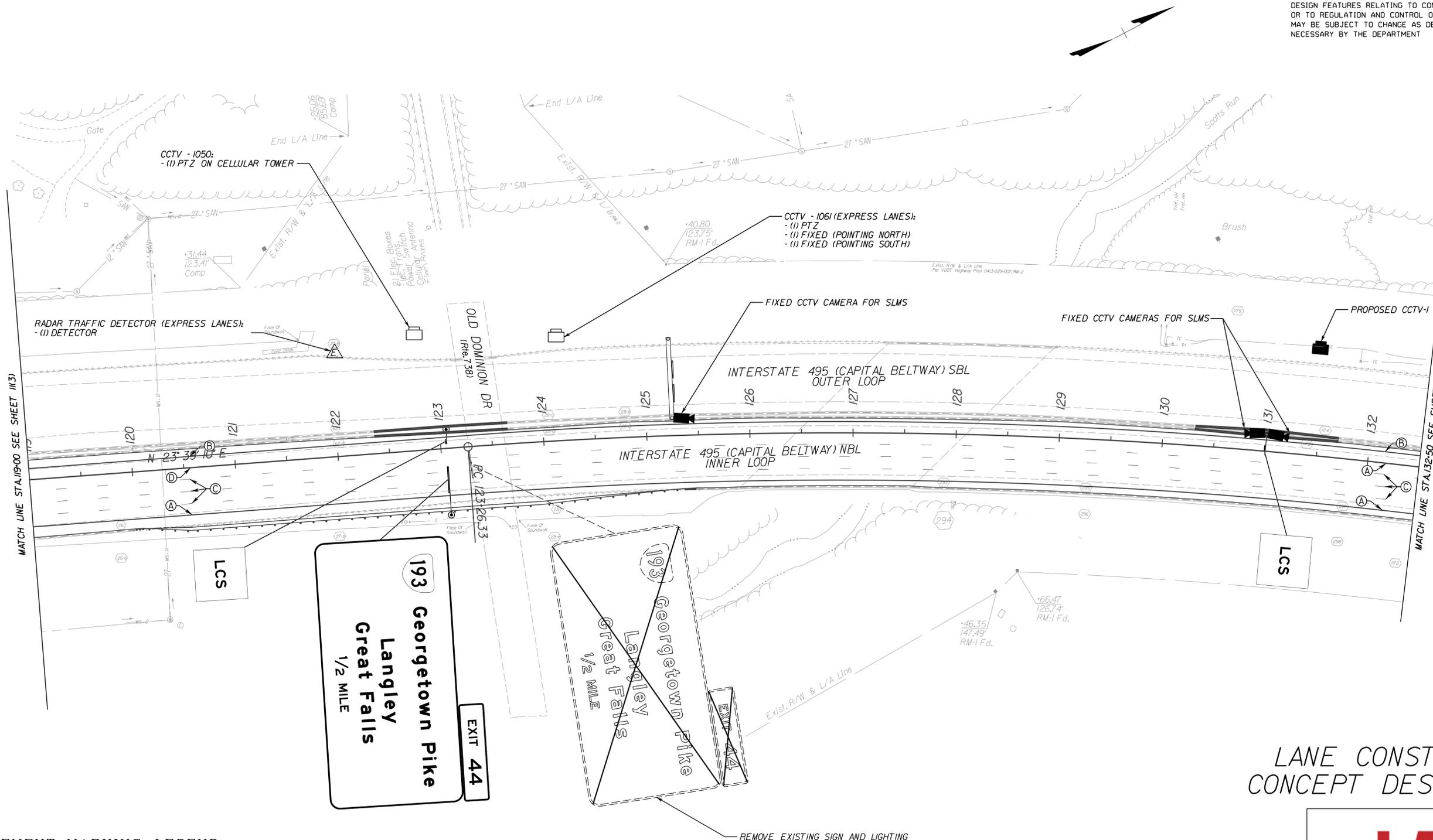
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PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
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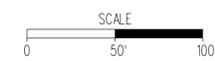
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	11(4)

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



**PAVEMENT MARKING LEGEND**

- |   |  |
|---|--|
| Ⓐ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH                       | Ⓕ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (3' LINE, 9' SPACE)  |
| Ⓑ TYPE B, CLASS VI, YELLOW PAVEMENT LINE MARKING, 6" WIDTH                      | Ⓖ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 12" WIDTH (3' LINE, 9' SPACE) |
| Ⓒ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (10' LINE, 30' SPACE) | Ⓖ TYPE B, CLASS VI, YELLOW PAVEMENT LINE MARKING, 4" WIDTH                     |
| Ⓓ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (2' LINE, 4' SPACE)   | Ⓗ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 4" WIDTH                      |
| Ⓔ TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 8" WIDTH                       | Ⓘ TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH (45 DEGREES)         |



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

**LANE CONSTRUCTION CONCEPT DESIGN PLANS**

**LANE**

The LANE Team

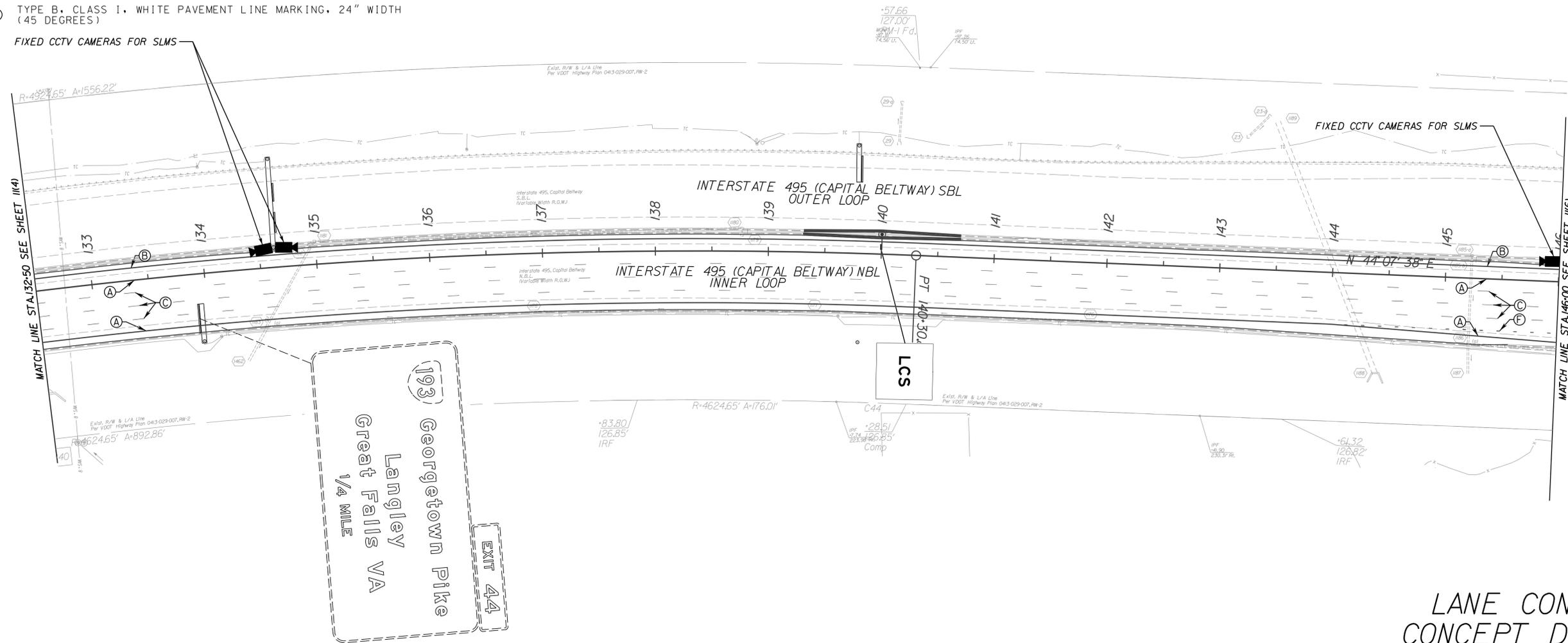
PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman Requardt & Associates (703) 293-9717

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	495	0495-029-123 C501	11(5)

### PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH
- (B) TYPE B, CLASS VI, YELLOW PAVEMENT LINE MARKING, 6" WIDTH
- (C) TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH (10' LINE, 30' SPACE)
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

# LANE

The LANE Team

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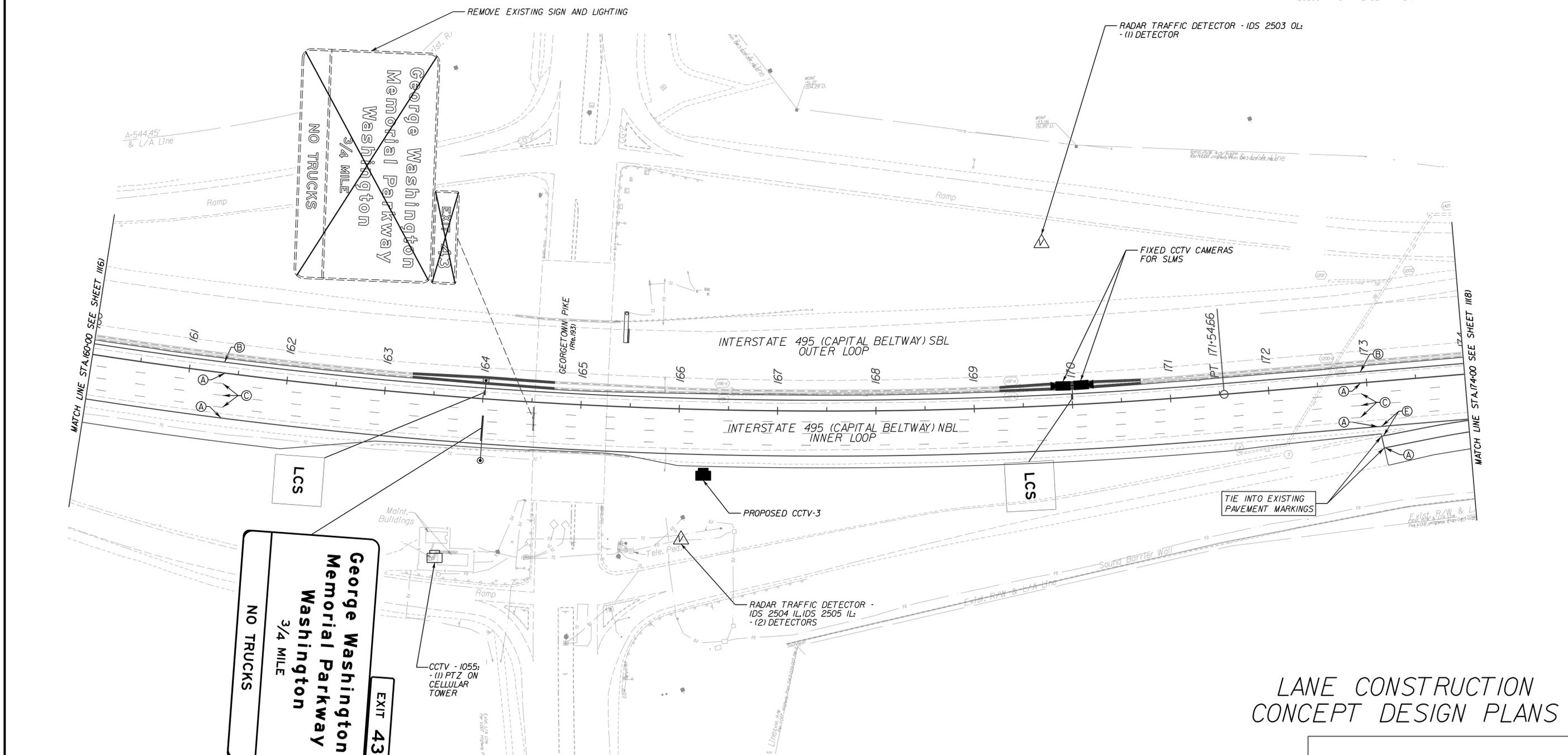




PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman, Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	11(7)

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



**George Washington Memorial Parkway**  
**Washington**  
3/4 MILE  
**NO TRUCKS**  
**EXIT 43**

**PAVEMENT MARKING LEGEND**

- (A) TYPE B, CLASS VI, WHITE PAVEMENT LINE MARKING, 6" WIDTH
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**LANE CONSTRUCTION CONCEPT DESIGN PLANS**

**LANE**

The LANE Team

EXHIBIT 11(7)

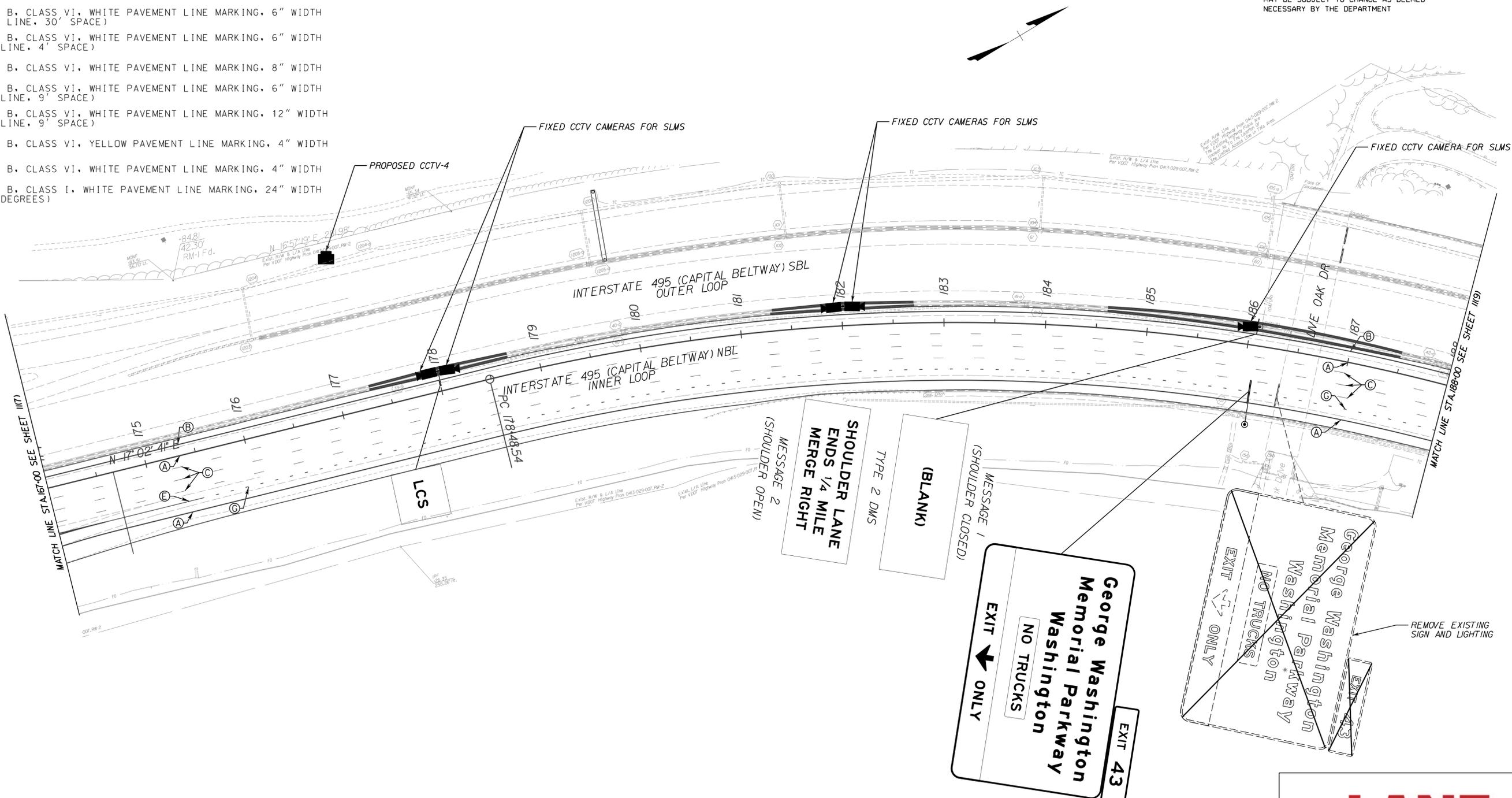
PROJECT MANAGER Paul Nishimoto (57) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman, Reardon & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	11(8)

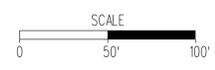
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**LANE CONSTRUCTION CONCEPT DESIGN PLANS**



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**LANE**

The LANE Team

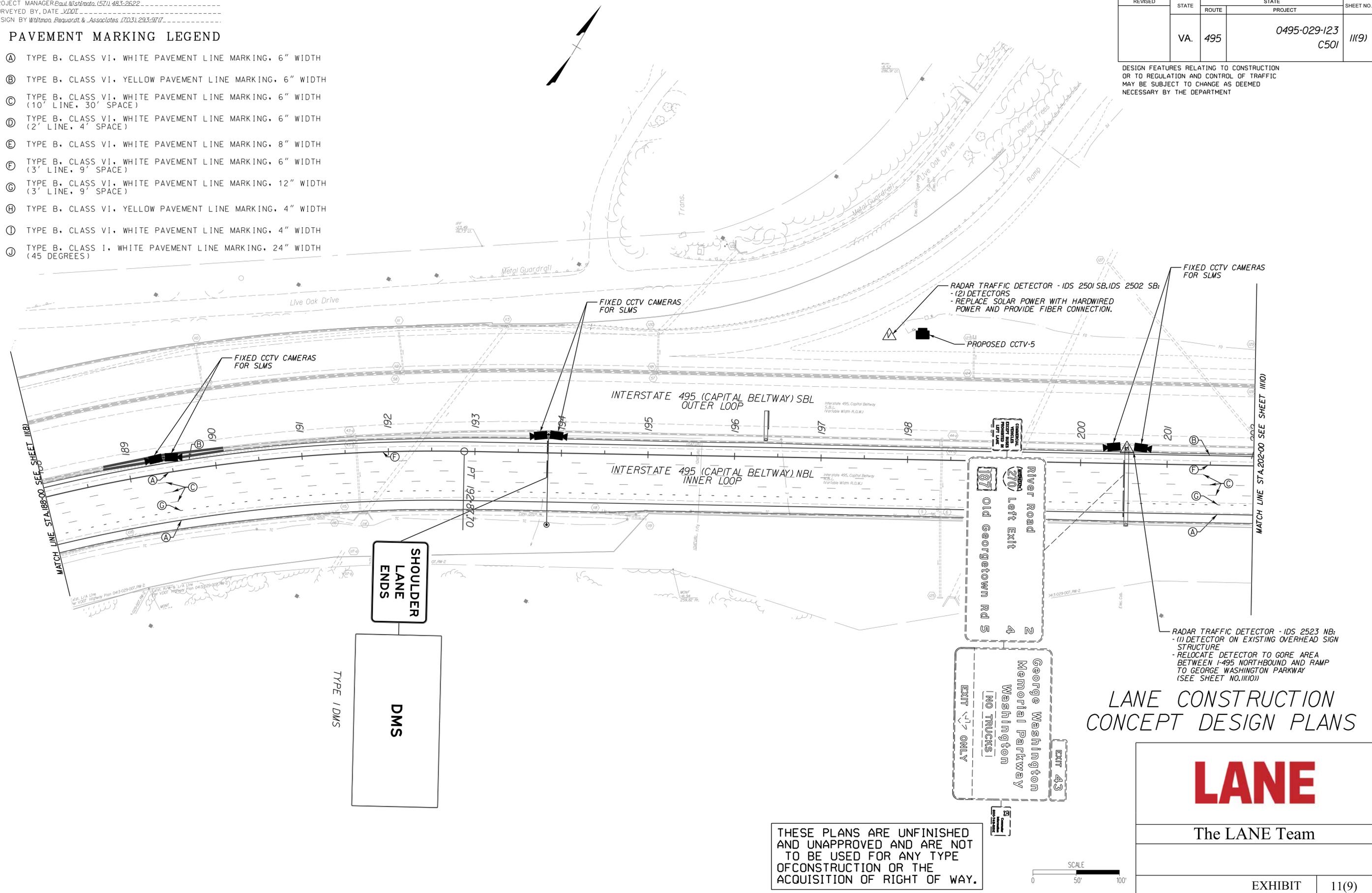
PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Whitman Requardt & Associates (703) 293-9717

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	11(9)

**PAVEMENT MARKING LEGEND**

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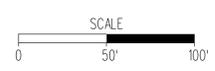


**LANE CONSTRUCTION CONCEPT DESIGN PLANS**

**LANE**

The LANE Team

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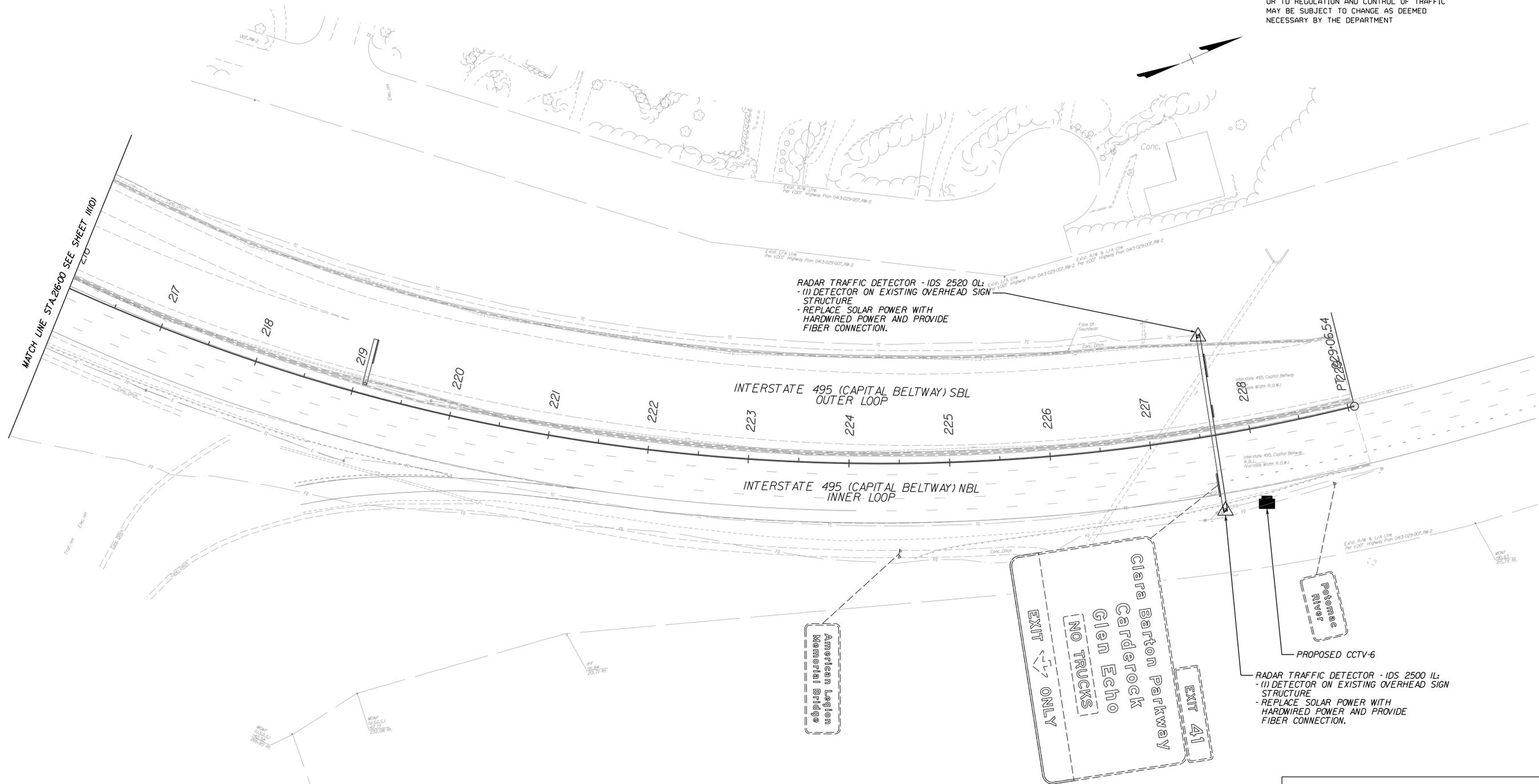




PROJECT MANAGER Paul Nishimoto (571) 483-2622  
SURVEYED BY, DATE VDOT  
DESIGN BY Waltman Requardt & Associates (703) 293-9717

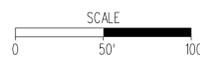
REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	495	0495-029-123 C501	11(11)

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



## LANE CONSTRUCTION CONCEPT DESIGN PLANS

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# LANE

The LANE Team

**Attachment 4.2.8**  
**Offeror's Technical Proposal Compliance**

#### **4.2.8 Technical Proposal Compliance**

I-495 Northern Section Shoulder Use  
State Project No.: (FO) 0495-029-123, P101, C501  
Federal Project No.: STP-495-5(094)  
Contract ID Number: C00105130DB72

The Lane Construction Corporation'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.

The Lane Construction Corporation certifies the proposed limits of construction to include all stormwater management facilities are located within the right-of-way limits shown on the RFP Conceptual Plans with the exception of permanent and temporary easements.

The Lane Construction Corporation's design concept does not require Design Exceptions and/or Design Waivers unless they are identified or included in the RFP or Addendum(s).

# **LANE**

**14500 Avion Parkway  
Suite 200  
Chantilly, VA 20151  
703.222.5670**

**[www.laneconstruct.com](http://www.laneconstruct.com)**



**March 14, 2014**

**ORIGINAL**

**PRICE PROPOSAL**

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# **I-495 NORTHERN SECTION SHOULDER USE**

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**State Project No.: (FO) 0495-029-123, P101, C501  
Federal Project No.: STP-495-5(094)  
Contract ID No.: C00105130DB72**

**Submitted for:**



**Submitted by:**

**LANE**



**ATTACHMENT 4.0.1.2**

**DESIGN-BUILD PRICE PROPOSAL  
CHECKLIST**

**Project Name: I-495 Northern Section Shoulder Use  
in Fairfax County, Virginia  
Contract ID Number: C00105130DB72  
The LANE Construction Corporation**

---

➤ **Contents of Price Proposal:**

- Proposal Price, in both numbers and words (Attachment 4.3.1)**
  - Schedule of Items itemized in accordance with Part 1, Section 4.4.6, including material quantities and costs of each proposed work package To be submitted in accordance with Section 4.4 Post Notice of Intent to Award Submittals**
  - Proposed Monthly Payment Schedule showing the anticipated schedule on which funds will be required and associated value of work in accordance with Part 1, Section 4.4.7 To be submitted in accordance with Section 4.4 Post Notice of Intent to Award Submittals**
  - Price Adjustment Information and Forms for Fuel, Asphalt and Steel, including identification of pay items and associated quantities eligible for adjustment (Part 3, Section 6.3, Attachments 6.3)**
  - Proposal Guaranty (C-24) required by Section 102.07 of Part 5, Division I Amendments to the Standard Specifications**
  - Sworn Statement Forms (C-104, C-105, Attachments 4.3.4(a) and 4.3.4(b))**
  - DBE Requirements Forms (C-111, C-49 and C-112) as applicable (Attachments 4.3.5(a), 4.3.5(b) and 4.3.5(c))**
  - CD-ROM containing the entire Price Proposal in a single cohesive Adobe PDF file**
-

**Attachment 4.3.1**  
**Cost Breakdown Summary**

**ATTACHMENT 4.3.1**  
**PRICE PROPOSAL FORM**

4.3.1 Offeror shall specify the pricing information for the items below, the dollars amount shall be in whole numbers:

Price Proposal Cost Breakdown Summary;

Design Services, LS	\$ 1,850,000.-
Mobilization (Construction), LS	\$ 1,104,123.-
Quality Assurance (QA) (Construction), LS	\$ 550,000.-
Quality Control (QC) (Construction), LS	\$ 550,000.-
Earthwork, LS	\$ 983,935.-
Roadway Incidentals, LS	\$ 156,292.-
Drainage (Structures), LS	\$ 1,151,830.-
Utilities, LS	\$ 4,000.-
Pavement, LS	\$ 6,853,840.-
Full Depth Transverse Joint Repair, LS	\$ 552,500.-
Permanent Traffic Control/Signage, LS	\$ 1,440,060.-
Maintenance of Traffic, LS	\$ 2,490,280.-
ITS Components, LS	\$ 2,255,300.-
Barrier Modification, LS	\$ 1,933,965.-
Bridge Mounted signs Removal and Replacement, LS	\$ 597,250.-
All Others Costs, LS	\$ 2,235,500.-

Proposal Price; (Specify the Total Lump Sum price in both numbers and words, this price shall **equal** to the total sum of the items listed above)

Lump Sum (LS): TWENTY FOUR MILLION SEVEN HUNDRED EIGHT THOUSAND EIGHT HUNDRED SEVENTY FIVE DOLLARS AND NO CENTS.  
(\$ 24,708,875.00)

Signature:  Date: March 14, 2014

Design-Builder: The LANE Construction Corporation

Vendor No.: L 002

**Attachment 4.3.2**  
**Adjustments to Asphalt, Fuel and Steel Prices**

**Exhibit 6.3(b)**

Form C-16a  
August 9, 2013

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
ASPHALT PRICE ADJUSTMENT (PG76-22 or PG 70-28)  
DESIGN-BUILD PROJECTS**

**INSTRUCTIONS - This form is to be completed and returned ONLY when asphalt concrete items containing PG 76-22 or PG 70-28 is being utilized on the project.**

PROJECT NUMBER: (FO) 0495-029-123, P101, C501

DISTRICT: Northern Virginia

Bid Prices in this contract for items containing PG 76-22 or PG 70-28 asphalt cement were developed using an f.o.b.

price of \$ 640.00 per IMPERIAL ton for PG 76-22 or PG 70-28. This quote is project specific.

Price quotes signed by each supplier from which the Design-Builder proposes to obtain PG 76-22 or PG 70-28 shall be maintained by the Design-Builder. These quotes shall be retained on site during the life of the Contract for review by the Engineer upon request.

DATE: March 14, 2014

SIGNATURE: 

The LANE Construction Corporation  
(Firm or Corporation)

L 002  
(Vendor No.)

**EXHIBIT 6.3 (c)  
ADJUSTMENT FOR FUEL**

**VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
OPTIONAL ADJUSTMENT FOR FUEL  
DESIGN-BUILD PROJECTS**

November 5, 2012

In the event the Design-Builder elects to seek adjustment for fuel items designated in the Price Proposal/Contract as Price Adjustment Items such items will be subject to price adjustment as set forth herein. Other items will not be adjusted, except as otherwise specified in the contract.

The Design-Builder will submit their monthly application for payment associated with eligible work packages with an adjustment up or down as appropriate for cost changes in fuel used on specific items of work identified in this provision. A master listing of standard items eligible for fuel adjustment is provided by the Department on its website at the following link <http://www.virginiadot.org/business/resources/masteroptionalfuelitems.pdf>. The listing on the web site also includes the corresponding fuel factor for each item. The fuel usage factor for each item is considered inclusive of all fuel usage.

The amount of adjustment will be computed from the change in the indexes and the on-site fuel use as shown in the Department's master listing of eligible items.

In order to be eligible for fuel adjustment under this provision, the Design-Builder shall clearly identify in within the Schedule of Values those pay items and the associated quantities it chooses to have fuel adjustment applied to in its work packages. Items the Design-Builder claims in its application of payment for fuel adjustments must be properly designated in order to be considered for adjustment. Items not properly designated or left out of the Design-Builder's Schedule of Values will automatically not be considered for adjustment.

The monthly index price to be used in the administration of this provision will be calculated by the Department from the Diesel fuel prices published by the U. S. Department of Energy, Energy Information Administration on highway diesel prices, for the Lower Atlantic region. The monthly index price will be the price for diesel fuel calculated by averaging each of the weekly posted prices for that particular month.

For the purposes of this provision, the base index price will be calculated using the data from the month preceding the receipt of bids. The base index price will be posted by the Department at the beginning of the month for all bids received during that month.

The current index price will be posted by the Department and will be calculated using the data from the month preceding the particular estimate being vouchered for payment.

The current monthly quantity for eligible items of work selected by the Design-Builder for fuel adjustment in its work packages will be multiplied by the appropriate fuel factor to determine the gallons of fuel to be cost adjusted. The amount of adjustment per gallon will be the net difference between the current index price and the base index price. Computation for adjustment will be made as follows:

$$S = (E - B) QF$$

Where; S = Monetary amount of the adjustment (plus or minus)

B = Base index price

E = Current index price

Q = Quantity of individual units of work

F = Appropriate fuel factor

Adjustments will not be made for work performed beyond the original contract time limit unless the original time limit has been changed by an executed Work Order.

If new pay items are added to this contract by Work Order and they are listed in the Department's master listing of eligible items, the Work Order must indicate which of these individual items will be fuel adjusted; otherwise, those items will not be fuel adjusted. If applicable, designating which new pay items will be added for fuel adjustment must be determined during development of the Work Order and clearly shown on the Work Order form. The Base Index price on any new eligible pay items added by Work Order will be the Base Index price posted for the month in which bids were received for that particular project. The Current Index price for any new eligible pay items added by Work Order will be the Index price posted for the month preceding the estimate on which the Work Order is paid.

When quantities differ between the last monthly application of payment prepared upon final acceptance and the final application of payment, adjustment will be made using the appropriate current index for the period in which that specific item of work was last performed.

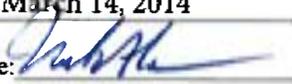
In the event any of the base fuel prices in this contract increase more than 100 percent (i.e. fuel prices double), the Department will review each affected item of work and give the Design-Builder written notice if work is to stop on any affected item of work. The Department reserves the right to reduce, eliminate or renegotiate the price for remaining portions of affected items of work.

Any amounts resulting from fuel adjustment will not be included in the total cost of work for determination of progress or for extension of contract time.

I elect to use this provision

I elect not to use this provision

Date: March 14, 2014

Signature: 

Design-builder: The LANE Construction Corp.

Vendor No.: L 002

**EXHIBIT 6.3(d)  
ADJUSTMENT FOR STEEL**

**VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
PRICE ADJUSTMENT FOR STEEL  
DESIGN-BUILD PROJECTS**

June 30, 2011

In the event the Design-Builder elects to seek adjustment for steel items designated in the Price Proposal/Contract as Price Adjustment Items such items will be subject to price adjustment as set forth herein. If new pay items which involve steel are established by Work Order, they will not be subject to Price Adjustment unless specifically designated in the Work Order to be subject to Price Adjustment.

The Design-Builder will submit their monthly application for payment associated with eligible work packages with an adjustment up or down as appropriate for cost changes in steel used on specific items of work identified in the Price Proposal/contract in accordance with this provision. Provided at the end of this provision is a master listing of standard bid items the Department has determined are eligible for steel price adjustment. Inventoried materials from the listing of eligible items are specifically excluded for consideration. In addition, concrete items where reinforcing steel is normally included in the unit bid price for the item such as (but not limited to) drop inlets, median barriers, sound barrier walls, bridge railing and parapets, are not eligible for consideration under this provision.

The requirements of this provision shall apply only to material cost changes that occur between the date of the opening of the Price Proposal and the date the material is shipped to the fabricator. To be eligible for this price adjustment, Design-Builder is required to fill out the accompanying Form for Price Adjustment for Eligible Steel Items on Design-Build Projects and submit the same with its Price Proposal for the Project. By signing the Form and submitting it with its Price Proposal Design-Builder declares its intention to participate in the price adjustment in its contract with the Department. For the purposes of this provision, the prices listed on the Form for Price Adjustment for Eligible Steel Items on Design-Build projects are fixed for cost and adjustment calculations regardless of quantities incorporated into final design. Further, in order for steel items to be eligible for adjustment, once shipped to the fabricator, the items shall be specifically stored, labeled, or tagged, recognizable by color marking, and identifiable by project for inspection and audit verification.

Design-Builder shall upon request furnish documentation supporting the price per pound for eligible steel items as shown on the Form for Price Adjustment for Eligible Steel Items on Design-Build Projects furnished with its Price Proposal. Design-Builder must use the format as shown with this Form; no other format for presenting this information will be permitted. Design-Builder shall certify that all items of documentation are original and were used in the computation of the price per pound amount for the represented eligible pay items for the month the Price Proposal was opened. This documentation shall support the base line material price ("Base Price") of the steel item only. Base price per pound shall not include the following cost components: fabrication, shipping, storage, handling, and erection.

Failure to submit all documentation required or requested supporting the per pound prices on eligible steel items will result in Design-Builder being ineligible for a price adjustment of any or all steel items.

Price adjustment of each qualifying item under consideration will be subject to the following condition:

There is an increase or decrease in the cost of eligible steel materials in excess of 10 percent up to a maximum of 60 percent from the Base Price when compared with the latest published price index ("Price Index") in effect at the time material is shipped to the fabricator.

The Price Index the Department is using is based on The U.S. Department of Labor, Bureau of Labor Statistics, Producers Price Index (PPI) which measures the average price change over time of the specific

steel eligible item from the perspective of the seller of goods. The Master List table provided at the end of this provision indicates the Producers Price Index (PPI) steel category index items and the corresponding I.D. numbers to which VDOT items will be compared. **Please note:** The Producers Price Index (PPI) is subject to revision 4 months after original publication, therefore, price adjustments and payments will not be made until the index numbers are finalized.

The price adjustment will be determined by computing the percentage of change in index value beyond 10 percent above or below the index on the date of opening of Design-Builder's Price Proposal to the index value on the date the steel material is shipped to the fabricator (Please see included sample examples). Weights and date of shipment must be documented by a bill of lading provided to the Department. The final price adjustment dollar value will be determined by multiplying this percent increase or decrease in the index (after 10%) by the represented quantity of steel shipped, by the Base Price per pound subject to the limitations herein.

**Price increase/decrease will be computed as follows:**

$$A = B \times P \times Q$$

- Where;
- A = Steel price adjustment in lump sum dollars
  - B = Average weighted price of steel submitted in Design-Builder's Price Proposal for project in price per pound as listed on the Form for Price Adjustment for Eligible Steel Items on Design-Build Project
  - P = Adjusted percentage change in PPI average from shipping date to date of opening of Price Proposal minus 10% (0.10) threshold
  - Q = Total quantity of steel in pounds shipped to fabricator for specific project

The need for application of the adjustments herein to extra work will be determined by the Engineer on an individual basis and, if appropriate, will be specified on the Work Order.

This price adjustment is capped at 60 percent. This means the maximum "P" value for increase or decrease that can be used in the above equation is 50% (60%-10% threshold).

Calculations for price adjustment shall be shown separate from the monthly progress payment for work packages and will not be included in the total cost of work for determination of progress or for extension of contract time.

Upon Department review and due process consideration for redress by Design-Builder, any apparent evidence to unbalance the price supplied by Design-Builder in favor of items subject to price adjustment will result in ineligibility for Department participation under this provision.



---

**Sample Calculation of a Price Adjustment (increase)**

---

Project bid on April 28, 2004.

Project has 450,000 lb. of eligible structural steel.

Design Builder's \*f.o.b. supplier price for structural steel submitted in the Price Proposal is \$0.2816 per pound.

\*free on board

Adjusted\*\* BLS Producers Price Index (PPI) most recently published average at time of opening of the Price Proposal is 139.6.

All eligible steel shipped to fabricator in same month, October 2004.

Adjusted BLS Producers Price Index (PPI) most recently published average for month of October is 161.1

Adjustment formula is as follows:

$$A = B \times P \times Q$$

- Where;
- A = Steel price adjustment in lump sum dollars
  - B = Average weighted price of steel submitted in the Price Proposal for Design-Build project in \$ per pound
  - P = Adjusted percentage change in PPI average from shipping date to date of submitted Price Proposal minus 10% (0.10) threshold
  - Q = Total quantity of eligible steel shipped to fabricator in October 2004 for this project in pounds

$$B = \$0.2816$$

$$P = (161.1 - 139.6) / 139.6 - 0.10 = 0.054$$

$$Q = 450,000 \text{ lb.}$$

$$A = 0.2816 \times 0.054 \times 450,000$$

$$A = \$6,842.88 \text{ pay adjustment to Design-Builder}$$

---

**Sample Calculation of a Price Adjustment (decrease)**

---

Project bid on April 28, 2004.

Project has 450,000 lb. of eligible structural steel.

Design-Builder's \*f.o.b. supplier price for structural steel submitted in the Price Proposal is \$0.2816 per pound.

\*free on board

Adjusted BLS Producers Price Index (PPI) most recently published average at time of opening of the Price Proposal is 156.6.

All eligible steel shipped to fabricator in same month, October 2004.

Adjusted BLS Producers Price Index (PPI) most recently published average for month of October is 136.3

Adjustment formula is as follows:

$$A = B \times P \times Q$$

- Where;
- A = Steel price adjustment in lump sum dollars
  - B = Average weighted price of steel submitted in the Price Proposal for Design-Build project in \$ per pound
  - P = Adjusted percentage change in PPI average from shipping date to date of submitted Price Proposal minus 10% (0.10) threshold
  - Q = Total quantity of eligible steel shipped to fabricator in October 2004 for this project in pounds

$$B = \$0.2816$$

$$P = (156.6 - 136.3)/156.6 - 0.10 = 0.030$$

$$Q = 450,000 \text{ lb.}$$

$$A = 0.2816 \times 0.030 \times 450,000$$

$$A = \$3,801.60 \text{ credit to Department}$$

## MASTER LISTING

### STANDARD BID ITEMS ELIGIBLE FOR STEEL PRICE ADJUSTMENT

March 18, 2009

BLS Series I. D.

ITEM NUMBER	ITEM DESCRIPTION	UNITS	Number WPU used in \$ adjust.
00519	SHEET PILE, STEEL	SF	avg. 1017 & 101
00540	REINF. STEEL	LB	101704
00542	EPOXY COATED REINF. STEEL	LB	101704
00560	STRUCTURAL STEEL JB-1	LB	avg. 1017 & 101
11030	REINF. STEEL BRIDGE APPR. SLAB	LB	101704
11181	PATCH.HYDR.CEM.CONC. PAVE.	SY	101704
13290	GUARDRAIL GR-8 (NCHRP 350 TL-3)	LF	avg. 1017 & 101
13292	GUARDRAIL GR-8A (NCHRP 350 TL-3)	LF	avg. 1017 & 101
13294	GUARDRAIL GR-8B (NCHRP 350 TL-3)	LF	avg. 1017 & 101
13310	GUARDRAIL TERMINAL GR-6 (NCHRP 350)	LF	avg. 1017 & 101
13320	GUARDRAIL GR-2	LF	avg. 1017 & 101
13323	GUARDRAIL GR-2A	LF	avg. 1017 & 101
13331	RAD. GUARDRAIL GR-2	LF	avg. 1017 & 101
13333	RAD. GUARDRAIL GR-2A	LF	avg. 1017 & 101
13335	GUARDRAIL GR-3	LF	avg. 1017 & 101
13341	GUARDRAIL TER. GR-6(WEATHERING STEEL	LF	avg. 1017 & 101
13351	GUARDRAIL GR-8	LF	avg. 1017 & 101
13352	GUARDRAIL GR-8A	LF	avg. 1017 & 101
13353	GUARDRAIL GR-8B	LF	avg. 1017 & 101
13355	GUARDRAIL GR-10	LF	avg. 1017 & 101
13421	MEDIAN BARRIER MB-3	LF	avg. 1017 & 101
13450	MEDIAN BARRIER MB-5	LF	avg. 1017 & 101
13451	MEDIAN BARRIER MB-5A	LF	avg. 1017 & 101
13452	MEDIAN BARRIER MB-5B	LF	avg. 1017 & 101
13545	REINF. STEEL	LB	101704
14502	REINFORCING STEEL	LB	101704
15290	PATCH.CEM.CONC.PAVE.TY.CRCP-A	SY	101704
15302	PATCH.CEM.CONC.PAVE. TY. II	SY	101704
15305	PATCH.CEM.CONC.PAVE.TY. IV-A	SY	101704
17323	GUARDRAIL BEAM *	LF	avg. 1017 & 101
17325	RADIAL GUARDRAIL BEAM *	LF	avg. 1017 & 101
17327	RUB RAIL	LF	avg. 1017 & 101
17353	CABLE GR-3	LF	avg. 1017 & 101
17521	GUARDRAIL BEAM (WEATHERING STEEL)	LF	avg. 1017 & 101
17523	RADIAL GUARDRAIL BEAM (WEATHERING STEEL)	LF	avg. 1017 & 101
17525	RUB RAIL (WEATHERING STEEL)	LF	avg. 1017 & 101
22501	FENCE FE-W1	LF	avg. 1017 & 101
22643	FENCE FE-CL	LF	avg. 1017 & 101
22645	FENCE FE-CL VINYL COATED	LF	avg. 1017 & 101
23043	WATER GATE FE-4 TY.III	LF	avg. 1017 & 101
23501	FENCE FE-W1 (FABRIC ONLY)	LF	avg. 1017 & 101
45522	4" STEEL ENCASE. PIPE	LF	101706
45532	6" STEEL ENCASE. PIPE	LF	101706
45562	16" STEEL ENCASE. PIPE	LF	101706
45572	18" STEEL ENCASE. PIPE	LF	101706

45582	24" STEEL ENCASE. PIPE	LF	101706
45584	24" JACKED STEEL ENCASUREMENT PIPE	LF	101706
45592	30" STEEL ENCASE. PIPE	LF	101706
50402	SIGN POST STEEL 3"	LF	101706
50404	SIGN POST STEEL 4"	LF	101706
50406	SIGN POST STEEL 6"	LF	101706
50410	SIGN POST STEEL 10"	LF	101706
50412	SIGN POST STEEL 12"	LF	101706
50414	SIGN POST STEEL 14"	LF	101706
50416	SIGN POST STEEL 16"	LF	101706
50418	SIGN POST STEEL 18"	LF	101706
51317	SIG. POLE MP-1 20' ONE ARM 30'	EA	101706
51319	SIG. POLE MP-1 20' ONE ARM 32'	EA	101706
51325	SIG. POLE MP-1 20' ONE ARM 38'	EA	101706
51327	SIG. POLE MP-1 20' ONE ARM 40'	EA	101706
51329	SIG. POLE MP-1 20' ONE ARM 42'	EA	101706
51331	SIG. POLE MP-1 20' ONE ARM 44'	EA	101706
51337	SIG. POLE MP-1 20' ONE ARM 50'	EA	101706
51339	SIG. POLE MP-1 20' ONE ARM 52'	EA	101706
51341	SIG. POLE MP-1 20' ONE ARM 54'	EA	101706
51344	SIG. POLE MP-1 20' ONE ARM 56'	EA	101706
51346	SIG. POLE MP-1 20' ONE ARM 58'	EA	101706
51347	SIG. POLE MP-1 20' ONE ARM 60'	EA	101706
51348	SIG. POLE MP-1 20' ONE ARM 62'	EA	101706
51368	SIG. POLE MP-1 20' TWO ARMS 36' & 42'	EA	101706
51400	SIG. POLE MP-1 CO. LU. ONE ARM 38	EA	101706
51402	SIG. POLE MP-1 CO. LU. ONE ARM 40	EA	101706
51408	SIG. POLE MP-1 CO. LU. ONE ARM 46	EA	101706
51412	SIG. POLE MP-1 CO. LU. ONE ARM 50	EA	101706
51414	SIG. POLE MP-1 CO. LU. ONE ARM 52	EA	101706
51416	SIG. POLE MP-1 CO. LU. ONE ARM 54	EA	101706
51418	SIG. POLE MP-1 CO. LU. ONE ARM 56	EA	101706
51420	SIG. POLE MP-1 CO. LU. ONE ARM 58	EA	101706
51422	SIG. POLE MP-1 CO. LU. ONE ARM 60	EA	101706
55162	LIGHTING POLE LP-1 30'-4'	EA	101706
55163	LIGHTING POLE LP-1 30'-6'	EA	101706
55166	LIGHTING POLE LP-1 30'-12'	EA	101706
55169	LIGHTING POLE LP-1 35'-6'	EA	101706
55171	LIGHTING POLE LP-1 35'-10'	EA	101706
55176	LIGHTING POLE LP-1 40'-8'	EA	101706
55185	LIGHTING POLE LP-2 TYPE A	EA	101706
55186	LIGHTING POLE LP-2 TYPE B	EA	101706
55187	LIGHTING POLE LP-2 TYPE C	EA	101706
55188	LIGHTING POLE LP-2 TYPE D	EA	101706
55189	LIGHTING POLE LP-2 TYPE E	EA	101706
55190	LIGHTING POLE LP-2 TYPE F	EA	101706
55192	LIGHTING POLE LP-2 TYPE H	EA	101706
60452	REINF. STEEL BRIDGE APPR. SLAB	LB	101704
61700	REINF. STEEL	LB	101704
61704	CORROSION RESISTANT REINF. STEEL	LB	101704
61705	EPOXY COATED REINF. STEEL	LB	101704
61750	STRUCT. STEEL HIGH STRG. PLT. GIRDERS	LB	avg. 1017 & 101
61811	STR. STEEL PLATE GIRDER ASTM A709 GRADE50	LB	avg. 1017 & 101
61812	STR. STEEL PLATE GIRDER ASTM A709 GRADE50	LB	avg. 1017 & 101
61813	STR. STEEL PLATE GIRDER ASTM A709 GRADEHPS50W	LB	avg. 1017 & 101
61814	STR. STEEL PLATE GIRDER ASTM A709 GRADEHPS70W	LB	avg. 1017 & 101
61820	STR. STEEL ROLLED BEAM ASTM A709 GRADE 36	LB	avg. 1017 & 101

61821	STR.STEEL ROLLED BEAM ASTM A709 GRADE50	LB	avg. 1017 & 101
61822	STR.STEEL ROLLED BEAM ASTM A709 GRADE50W	LB	avg. 1017 & 101
61990	STEEL GRID FLOOR	SF	avg. 1017 & 101
64110	STEEL PILES 10"	LF	avg. 1017 & 101
64112	STEEL PILES 12"	LF	avg. 1017 & 101
64114	STEEL PILES 14"	LF	avg. 1017 & 101
64768	DRIVING TEST FOR 12" STEEL PILE	LF	avg. 1017 & 101
64778	DRIVING TEST FOR 14" STEEL PILE	LF	avg. 1017 & 101
65200	REINF. STEEL	LB	101704
65204	CORROSION RESISTANT REINF. STEEL	LB	101704
65205	EPOXY COATED REINF. STEEL	LB	101704
67086	PED. FENCE 6'	LF	avg. 1017 & 101
67088	PED. FENCE 8'	LF	avg. 1017 & 101
67089	PED. FENCE 10'	LF	avg. 1017 & 101
68100	REINF. STEEL	LB	101704
68104	CORROSION RESISTANT REINF. STEEL	LB	101704
68105	EPOXY COATED REINF. STEEL	LB	101704
68107	STR.STEEL PLATE GIRDER ASTM A709 GRADE50	LB	avg. 1017 & 101
68108	STR. STEEL PLATE GIRDER ASTM A709 GR50W	LB	avg. 1017 & 101
68109	STR. STEEL PLATE GIRDER ASTM A709 GR.HPS50W	LB	avg. 1017 & 101
68110	STR. STEEL PLATE GIRDER ASTM A709 GR.HPS70W	LB	avg. 1017 & 101
68112	STR.STEEL ROLLED BEAM ASTM A709 GR.36	LB	avg. 1017 & 101
68113	STR.STEEL ROLLED BEAM ASTM A709 GR.50	LB	avg. 1017 & 101
68114	STR.STEEL ROLLED BEAM ASTM A709 GR. 50W	LB	avg. 1017 & 101
68115	STRUCT. STEEL	LB	avg. 1017 & 101
68270	REINF. STEEL BRIDGE APPR. SLAB	LB	101704
69060	SHEET PILES, STEEL	SF	avg. 1017 & 101
69100	REINF. STEEL	LB	101704
69104	CORROSION RESISTANT REINF. STEEL	LB	101704
69105	EPOXY COATED REINF. STEEL	LB	101704
69110	STEEL PILES 10"	LF	avg. 1017 & 101
69112	STEEL PILE 12"	LF	avg. 1017 & 101
69113	DRIVING TEST FOR 12" STEEL PILE	LF	avg. 1017 & 101

I elect to use this provision

I elect not to use this provision

Date: March 14, 2014

Signature: 

Design-Builder: The LANE Construction Corporation

Vendor No.: L 002

**Attachment 4.3.3  
Proposal Guaranty**

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
PROPOSAL GUARANTY

KNOW ALL MEN BY THESE PRESENTS, THAT WE The Lane Construction Corporation As principal, and Zurich American Insurance Company and Fidelity and Deposit Company of Maryland and Liberty Mutual Insurance Company Surety, are held and firmly bound unto the Commonwealth of Virginia as obligee, in the amount of FIVE PERCENT OF THE DOLLAR VALUE OF THE BID, lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally and firmly by these presents.

SIGNED, sealed and dated this 26th Day of February, 20 14

WHEREAS, the above said principal is herewith submitting its proposal for: I-495 Shoulder - North Section (UPC 105130)  
PROJECT NUMBER: 0495-029-123, P101, C501

NOW, THEREFORE, the condition of the above obligee is such, that if the aforesaid principal shall be awarded the contract upon said proposal and shall within the time specified in the Specifications after the notice of such award enter into a contract and give bond for the faithful performance of the contract, then this obligation shall be null and void; otherwise to remain in full force and effect and the principal and surety will pay unto the obligee the difference in money between the amount of the bid of the said principal and the amount for which the obligee may legally contract with another party to perform the said work if the latter amount be in excess of the former; but in no event shall the liability exceed the penal sum hereof.

The Lane Construction Corporation  
(Principal\*)

By: JM M. Ferrell  
(Officer, Partner or Owner) (Seal)

JM M. FERRELL  
(Principal\*) **EXEC. VICE PRESIDENT & CFO**

By: \_\_\_\_\_  
(Officer, Partner or Owner) (Seal)

\_\_\_\_\_  
(Principal\*)

By: \_\_\_\_\_  
(Officer, Partner or Owner) (Seal)

Zurich American Insurance Company and Fidelity and Deposit Company of Maryland  
(Surety Company)

By: Theresan E. Rowedder  
(Attorney-in-Fact\*\*) (Seal)  
Theresan E. Rowedder

One Federal Street, 20th Floor, Boston, MA 02110  
(Address)

By: Liberty Mutual Insurance Company  
(Surety Company)

Theresan E. Rowedder  
(Attorney-in-Fact\*\*) (Seal)  
Theresan E. Rowedder

By: One Federal Street, 20th Floor, Boston, MA 02110  
(Address)

\*Note: If the principal is a joint venture, each party thereof must be named and execution made by same hereon. If there is more than one surety to the bid bond, each surety must be named and execution shall be made by same hereon.

Electronic Bid Only: In lieu of completing the above section of the Contract Performance Bond, the Principal shall file an Electronic Bid Bond when bidding electronically. By signing below the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the Commonwealth of Virginia under the same conditions of the bid bond as shown above.

Electronic Bid Bond ID# \_\_\_\_\_ Company/Bidder Name \_\_\_\_\_ Signature and Title \_\_\_\_\_

\*\*Attach copy of Power of Attorney

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by THOMAS O. MCCLELLAN, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT, Jeffrey HENDRICKS and Jane GILSON, all of Boston, Massachusetts, EACH its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York, the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has herunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 30th day of May, A.D. 2013.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



*Eric D. Barnes*

By: \_\_\_\_\_

*Assistant Secretary  
Eric D. Barnes*

*Thomas O. McClellan*

*Vice President  
Thomas O. McClellan*

State of Maryland  
City of Baltimore

On this 30th day of May, A.D. 2013, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Assistant Secretary, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposed and said, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

*Maria D. Adamski*

*Maria D. Adamski, Notary Public  
My Commission Expires: July 8, 2015*



**EXTRACT FROM BY-LAWS OF THE COMPANIES**

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

**CERTIFICATE**

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 16th day of FEBRUARY, 2014.



*Geoffrey Delisio*

Geoffrey Delisio, Vice President

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6146273

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies") pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Brian Driscoll, Bryan Huff, Jane Gilson, Jean Correia, Jeffrey Handricks, Kevin A. White, Maria Chavas, Mark P. Herendaen, Therasan E. Rowedder

all of the city of Boston, state of MA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 31st day of May, 2013.



American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss  
COUNTY OF KING

On this 31st day of May, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

**ARTICLE IV - OFFICERS** - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII - Execution of Contracts** - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** - The President of the Company, acting pursuant to the By-laws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 26th day of February, 2014.



By: David M. Carey  
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-810-832-8240 between 9:00 am and 4:30 pm EST on any business day.



90 Fieldstone Court  
 Cheshire, CT 06410-1212  
 203-235-3351  
 203-237-4260 Fax  
 www.laneconstruct.com

Resolution unanimously approved by the Board of Directors of The Lane Construction Corporation effective January 1, 2014:

VOTED: That effective January 1, 2014, rescinding all previous authorizations, the following be and hereby are authorized to sign proposals and bid bonds on behalf of this Corporation:

- R. E. Alger, President & Chief Executive Officer
- D. P. Dobbs, Executive Vice President Administration & Secretary
- J. M. Ferrell, Executive Vice President & Chief Financial Officer
- K. D. Junco, Chief Operating Officer & Executive Vice President
- D. F. Benton, Executive Vice President Operational Support
- M. M. Cote, Executive Vice President & Chief Development Officer
- J. S. Cruickshank, Executive Vice President & General Counsel
- V. J. Caiola, Vice President, Treasurer & Assistant Secretary
- A. M. Falsey, Tax Director, Assistant Treasurer & Assistant Secretary
- J. P. Lark, Senior Vice President & Assistant Secretary
- D. J. Rankin, Senior Vice President & Assistant Secretary
- M. A. Schiller, Senior Vice President & Assistant Secretary
- L. G. Hurley, Vice President & Assistant Secretary
- T. R. Larson, Assistant Vice President, Engineering
- M. J. Tomkalski, Assistant Vice President & Controller
- M. R. Hindt, Senior District Manager
- J. O. Hughes, Senior District Manager
- D. A. Luzier, Senior District Manager
- R. A. Bean, District Manager
- J. G. Brown, District Manager
- M. C. Cullik, District Manager
- C. M. Curran, District Manager
- D. J. Eudy, District Manager
- G. A. Hassfurter, District Manager
- G. F. Jerabek, District Manager
- R. P. Lane, District Manager
- J. P. McLearn, District Manager
- D. S. Mason, Jr., District Manager
- D. B. O'Connor, District Manager
- R. L. Portley, District Manager
- K. K. Prince, District Manager
- J. F. Roddy, District Manager
- W. H. Tomlinson, District Manager
- K. P. Cates, Assistant District Manager
- C. E. DuBois, Assistant District Manager
- J. E. Kristensen, Assistant District Manager
- P. J. Paul, Assistant District Manager
- D. J. Phillips, Assistant District Manager
- E. G. Ritchie, Assistant District Manager
- J. A. Sherman, Assistant District Manager
- D. W. Grey, Senior National Pursuit Manager
- R. A. McDonough, Senior National Pursuit Manager
- R. Burton, Senior Plant Manager

I hereby certify that the above is a true copy of the Resolution unanimously approved by the Board of Directors of The Lane Construction Corporation effective January 1, 2014, and that the above vote has not been rescinded and stands in full force and effect as of this date.

THE LANE CONSTRUCTION CORPORATION

February 27, 2014  
 Date

*Ann M. Falsey*  
 Assistant Secretary

State of Connecticut  
 County of New Haven

February 27, 2014  
 Date

Personally appeared before me, Ann M. Falsey, Assistant Secretary, and made oath that the above is a true copy of the December 4, 2013 meeting minutes of the Board of Directors of The Lane Construction Corporation.

*Patricia A. Delekta*  
 Patricia A. Delekta, Notary Public  
 My Commission Expires July 31, 2014

**Attachment 4.3.4(a)**  
**Sworn Statement Forms**  
**C-104**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

PROJECT: (FO) 0495-029-123, P101, C501

FHWA: STP-495-5(094)

This form must be completed, signed and returned with bid; and failure to do so may result in the rejection of your bid. **THE CONTRACTOR SHALL AFFIRM THE FOLLOWING STATEMENT EITHER BY SIGNING THE AFFIDAVIT AND HAVING IT NOTARIZED OR BY SIGNING THE UNSWORN DECLARATION UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES. A SEPARATE FORM MUST BE SUBMITTED BY EACH PRINCIPAL OF A JOINT VENTURE BID.**

**STATEMENT.** In preparation and submission of this bid, I, the firm, corporation or officers, agents or employees thereof did not, either directly or indirectly, enter into any combination or arrangement with any persons, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Article 1.1 or Chapter 12 of Title 18.2 (Virginia Governmental Frauds Act), Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

**AFFIDAVIT**

The undersigned is duly authorized by the bidder to make the foregoing statement to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at Fairfax County, VA, this 14th day of March, 20 14  
County (City), STATE

The LANE Construction Corporation By: [Signature] Regional Vice President  
(Name of Firm) (Signature) Title (print)

STATE of Virginia COUNTY (CITY) of Fairfax

To-wit: I Michael L. Howes, a Notary Public in and for the State and

County(City) aforesaid, hereby certify that this day M. A. Schiller

personally appeared before me and made oath that he is duly authorized to make the above statements and that such statements are true and correct.

Subscribed and sworn to before me this 14th day of March, 20 14

[Signature] My Commission expires May 31, 2016  
Notary Public

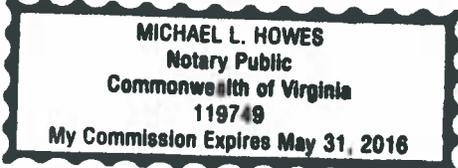
OR

**UNSWORN DECLARATION**

The undersigned is duly authorized by the bidder to make the foregoing statement to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_  
County (City), STATE

By: \_\_\_\_\_  
(Name of Firm) (Signature) Title (print)



**Attachment 4.3.4(b)**  
**Sworn Statement Forms**  
**C-105**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
AFFIDAVIT**

PROJECT: (FO) 0495-029-123, P101, C501

FHWA: STP-495-5(094)

This form must be completed, signed, notarized and returned with bid; and failure to do so, may result in the rejection of your bid. A separate form must be submitted by each principal of a joint venture bid.

1. I, the firm, corporation or officers, agents or employees thereof have neither directly nor indirectly entered into any combination or arrangement with any person, firm or corporation or entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract, the effect of which is to prevent competition or increase the cost of construction or maintenance of roads or bridges.

During the preceding twelve months, I (we) have been a member of the following Highway Contractor's Associations, as defined in Section 33.1-336 of the Code of Virginia (1970). (If none, so state).

NAME	Location of Principal Office
<u>VTCA</u>	<u>Richmond, VA</u>
<u>ARTBA</u>	<u>Washington, D.C.</u>
<u>AGC of America</u>	<u>Washington, D.C.</u>

2. I (we) have , have not , participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that I/We have , have not , filed with the joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

**Note:** The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR 60-1.7(b)(1)], and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contract or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contract and subcontract unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

(Continued)

ORDER NO.:  
CONTRACT ID. NO.:

Form C-105  
page 2

3. The bidder 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 judgement rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation 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 above; and
  - (d) Where the bidders is unable to certify to any of the statements in this certification, the bidder shall show an explanation below.

Explanations will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any explanation noted, indicate below to whom it applies, initiating agency, and dates of action. Providing false information may result in federal criminal prosecution or administration sanctions. The bidder shall provide immediate written notice to the Department if at any time the bidder learns that its certification was erroneous when submitted or has become erroneous by reason of change circumstances.

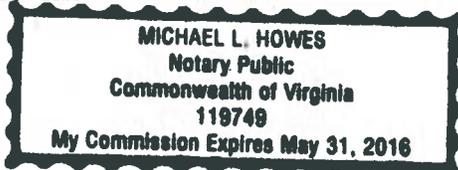
The undersigned is duly authorized by the bidder to make the foregoing statements to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at Fairfax County, VA this 14th day of March, 20 14  
County (City), STATE  
The LANE Construction Corporation By: [Signature] Regional Vice President  
(Name of Firm) (Signature) Title (print)  
STATE of Virginia COUNTY (CITY) of Fairfax  
To-wit:

I Michael L. Howes, a Notary Public in and for the State and  
County(City) aforesaid, hereby certify that this day M. A. Schiller  
personally appeared before me and made oath that he is duly authorized to make the above statements  
and that such statements are true and correct.

Subscribed and sworn to before me this 14th day of March, 20 14  
[Signature] My Commission expires May 31, 2016

Notary Public



**Attachment 4.3.5(a)**  
**Minimum DBE Requirements**  
**Form C-111**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
MINIMUM DBE REQUIREMENTS**

PROJECT NO. (FO) 0495-029-123, P101, C501

FHWA NO. STP-495-5(094)

**\*\*\* INSTRUCTIONS \*\*\***

THIS FORM CAN BE USED BY THE CONTRACTOR TO SUBMIT THE NAMES OF DBE FIRMS TO BE UTILIZED ON THE PROJECT. THE CONTRACTOR SHALL INDICATE THE DESCRIPTION OF THE CATEGORY (S, M, SP or H) AND THE TYPE OF WORK THAT EACH DBE WILL PERFORM AND THE ALLOWABLE CREDIT PER ITEM(S). ADDITIONAL SHEETS TO SHOW THE ALLOWABLE CREDIT PER ITEM MAY BE ATTACHED IF NECESSARY. PLEASE NOTE: THE AMOUNT OF ALLOWABLE CREDIT FOR A DBE SUPPLIER IS 60% OF THE TOTAL COST OF THE MATERIALS OR SUPPLIES OBTAINED AND 100% FOR A DBE MANUFACTURER OF THE MATERIALS AND SUPPLIES OBTAINED. A CONTRACTOR MAY COUNT 100% OF THE FEES PAID TO A DBE HAULER FOR THE DELIVERY OF MATERIALS AND SUPPLIES TO THE PROJECT SITE, BUT NOT FOR THE COST OF THE MATERIALS AND SUPPLIES THEMSELVES.

DBE REQUIREMENT 11 %

PERCENT ATTAINED BY BIDDER 11 %

NAMES(S) AND CERTIFICATION NO. OF DBE(S) TO BE USED	USED AS SUBCONTR. (S) MFG. (M) SUPPLIER (SP) HAULER (H)	TYPE OF WORK AND ITEM NO(S)	\$ AMOUNT OF ALLOWABLE CREDIT PER ITEM
<u>See attached listing</u>			

**TOTAL** \$ 2,718,000.00

TOTAL CONTRACT VALUE \$ 24,708,875.00 x REQUIRED DBE 11.0 % = \$ 2,717,976.25

I/WE CERTIFY THAT THE PROPOSED DBE(S) SUBMITTED WILL BE USED ON THIS CONTRACT AS STATED HEREON AND ASSURE THAT DURING THE LIFE OF THE CONTRACT. I/WE WILL MEET OR EXCEED THE PARTICIPATION ESTABLISHED HEREON BY THE DEPARTMENT.

The LANE Construction Corporation  
BIDDER

BY



SIGNATURE

Regional Vice President  
TITLE

BY

March 14, 2014

DATE

The LANE Construction Corporation  
 90 Fieldstone Court  
 Cheshire, CT 06410

I-495 Northern Section Shoulder Use  
 (FO) 0495-029-123, P101, C501  
 Fairfax County, VA

**DBE PROGRAM**

Contract Total \$ 24,708,875.00

DBE Required 11%

REQUIRED DBE \$ \$ 2,717,976.25

Firm Name	Used As	DMBE Certification No.	Type of Work	Item Numbers	Total Anticipated Contract	Allowable Credit Percentage	DBE Amount	DBE %
Tavares Concrete Co., Inc.	Sub	626436	Furnish and Install Site Concrete	134,151,341,613,478	\$1,260,000.00	100%	\$ 1,260,000.00	5.10%
Sabra, Wang & Associates, Inc.	Sub	000982	Design Services	25591	\$1,458,000.00	100%	\$ 1,458,000.00	5.90%
							<b>\$ 2,718,000.00</b>	<b>11.00%</b>

**Attachment 4.3.5(c)**  
**Certification of Binding Agreement**  
**Form C-112**

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
CERTIFICATION OF BINDING AGREEMENT  
WITH  
DISADVANTAGED BUSINESS ENTERPRISE FIRMS

Project No.: (FO) 0495-029-123, P101, C501

Federal Project No.: STP-495-5(094)

This form is to be submitted in accordance with the Department's Special Provision for Section 107.15.

It is hereby certified by the below signed Contractors that there exists a written quote, acceptable to the parties involved preliminary to a binding subcontract agreement stating the details concerning the work to be performed and the price which will be paid for the aforementioned work. This document is not intended to, nor should it be construed to, contain the entire text of the agreement between the contracting parties. This document does not take the place of, nor may it be substituted for, an official subcontracting agreement in those situations that may require such an agreement. A copy of the fully executed *subcontract agreement* shall be submitted to the Engineer within fourteen (14) business days after contract execution.

It is further certified that the aforementioned mutually acceptable quote and fully executed subcontract agreement represent the entire agreement between the parties involved and that no conversations, verbal agreements, or other forms of non-written representations shall serve to add to, delete, or modify the terms as stated.

The prime Contractor further represents that the aforementioned mutually acceptable quote and fully executed subcontract agreement shall remain on file for a period of not less than one year following completion of the prime's contract with the Department or for such longer period as provisions of governing Federal or State law or regulations may require. For purposes of this form, the term Prime Contractor shall refer to any Contractor utilizing a DBE subcontractor, regardless of tier, in which they are claiming DBE credit toward the contract goal.

Contractors further jointly and severally represent that said binding agreement is for the performance of a "commercially useful function" as that term is employed in 49 C.F.R. Part 26.55 (c), (d).

**TO BE SIGNED BY THE SUBCONTRACTOR TO THE PRIME CONTRACTOR, AND ANY LOWER TIER  
SUBCONTRACTORS HAVING A CONTRACT WITH THE BELOW NAMED DBE FIRM**

Prime Contractor The LANE Construction Corporation

By:  Regional Vice President  
Signature Title

Date: March 14, 2014

First Tier  
Subcontractor if  
Applicable

By: \_\_\_\_\_  
Signature Title

Date: \_\_\_\_\_

Second Tier  
Subcontractor if  
Applicable

\_\_\_\_\_

By: \_\_\_\_\_  
Signature Title

Date: \_\_\_\_\_

Third Tier  
Subcontractor if  
Applicable

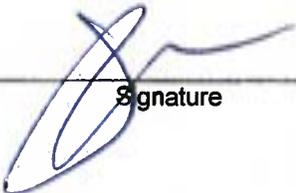
\_\_\_\_\_

By: \_\_\_\_\_  
Signature Title

Date: \_\_\_\_\_

DBE Contractor

Sabra, Wang & Associates, Inc.  
\_\_\_\_\_

By:  \_\_\_\_\_  
Signature Title

Principal  
Date: 03/5/2014

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
CERTIFICATION OF BINDING AGREEMENT  
WITH  
DISADVANTAGED BUSINESS ENTERPRISE FIRMS

Project No.: (FO) 0495-029-123, P101, C501

Federal Project No.: STP-495-5(094)

This form is to be submitted in accordance with the Department's Special Provision for Section 107.15.

It is hereby certified by the below signed Contractors that there exists a written quote, acceptable to the parties involved preliminary to a binding subcontract agreement stating the details concerning the work to be performed and the price which will be paid for the aforementioned work. This document is not intended to, nor should it be construed to, contain the entire text of the agreement between the contracting parties. This document does not take the place of, nor may it be substituted for, an official subcontracting agreement in those situations that may require such an agreement. A copy of the fully executed *subcontract agreement* shall be submitted to the Engineer within fourteen (14) business days after contract execution.

It is further certified that the aforementioned mutually acceptable quote and fully executed subcontract agreement represent the entire agreement between the parties involved and that no conversations, verbal agreements, or other forms of non-written representations shall serve to add to, delete, or modify the terms as stated.

The prime Contractor further represents that the aforementioned mutually acceptable quote and fully executed subcontract agreement shall remain on file for a period of not less than one year following completion of the prime's contract with the Department or for such longer period as provisions of governing Federal or State law or regulations may require. For purposes of this form, the term Prime Contractor shall refer to any Contractor utilizing a DBE subcontractor, regardless of tier, in which they are claiming DBE credit toward the contract goal.

Contractors further jointly and severally represent that said binding agreement is for the performance of a "commercially useful function" as that term is employed in 49 C.F.R. Part 26.55 (c), (d).

**TO BE SIGNED BY THE SUBCONTRACTOR TO THE PRIME CONTRACTOR, AND ANY LOWER TIER  
SUBCONTRACTORS HAVING A CONTRACT WITH THE BELOW NAMED DBE FIRM**

Prime Contractor The LANE Construction Corporation

By:  Regional Vice President  
Signature Title

Date: March 14, 2014

First Tier  
Subcontractor if  
Applicable

By: \_\_\_\_\_  
Signature Title

Date: \_\_\_\_\_

Second Tier  
Subcontractor if  
Applicable

\_\_\_\_\_

By: \_\_\_\_\_  
Signature Title  
Date: \_\_\_\_\_

Third Tier  
Subcontractor if  
Applicable

\_\_\_\_\_

By: \_\_\_\_\_  
Signature Title  
Date: \_\_\_\_\_

DBE Contractor

TAVARES CONCRETE COMPANY, INC.

By: [Signature] PRESIDENT  
Signature Title  
Date: 8/7/14

# **LANE**

**14500 Avion Parkway  
Suite 200  
Chantilly, VA 20151  
703.222.5670**

**[www.laneconstruct.com](http://www.laneconstruct.com)**