

# BID PROPOSAL AND CONTRACT

## City of Williamsburg Prince George Street & Armistead Avenue Reconstruction and City Wide Sidewalk Improvements

UPC: 102777 & 102778

VDOT Project No: U000-137-R44, P101, M501

HAMPTON ROADS DISTRICT

CITY OF WILLIAMSBURG, VIRGINIA

Invitation for Bids (IFB) 01-4101-14



July 2013



**INVITATION FOR BIDS (IFB)**

Issue Date: July 20, 2013

Sealed Solicitation Title:  
**City of Williamsburg Prince George Street  
& Armistead Avenue Reconstruction and  
City Wide Sidewalk Improvements**



Issuing Office: City of Williamsburg  
Office of the Public Works Director  
2nd Floor  
401 Lafayette Street  
Williamsburg, Virginia 23185-3617  
Voice (757)220-6140 Fax (757)259-3798

<b>IFB NO:</b> 01-4101-14
<b>Pre-Bid Conference:</b> July 31, 2013 @ 2:00 p.m.
<b>CLOSING DATE:</b> August 20, 2013
<b>CLOSING TIME:</b> 2:00 p.m.
<b>PROCUREMENT OFFICER:</b> Julie Phares <b>PHONE:</b> 757-220-6181

Location of where work will be performed:

City of Williamsburg - 23185

**Sealed Bids Will Be Received Until the Date and Time Noted Above For Furnishing the Goods/Services Described Herein And Then Opened In Public.**

All inquiries for information should be directed to Aaron B. Small, P.E., City Engineer, at 757-220-6140

**IF BIDS ARE MAILED, SEND DIRECTLY TO ISSUING OFFICE NOTED ABOVE. IF BIDS ARE HAND DELIVERED, DELIVER TO:**

401 Lafayette Street Williamsburg Municipal Building 2nd Floor – Public Works Department

In Compliance With This Invitation For Bids And To All The Conditions Imposed Therein, The Undersigned Offers And Agrees To Furnish The Goods/Services At The Price(s) Indicated In Section VII, Pricing Schedule.

Name And Address Of Firm:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Zip Code: \_\_\_\_\_

FEI/FIN NO. \_\_\_\_\_  
Fax Number: (\_\_\_\_) \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_

Date: \_\_\_\_\_  
By: \_\_\_\_\_  
(Signature In Ink)  
Name: \_\_\_\_\_  
(Please Print)  
Title: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_

**PRE-BID CONFERENCE:** Pre-bid conference will be held **July 31, 2013 at 2:00 p.m.**, local time. Bidders may contact Aaron B. Small, Department of Public Works at (757) 220-6140 for any questions.

**RETURN THIS PAGE WITH YOUR BID OFFER**

## I. NOTICE OF ADVERTISEMENT

PROJECT: **City of Williamsburg Prince George Street & Armistead Avenue Reconstruction and City Wide Sidewalk Improvements, UPC: 102777 & 102778, VDOT Project No: U000-137-R44, P101, M501**  
LOCATION: **City of Williamsburg, Virginia**  
DATE: **July 20, 2013**

The City of Williamsburg, Virginia will receive sealed Bids for the above titled project at the office of the Director of Public Works and Utilities, located at 401 Lafayette Street, Williamsburg, VA 23185 until **2:00 p.m.** local time on **August 20, 2013** at which time the Bids will be publicly opened and read aloud. Any Bids received after the specified time and date will not be considered.

The project was developed under UPC 102777 & 102778, State Project Number U000-137-R44, P101, M501, with funding allocations from the VDOT Revenue Sharing Program.

The work under this project consists of sidewalk improvement work at six (6) areas of public streets within the City of Williamsburg totaling approximately 8,832 linear feet. The six areas are briefly described as follows:

- Area 1            The west side of Richmond Road (US 60) from 19 ft south of Patriot Lane to 79 ft south of the Holiday Inn South entrance (UPC 102778).
  
- Area 2            The southeast side of Ironbound Road (SR 615) from 35 ft northeast of Middle Street to 35 ft southwest of the entrance to 130 Ironbound Road (UPC 102778).
  
- Area 3            The southwest side of Lafayette Street (SR 162) from 26 ft southeast of Wythe Avenue to 13 ft northwest of Harrison Avenue (UPC 102778).
  
- Area 4            The southwest side of Prince George Street from 35 ft southeast to 20 ft northwest of Armistead Avenue (UPC 102778).  
  
                         Armistead Avenue from 15 ft south of Scotland Street to 30 ft south of Prince George Street (UPC 102777).  
                         Prince George Street from 20 ft southeast of Armistead Avenue to 20 ft east of North Boundary Street (UPC 102777).
  
- Area 5            The southwest side of Bypass Road (US 60) from 35 ft east of State Route 132 to 225 ft northwest of the Colonial Williamsburg Regional Visitor Center entrance (UPC 102778).  
                         The southwest side of Bypass Road (US 60) from 84 ft southeast of the Colonial Williamsburg Regional Visitor Center entrance to 20 ft northwest of Parkway Drive (UPC 102778).  
                         The southeast side of Parkway Drive from Bypass Road to Capitol Landing Road (UPC 102778).
  
- Area 6            Between the west side of Lafayette Street (SR 162/5) and the north side of York Street from Lafayette Street (SR 162/5) to York Street (UPC 102778).

These routes have functional classifications of Urban Local, Urban Minor Arterial, Urban Collector, Urban Minor Arterial, and Urban Freeway and Expressway, respectively. The work generally consists of:

- Removing existing concrete sidewalks and saw-cutting existing pavements.
- Installing new curb and gutter & new concrete sidewalks
- Installing new concrete and paver sidewalks and entrances.
- Installing accessible ramps (CG-12).
- Removing and reinstalling traffic signs where impacted by sidewalk construction.
- Full road restoration in parts of Area 4.

Bid Documents may be examined at the offices of the Director of Public Works and Utilities, City of Williamsburg, located at 401 Lafayette Street, Williamsburg, VA 23185.

Bid Documents may be obtained from the office of the Director of Public Works and Utilities, City of Williamsburg, 401 Lafayette Street, Williamsburg, VA 23185 upon a non-refundable payment of \$50.00 for each set of documents. Requests for Bid Documents to be mailed to the Bidder shall be made in writing and accompanied by a non-refundable check in the amount of \$15.00. Checks shall be made to the City of Williamsburg.

This project shall be constructed in accordance with: the plans; the Virginia Department of Transportation *Road and Bridge Specifications*, dated 2007; and the Virginia Department of Transportation *Road and Bridge Standards*, dated 2008; the *Virginia Work Area Protection Manual*, dated May 1, 2005; the 2003 edition of the *MUTCD*; and Supplemental Specifications, Special Provisions and Special Provision Copied Notes in this contract.

Bid Security in the amount of **five percent (5 %)** of the Bid shall be submitted with each Bid.

A NON-MANDATORY PRE-BID CONFERENCE will be held on **July 31, 2013** at **2:00 PM** Local Time at the Public Works and Utilities Conference Room on the Second Floor of the City Municipal Building, 401 Lafayette Street, Williamsburg, VA 23185.

Contractor registration in accordance with Title 2.2 Chapter 43, Code of Virginia is required. The Bidder shall include in its Bid the following notation: "Licensed Virginia Contractor No. \_\_\_\_\_."

Withdrawal of Bids due to error shall be subject to and in accordance with Section 2.2-4330 of the Code of Virginia and the Contract Documents.

The Owner reserves the right to reject any and all Bids and to waive any minor non-substantive errors in the Bid.

The City of Williamsburg does not discriminate in the solicitation or awarding of contracts on the basis of race, religion, faith-based organizations, color, national origin, age, disability or any other basis prohibited by state or federal law.

By: Daniel G. Clayton III  
Director of Public Works & Utilities  
City of Williamsburg

**II. BID FORM**

Bids to be opened: Time **2:00 PM**  
**August 20, 2013**  
Contract time limit **300 Days**  
Performance Bond: **100%**  
Payment Bond: **100%**  
Bid Security: **5%**

To: **City of Williamsburg, Virginia**  
**401 Lafayette Street**  
**Williamsburg, VA 23185**

**A. BID PROPOSAL**

In compliance with the Contract Documents, titled **Williamsburg Various Sidewalk Improvements, UPC: 102777 & 102778, VDOT Project No: U000-137-R44, P101, M501**, and all Addenda issued to date all of which are part of this Bid, the undersigned hereby proposes to furnish all items including materials, supervision, labor, and equipment in strict accordance with, said Contract Documents, for the total base sum of:

**Prince George Street & Armistead Avenue Reconstruction**  
**UPC: 102777**

NO.	VDOT BID ITEM CODE	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	00100	Mobilization	LS	1		
2	00126	Earthwork	LS	1		
3	00280	Select Matl. Ty. II Min. CBR-20	CY	100		
4	24265	NS Maintenance of Traffic	LS	1		
5	10123	Aggregate Base Material TY. I No. 21A	TON	1,079		
6	14260	Crusher Run Aggr. No. 25 or 26	TON	3		
7	12600	Std. Comb. Curb & Gutter CG-6	LF	1,270		
8	13108	CG-12 Detectable Warning Surface	SY	7		

9	13245	NS Sidewalk - Brick Paver	SY	1,251		
10	13245	NS Sidewalk - Concrete Paver	SY	45		
11	13551	NS Wall (Brick Masonry)	LF	146		
12	67090	NS Pedestrian Fence - 42" Black 2-Rail Metal	LF	247		
13	14100	Removal of Sidewalk and Entrance	SY	905		
14	14120	Removal of Comb. Curb and Gutter	LF	1,126		
15	51910	Saw Cut	LF	222		
16	14440	Saw Cut Sidewalk	LF	119		
17	14450	Saw Cut Curb, Gutter and Entrances	LF	33		
18	16335	Asphalt Concrete TY. SM- 9.5A	TON	281		
19	16375	Asphalt Concrete TY. BM- 25.0	TON	412		
20	16516	Flex. Pav. Tie-In Planing 0"- 2"	SY	7		
21	16522	Flexible Pave. Planing 0"-2"	SY	150		
22	16523	Flexible Pave. Planing Above 2"-4"	SY	2,375		
23	24702	NS Remove Exist. Tree	EA	3		
24	24702	NS Remove Exist. Lighting Pole & Fixture	EA	4		
25	24703	NS Remove Exist. Brick Wall	LF	197		
26	24703	NS Remove Exist. Wooden Planter Box	LF	103		
27	24703	NS Remove Exist. Fence	LF	17		
28	50759	Reloc. Exist. Sign Panel Ty. SP-1	EA	32		
29	54028	TY.A Pave. Line Marking 24"	LF	343		

30	01150	15" PIPE	LF	208		
31	01180	18" PIPE	LF	32		
32	01240	24" PIPE	LF	233		
33	02090	NS Pipe (3" DIP Roof Drain)	LF	88		
34	06745	Drop Inlet DI-2A	EA	2		
35	06748	Drop Inlet DI-2B,L=6'	EA	3		
36	09056	Manhole MH-1 OR 2	VLF	14		
37	09057	Frame & Cover MH-1	EA	2		
38	14411	Pipe Tie-In	EA	1		
39	24840	NS Reconstruct Exist. Drop Inlet to Manhole	EA	1		
40	24502	Remove Exist. Water Meter Box	EA	6		
41	40003	1" Water Service Line	LF	40		
42	40061	6" DI Water Main	LF	43		
43	40081	8" DI Water Main	LF	404		
44	41006	6" Gate Valve & Box	EA	2		
45	41104	Adjust Exist. Valve Box	EA	3		
46	41400	6"x6" Tap. Sleeve Valve & Box	EA	1		
47	41403	8"x8" Tap. Sleeve Valve & Box	EA	1		
48	41398	8"x6" Tap. Sleeve Valve & Box	EA	1		
49	41820	Fire Hydrant	EA	2		
50	41972	1" Water Meter & Box	EA	2		

51	00529	Flowable Backfill	CY	5.6		
52	42064	6" Sanitary Service Lateral Connection	LF	100		
53	42000	NS Sewer Pipe (10"-12" cured-in-place pipe lining)	LF	735		
54	42765	Adjust Exist. Frame & Cover	EA	7		
55	42846	6" Sewer Cleanout	EA	3		
56	14370	Roadside Restoration	SY	18		
57	23560	Temp. Safety Fence 4'	LF	411		
58	27451	Inlet Protection, Type A	EA	6		
59	85021	NS Dust Control	SY	4,380		
60	59000	NS Lighting (Post & Fixtures)	EA	13		
61	56030	2" Conduit	LF	817		
62	56200	Trench Excavation ECI-1	LF	817		
63		Wiring (by DVP)	LS	1		
64	30385	Ginko 1.50" Cal.	EA	10		
65	38950	NS Landscape (Tree Well)	EA	10		
<b>BID TOTAL</b> <b>UPC: 102777</b> (IN WORDS)						(\$ _____) (IN FIGURES)



**City Wide Sidewalk Improvements****UPC: 102778**

NO.	VDOT BID ITEM CODE	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	00100	Mobilization	LS	1		
2	00126	Earthwork	LS	1		
3	00280	Select Matl. Ty. II Min. CBR-20	CY	200		
4	24265	NS Maintenance of Traffic	LS	1		
5	14260	Crusher Run Aggr. No. 25 or 26	TON	21		
6	11040	Concrete Entrance Pavement 7"	SY	137		
7	12020	Std. Curb CG-2	LF	73		
8	12600	Std. Comb. Curb & Gutter CG-6	LF	2,011		
9	13108	CG-12 Detectable Warning Surface	SY	29		
10	13220	Hydr. Cement Conc. Sidewalk 4"	SY	2,974		
11	13245	NS Sidewalk - Brick Paver	SY	120		
12	13400	NS Guardrail GR-2	LF	714		
13	13401	NS Guardrail Terminal GR-7	EA	2		
14	13310	NS Guardrail Terminal GR-6	LF	24		
15	13551	NS Wall (Concrete)	LF	131		
16	13551	NS Wall (Brick Masonry)	LF	20		
17	67090	NS Pedestrian Fence - 42" White 3-Rail Wood	LF	149		

18	14100	Removal of Sidewalk and Entrance	SY	312		
19	14120	Removal of Comb. Curb and Gutter	LF	1,510		
20	51910	Saw Cut	LF	1,679		
21	14440	Saw Cut Sidewalk	LF	4		
22	14450	Saw Cut Curb, Gutter and Entrances	LF	6		
23	16335	Asphalt Concrete TY. SM-9.5A	TON	16		
24	16516	Flex. Pav. Tie-In Planing 0"-2"	SY	185		
25	24502	NS Remove Exist. DI-2, L-4'	EA	1		
26	24430	Demolition of Pavement (Flexible)	SY	781		
27	24600	Remove Existing Guardrail	LF	689		
28	13346	Remove GR-7 Terminal	EA	2		
29	24702	NS Remove Exist. Tree	EA	2		
30	25000	Handrail HR-1	LF	50		
31	50759	Reloc. Exist. Sign Panel Ty. SP-1	EA	18		
32	54028	TY.A Pave. Line Marking 24"	LF	125		
33	54032	TY.B CL.I Pave. Line Mark. 4"	LF	2,444		
34	54105	Erad. Of Exist. Pave. Marking	LF	2,444		
35	01240	24" PIPE	LF	6		
36	06818	Drop Inlet DI-3B,L=6'	EA	1		
37	09148	Eros.Contr.Stone Cl. A1 EC-1	TON	3		
38	02112	NS Drainage (Sidewalk Bridge)	EA	2		

39	24840	NS Reconstruct Exist. Drop Inlet to Manhole	EA	1		
40	41104	Adjust Exist. Valve Box	EA	4		
41	42765	Adjust Exist. Frame & Cover	EA	3		
42	14370	Roadside Restoration	SY	3,593		
43	23560	Temp. Safety Fence 4'	LF	62		
44	27321	Protective Covering EC-2	SY	851		
45	27410	Check Dam, Rock Ty. I	EA	1		
46	27451	Inlet Protection, Type A	EA	4		
47	27461	Inlet Protection, Type B	EA	12		
48	27505	Temp. Silt Fence	LF	2,716		
49	85021	NS Dust Control	SY	11,368		
50	59000	NS Lighting (Post & Fixtures)	EA	1		
51	56030	2" Conduit	LF	9		
52	56200	Trench Excavation ECI-1	LF	9		
53	27000	Selective Tree Removal Trimming & Clearing	LS	1		
<b>BID TOTAL</b> <b>UPC: 102778</b> (IN WORDS)						(\$ _____) (IN FIGURES)

<b>BID TOTAL</b> <b>UPC: 102777</b> (IN WORDS)	(\$ _____) (IN FIGURES)
<b>BID TOTAL</b> <b>UPC: 102778</b> (IN WORDS)	(\$ _____) (IN FIGURES)
<b>TOTAL</b> <b>BID</b> (IN WORDS)	(\$ _____) (IN FIGURES)

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents. The prices quoted shall include without exception all materials, supervision, labor, equipment, appliances, clean-up, incidental items, applicable sales, use and other taxes, insurance, building permit or fees, and the Contractor's labor, overhead, profit, mobilization and other mark-ups, and in full accordance with the Contract Documents. Include allowance for waste where appropriate. The unit prices shall be maintained throughout the Contract Time.

B. ADDENDA

The undersigned acknowledges receipt of the following addenda:

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_.

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_.

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_.

- C. It is expressly agreed by us that the City of Williamsburg, Virginia shall have the right to reject any and all Bids and to waive any minor non-substantive errors in the Bid. Award shall be based on the lowest responsive and responsible Total Bid.
- D. Attached is a bond conforming to the requirements of the current Road and Bridge Specifications, it being understood that such bond is to be forfeited as liquidated damages if, upon acceptance of the terms of this proposal, I/we fail to execute the contract and furnish bond as provided in the current Road and Bridge Specifications.
- E. I/we declare that no other person, firm or corporation is interested in this proposal.
- F. I/we have carefully examined the plans, job specifications, current Road and Bridge Specifications, and all other documents pertaining thereto and thoroughly understand the contents thereof.
- G. I/we understand that the plans and current Road and Bridge Specifications are a part of this proposal; that all of the quantities shown herewith are a part of this proposal; that all the quantities shown herewith are approximate only.
- H. I/we have examined the location of the proposed work and source of supply of materials.
- I. I/we agree to bind myself/ourselves upon award of the City of Williamsburg, Virginia under this proposal to a contract with necessary surety bond to start work within 15 days of notification of the contract execution or as excepted by other contract language permitted by project specifications, and to complete all work in accordance with the plans, job specifications and current Road and Bridge Specifications within the time limit set forth in the contract.

J. CONTRACTOR'S REGISTRATION

Registered Virginia Contractor Class and No. \_\_\_\_\_

*(NOTE: FAILURE TO INCLUDE CONTRACTOR'S REGISTRATION NUMBER IS GROUNDS FOR REJECTION OF THE BID.)*

K. SIGNATURE

Contractor \_\_\_\_\_ Signed \_\_\_\_\_

Date \_\_\_\_\_ Title \_\_\_\_\_

NOTE: If Bidder is a corporation, write state of incorporation under signature.

VENDOR#/FIN# \_\_\_\_\_

MAILING ADDRESS AND TELEPHONE NUMBER OF BIDDER:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

( \_\_\_\_\_ ) \_\_\_\_\_ [Telephone]

IF CORPORATION, PROVIDE NAME AND MAILING ADDRESS AS REQUIRED BELOW.

PRESIDENT

SECRETARY

TREASURER

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

IF PARTNERSHIP, PROPRIETORSHIP, LIMITED LIABILITY COMPANY OR OTHER FIRM, PROVIDE NAME AND MAILING ADDRESS OF EACH PARTNER, PROPRIETOR, OR MEMBER OF FIRM.

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**III. BID BOND**

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, \_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are hereby held and firmly bound unto **City of Williamsburg, Virginia** as OWNER in the penal sum of \_\_\_\_\_ (Five Percent) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The Condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain BID, attached hereto and hereby made a part hereof to enter into a Contract in writing, for the project entitled: **City of Williamsburg Prince George Street & Armistead Avenue Reconstruction and City Wide Sidewalk Improvements, UPC: 102777 & 102778, VDOT Project No: U000-137-R44, P101, M501.**

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a Contract in the attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth above.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

By: \_\_\_\_\_  
Attorney-in-Fact

IMPORTANT - Surety companies executing BONDS shall appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the Commonwealth of Virginia.

**IV. CERTIFICATION REGARDING DEBARMENT**

This is to certify that this person/firm/corporation is not now debarred by the Federal Government or by the Commonwealth of Virginia or by any other state, or by any town, city, or county, from submitting Bids on contracts for construction covered by this solicitation, nor are they an agent of any person or entity that is now so debarred.

\_\_\_\_\_  
Name of Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Firm or Corporation

\_\_\_\_\_  
Date

**V. AGREEMENT**

This AGREEMENT, dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between **City of Williamsburg** hereinafter called the Owner; and \_\_\_\_\_

(a corporation or an unincorporated organization organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ or, an individual trading under the above name) hereinafter called the Contractor.

WITNESSETH: The Owner and Contractor, for the consideration stated herein, agree as follows:

A. Scope of Work

The Contractor shall perform all required Work and shall provide and furnish all labor, materials, necessary tools, expendable equipment and utility and transportation service and all else required to complete the construction of the **City of Williamsburg Prince George Street & Armistead Avenue Reconstruction and City Wide Sidewalk Improvements, UPC: 102777 & 102778, VDOT Project No: U000-137-R44, P101, M501** project all in strict accordance with the Contract Documents, the terms of which are incorporated herein by reference.

It is understood and agreed that said labor, materials, tools, equipment and service shall be furnished and said Work performed and completed under the direction and supervision of the Contractor and subject to the approval of the Owner or its authorized representative.

B. Engineer

The power, duties, and responsibilities conferred hereto to the Engineer shall be construed to be those of the Owner or its authorized representative. Where the terms “Department”, “Engineer” and “Contract Engineer” appear in Virginia Department of Transportation Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the Virginia Department of Transportation publication(s) that each references, the authority identified shall be construed to be those of the Owner or its authorized representative.

C. Guarantee

All materials and equipment, furnished by the Contractor, and all construction involved in this Agreement are hereby guaranteed by the Contractor to be free from defects owing to faulty materials or workmanship for a period of one year after date of Completion of the Work. All Work that proves defective, by reason of faulty material or workmanship within said period of one year, shall be replaced by the Contractor free of cost to the Owner. These guarantees shall not operate as a waiver of any of the Owner’s rights and remedies for default under or breach of the Agreement which rights and remedies may be exercised at any time within the period of any applicable statute of limitations.



D. Contract Price

The Owner shall pay the Contractor as just compensation for the satisfactory performance of the Work, subject to any additions or deductions as provided in the Contract Documents, the unit and/or lump sum price as contained in the Bid Schedule attached hereto.

The Contract Price is \_\_\_\_\_ (\$ \_\_\_\_\_) based upon unit and/or lump sum prices extended as herein contained.

E. Payments

The Owner will pay the Contract Price to the Contractor in the manner and at such times as set forth in Section 109 of the *Virginia Department of Transportation Road and Bridge Specifications*, as referenced in Section I. below and as specifically revised for this Project.

F. Time

The undersigned Contractor agrees to complete all Work under this Agreement within **300** Days from the date of the Notice to Proceed. Contract completion shall be as described by Section 108.10 of the *Virginia Department of Transportation Road and Bridge Specifications*, as referenced in Section I. below.

G. Applicable Law/Compliance

(1) Applicable Law

This Agreement shall be deemed to be a Virginia contract and shall be governed as to all matters of validity, interpretations, obligations, performance, or otherwise, exclusively by the laws of the Commonwealth of Virginia, and all questions arising with respect thereto shall be determined in accordance with such laws. Regardless of where actually delivered and accepted, this Agreement shall be deemed to have been delivered and accepted by the parties in the Commonwealth of Virginia.

(2) Compliance with all Laws

Contractor shall comply with all federal, state and local statutes, ordinances, and regulations, now in effect or hereafter adopted, in the performance of Work set forth herein. Contractor represents that it possesses all necessary licenses and permits required to conduct its business and will acquire any additional license and permits necessary for performance of this Agreement prior to the initiation of Work. [If the Contractor is a corporation] Contractor further expressly represents that it is a corporation in good standing in the Commonwealth of Virginia and will remain in good standing throughout the term of the contract. Contractor shall at all times observe all health and safety measures and precautions necessary for the sanitary and safe performance of the contract Work.

(3) Venue

Any and all suits for any claims or for any breach or dispute arising out of these Contract Documents shall be maintained in the appropriate court of competent jurisdiction in the City of Williamsburg, Virginia.

(4) Environmental Considerations

Any cost or expense associated with environmentally related violations of the law, the creation or maintenance of a nuisance, or releases of hazardous substance, including but not limited to, the cost of any clean up activities, removals, remediation, responses, damages, fines, administrative or civil penalties or charges imposed on the Owner, whether because of actions or suits by any governmental or regulatory agency or by any private party, as a result of the release of any hazardous substances, or any noncompliance with or failure to meet any federal, state or local standards, requirements, laws, statutes, regulations or the law of nuisance by the Contractor (or its agents, officers, employees, subcontractors, consultants, subconsultants, or any other persons, corporations, or legal entities employed, utilized, or retained by the Contractor) in the performance of this Agreement or related activities, shall be paid by the Contractor.

(5) Non-Discrimination/Drug-Free Workplace Provisions

- a. Employment discrimination by Contractor shall be prohibited. Contractor agrees to comply with Special Provision SF010CF-0309, "FHWA 1273, MEMORANDUM AND CFR CHANGE" dated January 19, 2009 included in the Contract Documents. Furthermore, during the performance of this Agreement, Contractor agrees as follows:
  - i. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification/consideration reasonably necessary to the normal operation of Contractor. Contractor will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act, and the Code of Virginia § 2.2-4311. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the Agreement on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
  - ii. Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that Contractor is an equal opportunity employer.

- iii. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulations shall be deemed sufficient for the purpose of meeting the requirements of this section.
  - iv. Contractor will include the provisions of the foregoing subsections (i) and (ii), and (iii) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- b. During the performance of this Agreement, Contractor agrees as follows:
- i. Contractor will provide a drug-free workplace for Contractor's employees.
  - ii. Contractor will post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.
  - iii. Contractor will state in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace.
  - iv. Contractor will include the provisions of the foregoing subsections (i), (ii) and (iii) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
  - v. For the purposes of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession, or use of any controlled substance or marijuana during the performance of the contract."

#### H. Liquidated Damages

The damage and loss to the Owner resulting from failure of the Contractor to complete the Work within the time specified in this Agreement, plus any extension of time granted, shall be as stipulated in Section 108.06 of the *Virginia Department of Transportation Road and Bridge Specifications*.

#### I. Component Parts of the Contract

This Agreement includes all completed components of the Bid and Contract Documents as defined in Section 103.06 of the *Virginia Department of Transportation Road and Bridge Specifications* dated 2007, as revised for this Project all of which are incorporated herein by reference. Certain portions of the project are revised by the Project Specific Provisions included in the Contract Documents. Project Specific Provisions shall control over all other Specifications, Supplemental Specifications, Special Provisions, Special Provision Copied Notes, plans, and standard drawings.

J. Binding

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

K. Changes to the Agreement

No provision of this Agreement shall be changed, amended, modified, waived, or discharged except as agreed to in writing by the Owner and the Contractor.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and first above written in (\_\_\_\_\_) counterparts each of which shall for all purposes be deemed an original.

**OWNER**

**CONTRACTOR**

\_\_\_\_\_  
*Owner*  
By: \_\_\_\_\_  
*Name*  
Title: \_\_\_\_\_

\_\_\_\_\_  
*Contractor*  
By: \_\_\_\_\_  
*Name*  
Title: \_\_\_\_\_

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

No.: \_\_\_\_\_

Contractor's Registration

(If Contractor is a corporation or an unincorporated organization, attach evidence of authority to sign)

*[Corporate Seal]*

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

**VI. PERFORMANCE BOND**

Bond No. \_\_\_\_\_  
Amount: \$ \_\_\_\_\_

KNOW ALL PERSONS BY THESE PRESENTS, that \_\_\_\_\_ of \_\_\_\_\_, hereinafter called the Contractor and \_\_\_\_\_ a corporation duly organized and existing under and by virtue of the laws of the State of \_\_\_\_\_, hereinafter called the Surety, and authorized to transact business within the Commonwealth of Virginia as the Surety, are held and firmly bound unto \_\_\_\_\_ as Owner, in the sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_), lawful money of the United States of America, for payment of which, well and truly be made to the Owner, the Contractor and the Surety bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

WHEREAS, the Contractor has executed and entered into a certain Agreement, hereto attached, with the Owner dated \_\_\_\_\_, 20\_\_, for **City of Williamsburg Prince George Street & Armistead Avenue Reconstruction and City Wide Sidewalk Improvements, UPC: 102777 & 102778, VDOT Project No: U000-137-R44, P101, M501.**

NOW THEREFORE, if the Contractor, and its successors and assigns, shall at all times duly, promptly, and faithfully perform the Work and any alteration in or addition to the obligations of the Contractor arising thereunder, including the matter of infringement, if any, of patents or other proprietary rights, and shall assure all guarantees against defective workmanship and materials, including the guarantee period following final completion by the Contractor and final acceptance by the Owner and comply with all the covenants therein contained in the Specifications, Drawings, and other Contract Documents required to be performed by the Contractor, in the manner and within the times provided in the Agreement, and shall fully indemnify and save harmless the Owner from all costs and damage which it may suffer by reason or failure to do so, and shall fully reimburse and repay it all outlay and expenses which it may incur in making good any default, and reasonable counsel fees incurred in the prosecution of or defense of any action arising out of or in connection with any such default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that the Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract Documents or to the Work to be performed thereunder, or payment thereunder before the time required therein, or waiver of any provision thereof, or assignment, subletting or transfer thereof or any part thereof, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, addition to the terms of the Contract Documents or any such payment, waiver, assignment, subcontract or transfer.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

Whenever Contractor shall be declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Owner shall have the right, at its option, to require the

Surety to promptly proceed to remedy the default within 30 days of notice by proceeding or procuring others to proceed with completing the Agreement with its terms and conditions; and all reserves, deferred payments, and other funds provided by the Agreement to be paid to Contractor shall be paid to Surety at the same times and under the same conditions as by the terms of that Agreement such fund would have been paid to Contractor had the Agreement been performed by Contractor; and Surety shall be entitled to such funds in preference to any assignee of Principal of any adverse claimant. Notwithstanding the above, the Owner shall have the right, with the approval of the Surety which shall not be unreasonably withheld, to take over and assume completion of the Agreement and be promptly paid in cash by the Surety for the cost of such completion less the balance of the Contract price.

IN WITNESS WHEREOF, all above parties bounded together have executed this instrument this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

\_\_\_\_\_

By: \_\_\_\_\_(Seal)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_  
Attest

SURETY

\_\_\_\_\_

By: \_\_\_\_\_(Seal)

\_\_\_\_\_  
Attest

APPROVED AS TO FORM: \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
OWNER

NOTE: Date of Bond shall not be prior to the date of the Agreement. If the Contractor is a partnership, all partners shall execute the Bond.

IMPORTANT: The Surety named on this Bond shall be one who is licensed to conduct business in the Commonwealth of Virginia, and named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent shall be accompanied by a certified copy of the authority to act for the Surety at the time of signing of this Bond.

**VII. PAYMENT BOND**

Bond No. \_\_\_\_\_  
Amount: \$ \_\_\_\_\_

KNOW ALL PERSONS BY THESE PRESENTS, that \_\_\_\_\_ of \_\_\_\_\_ hereinafter called the Contractor and \_\_\_\_\_ a corporation duly organized and existing under and by virtue of the laws of the State \_\_\_\_\_, hereinafter called the Surety, and authorized to transact business within the Commonwealth of Virginia as the Surety, are held and firmly bound unto \_\_\_\_\_ as Owner, in the sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_), lawful money of the United States of America, for payment of which, well and truly be made to the Owner, the Contractor and the Surety bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

WHEREAS, the Contractor has executed and entered into a certain Agreement, hereto attached, with the Owner dated \_\_\_\_\_, 20\_\_, for **City of Williamsburg Prince George Street & Armistead Avenue Reconstruction and City Wide Sidewalk Improvements, UPC: 102777 & 102778, VDOT Project No: U000-137-R44, P101, M501.**

NOW THEREFORE, if the Contractor shall promptly make payments to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in the Agreement, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment, and tools consumed, used or rented in connection with the construction of the Work, and all insurance premiums on the Work, and for all labor performed in the Work, whether by Subcontractor or otherwise, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract Documents or to the Work to be performed thereunder, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract Documents.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, all above parties bounded together have executed this instrument this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

By: \_\_\_\_\_(Seal)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_  
Attest

SURETY

\_\_\_\_\_  
By: \_\_\_\_\_(Seal)

\_\_\_\_\_  
Attest

APPROVED AS TO FORM: \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
OWNER

NOTE: Date of Bond shall not be prior to the date of the Agreement. If the Contractor is a partnership, all partners shall execute the Bond.

IMPORTANT: The Surety named on this Bond shall be one who is licensed to conduct business in the Commonwealth of Virginia, and named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent shall be accompanied by a certified copy of the authority to act for the Surety at the time of signing of this Bond.

End of Section



**ORDER NO.:**  
**CONTRACT ID. NO.:**

Form C-104  
Rev. 7-13-05

**COMMONWEALTH OF VIRGINIA**  
**DEPARTMENT OF TRANSPORTATION**

PROJECT: U000-137-R44, P101, M501

FHWA:

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

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

STATE of \_\_\_\_\_ COUNTY (CITY) of \_\_\_\_\_

To-wit:

I \_\_\_\_\_, a Notary Public in and for the State and  
County(City) aforesaid, hereby certify that this day \_\_\_\_\_

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 \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_  
My Commission expires \_\_\_\_\_

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

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

**ORDER NO.:**  
**CONTRACT ID. NO.:**

Form C-105  
Rev. 7-13-05

**COMMONWEALTH OF VIRGINIA**  
**DEPARTMENT OF TRANSPORTATION**  
**AFFIDAVIT**

PROJECT: U000-137-R44, P101, M501

FHWA:

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
_____	_____
_____	_____
_____	_____

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

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

STATE of \_\_\_\_\_ COUNTY (CITY) of \_\_\_\_\_

To-wit:

I \_\_\_\_\_, a Notary Public in and for the State and  
County(City) aforesaid, hereby certify that this day \_\_\_\_\_

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 \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_

My Commission expires \_\_\_\_\_

\_\_\_\_\_  
Notary Public

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**——100 SERIES SPECIAL PROVISION COPIED NOTES (SPCNs)——**

(c100ai02-0609) **GENERAL PROJECT REQUIREMENTS, SUPPLEMENTAL SPECIFICATIONS (SSs), SPECIAL PROVISIONS (SPs) AND SPECIAL PROVISION COPIED NOTES (SPCNs)**

This project shall be constructed in accordance with: the plans; the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007; and the *Virginia Department of Transportation Road and Bridge Standards*, dated 2008; the *Virginia Work Area Protection Manual*, dated May 1, 2005; the 2003 edition of the *MUTCD*; and Supplemental Specifications, Special Provisions and Special Provision Copied Notes in this contract.

Special Provision Copied Notes in this contract are designated with “(SPCN)” after the date.

The information enclosed in parenthesis “( )” at the left of each Special Provision Copied Note in this contract is file reference information for Department use only. The information in the upper left corner above the title of each Supplemental Specification and Special Provision in this contract is file reference information for Department use only.

The Department has identified the system of measurement to be used on this particular project as imperial. Any imperial unit of measure in this contract with an accompanying expression in a metric unit shall be referred to hereinafter as a “dual unit” measurement. Such a “dual unit” measurement is typically expressed first in the imperial unit followed immediately to the right by the metric unit in parenthesis “( )” or brackets “[ ]” where parenthesis is used in the sentence to convey other information. Where a “dual unit” of measure appears in this project, only the imperial unit shall apply. The accompanying metric unit shown is not to be considered interchangeable and mathematically convertible to the imperial unit and shall not be used as an alternate or conflicting measurement.

3-5-09c (SPCN)

(c100II1-0710) **VDOT SUPPLEMENTAL SPECIFICATIONS (SSs), SPECIAL PROVISIONS (SPs) AND SPECIAL PROVISION COPIED NOTES (SPCNs)**

Where Virginia Department of Transportation (VDOT) Supplemental Specifications, Special Provisions and Special Provision Copied Notes are used in this contract, the references therein to “the Specifications” shall refer to the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007 for both imperial and metric unit projects. References to the “Road and Bridge Standard(s)” shall refer to the *Virginia Department of Transportation Road and Bridge Standards*, dated 2008 for both imperial and metric unit projects. References to the “Virginia Work Area Protection Manual” shall refer to the *Virginia Work Area Protection Manual*, dated May 1, 2005 for imperial and metric unit projects.

Where the terms “Department”, “Engineer” and “Contract Engineer” appear in VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the VDOT publication(s) that each references, the authority identified shall be in accordance with the definitions in Section 101.02 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007. Authority identified otherwise for this particular project will be stated elsewhere in this contract.



VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the VDOT publication(s) that each reference are intended to be complementary to the each other. In case of a discrepancy, the order of priority stated in Section 105.12 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007 shall apply.

VDOT Special Provision Copied Notes in this contract are designated with "(SPCN)" after the date of each document. VDOT Supplemental Specifications and Special Provision Copied Notes in this contract are designated as such above the title of each document.

The information enclosed in parenthesis "( )" at the left of each VDOT Special Provision Copied Note in this contract is file reference information for VDOT use only. The information in the upper left corner above the title of each VDOT Supplemental Specification and VDOT Special Provision in this contract is file reference information for VDOT use only.

The system of measurement to be used in this project is stated elsewhere in this contract. VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes containing imperial units of measure with accompanying expressions in metric units shall be referred to hereinafter as "dual unit measurement" documents. Such a "dual unit measurement" is typically expressed first in the imperial unit followed immediately to the right by the metric unit in parenthesis "( )" or brackets "[ ]" where parenthesis is used in the sentence to convey other information. Where a "dual unit measurement" appears in VDOT documents, the unit that applies shall be in accordance with the system of measurement as stated elsewhere in this contract. The unit shown that is not of the declared unit of measurement is not to be considered interchangeable and mathematically convertible to the declared unit and shall not be used as an alternate or conflicting measurement. Where VDOT Specifications are used for metric unit projects and only imperial units of measurement appear the document, the provision(s) in this contract for imperial unit to metric unit conversion shall apply.

6-9-10 (SPCN)

(c105is1-0908) **SECTION 105.06 SUBCONTRACTING** of the Specifications is amended to replace the first paragraph with the following:

No portion of the Contract shall be subcontracted or otherwise disposed of without the written consent of the Engineer, except for work that is \$25,000 or less per subcontractor, where the cumulative total of the sublets not requiring the Engineer's written consent will not exceed 10 percent of the original contract value. This will not, however, waive the requirements for prequalification, and will be considered part of the percentage the Contractor is allowed to subcontract. The Contractor shall notify the Engineer of the name of the firm to whom the work will be subcontracted, and the amount and items of work involved. Such notification shall be made and verbal approval given by the Engineer prior to the subcontractor beginning work.

5-15-08 (SPCN)

(c106fp0-0609) **SECTION 106.03(b) SOURCES FURNISHED BY THE CONTRACTOR** of the Specifications is replaced by the following:

- (b) **Sources Furnished by the Contractor:** The use of material from sources furnished by the Contractor will not be permitted until approved by the Engineer and written authority is issued for the use thereof.

The Contractor shall acquire the necessary rights to take material from these sources and shall pay all costs related thereto, including costs which may result from an increase in length of haul. The Department will review and evaluate the material and reserves the right to reject any material from a previously approved source which fails visual examination or test.

1-14-08 (SPCN)

**100 SERIES SPs (SPECIAL PROVISIONS)**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**PROJECT COMMUNICATION AND DECISION MAKING**

January 3, 2005c  
Reissued July 2008

**I. DESCRIPTION**

The intent of this provision is to establish procedures, processes and guidelines for making decisions and managing communications regarding work under contract on construction and maintenance projects. The information contained herein is not meant to be all inclusive but to serve as a minimal general framework for promoting efficient and effective communication and decision making at both the project and, if needed, executive administrative level. It is also not meant to override the decision-making processes or timeframes of specific contract requirements.

**II. DEFINITIONS**

For the purposes of this provision the following terms will apply and be defined as follows:

**Submittals** – Documents required by the contract that the Contractor must submit for the Department's review, acceptance or approval. These may include shop drawings, working drawings, material test reports, material certifications, project progress schedules, and schedule updates. The Contractor shall produce submittals as early as practicable when required by the contract so as not to delay review and determination of action.

**Confirmation of verbal instructions (COVI)** - Contractor requested written confirmation of agreements and instructions developed in negotiations with the Department concerning the Work under contract. Agreements must be able to be quantified using existing contract procedures and will, in the vast majority of cases, not impact contract time and cost. When time and/or cost are impacted, they must be clearly spelled out in the COVI.

**Requests for information (RFI)** – Requests generated by either the Contractor or the Department that the other party supplies information to better understand or clarify a certain aspect of the Work.

**Requests for owner action (ROA)** – Requests when the Contractor asks that the Department take certain action(s) the Contractor feels is required for proper completion of a portion of the Work or project completion.

**Contract change requests (CCR)** - Request where the Contractor asks the Department to make an equitable adjustment to the contract because of excusable and/or compensable events, instructions that have or have not been given or other work requiring time and/or cost beyond that specified or envisioned within the original contract.

**Requests for contractor action (RCA)** – Request generated by the Department where the Department asks the Contractor to take certain action that is in the best interests of the project and/or is required for proper completion of a portion of the Work or for project completion.

**Contract change directives (CCD)** – Directive by the Department which instructs the Contractor to perform work beyond that specified or envisioned in the original contract and which may specify instructions, time, and cost(s) to make an equitable adjustment to the original contract.

**Responsible Person** – The individual in the normal or escalated resolution process, for either the Contractor or the Department, having the direct authority, responsibility and accountability to formulate and respond to each category of information request.

### III. PROCESS FOR DECISION MAKING

Project teams composed on responsible individuals directly involved in the administration, prosecution, and inspection of the Work from the Contractor and the Department shall define and agree upon the field decision-making process during the pre-construction conference. This information relative to the process should be written down and distributed to all parties of the process once it is established. Where there are responsibility, authority or personnel changes associated with this process such changes shall be distributed to all affected parties as quickly as practicable after they are effective so as not to delay or impede this process.

The process for making field decisions with respect to the Work detailed in the contract basically requires the following steps:

1. The Contractor and the Engineer agree on the decision-making process, the identity, authority and accountability of the individuals involved and on the cycle times for response for each category of decision.
2. The party requiring the information generates the appropriate request documents, and calls for a decision from the individual who is accountable for the particular facet of the Work under consideration within the agreed period.
3. The responding party has an internal decision-making process that supports the individual who is accountable and provides the information required within the agreed period for each category of request.
4. The party receiving the decision has an internal process for accepting the decision or referring it for further action within an agreed period of time.

The process also requires that clear and well-understood mechanisms be in place to log and track requests, document the age and status of outstanding requests and actions to be taken on requests that have not been answered within the agreed period.

Both the Department and the Contractor shall agree on the following:

- The documentation and perhaps format to be developed for each category of information requested,
- The name (as opposed to organizational position) of all individuals with the responsibility, authority and accountability to formulate and respond to each category of information requested. The District Administrator (DA) or Chief Executive Officer (CEO) of the Contractor may delegate the responsibility and authority for formulating and responding to requests, however, the accountability for meeting the established response time(s) remains with the District Administrator and CEO.
- The cycle times for each stage in the decision-making process,
- The performance measures to be used to manage the process,
- The action to be taken if cycle times are not achieved and information is not provided in a timely manner.

The following general guideline and timeframe matrix will apply to the various requests for action. Again, please note these guidelines are general in scope and may not apply to specific contract timeframes for response identified within the requirements of the Contract documents. In such cases, specific contract requirements for information shall apply.

**PROCESS GUIDELINES FOR REQUESTS GENERATED BY THE CONTRACTOR**

Process	Situation	Normal resolution process		Escalated process		Final resolution
		By	Within (calendar days)	By	Within	
Submittal	Where the Contractor requests the Department's review, acceptance or approval of shop drawings, materials data, test reports, project progress schedules, or other submittals required by standard Specifications or other contract language.	Department's Designated Project Manager	<ul style="list-style-type: none"> <li>• Acknowledge: 3 days<sup>1</sup></li> <li>• Accept or Return: 14 days</li> <li>• Final Determination\Approve: 30 days or as outlined in contract documents.</li> </ul>	DA or their designee*	7 days	Submit ROA or CCR
Confirmation of Verbal Instruction (COVI)	Resolving routine field issues, within the framework of the Contract, in negotiation with Owner field personnel.	Department's Appropriate field personnel	• Confirmation: 1 day <sup>2</sup>	Submit RFI, ROA or CCR	7 days	(See process for RFI, ROA, or CCR)
Request for Information (RFI)	Requests the Department to supply information to better understand or clarify a certain aspect of the work.	Department's Designated Project Manager	• Action: 14 days (or appropriate Action Plan)	DA or their designee*	7 days	Submit ROA or CCR
Request for Owner Action (ROA)	Requests that the Department take certain action the Contractor feels is required for proper completion of a portion of the Work or project completion.	Department's Designated Project Manager	<ul style="list-style-type: none"> <li>• Acknowledge: 3 days<sup>1</sup></li> <li>• Action: 14 days (or appropriate Action Plan)</li> </ul>	DA or their designee*	7 days	Submit CCR
Contract Change Request (CCR)	Requests the Department to make an equitable adjustment to the contract because of excusable and/or compensable events, instructions that have or have not been given or other work requiring time and/or cost beyond that specified or envisioned within the original contract.	Department's Designated Project Manager	<ul style="list-style-type: none"> <li>• Acknowledge: 3 days<sup>1</sup></li> <li>• Action: 30 days (45 federal days if federal oversight project)</li> </ul>	DA or their designee*	7 days	Established dispute resolution and claims process

<sup>1</sup> Process initiated on the last business day of a week shall be acknowledged before 5 pm on the next VDOT business day.

<sup>2</sup> The absence of a written confirmation from the Owner to a Contractor's written request for confirmation of a verbal instruction shall constitute confirmation of the verbal instruction.

**PROCESS GUIDELINES FOR REQUESTS GENERATED BY THE OWNER**

Process	Situation	Normal resolution process		Escalated process		Final resolution
		By	Within (calendar days)	By	Within	
1. RFI	Requests the Contractor to supply information to better understand or clarify a certain aspect of the work. (RFI)	Contractor's Project Superintendent	<ul style="list-style-type: none"> <li>Action: 14 days (or appropriate written Action Plan)</li> </ul>	Contractor's Project Manager	7 days	Submit RCA or CCD
2. RCA	Requesting the Contractor take certain action(s) that is in the best interests of the project and/or is required for proper completion of a portion of the work or for project completion. (RCA)	Contractor's Project Superintendent	<ul style="list-style-type: none"> <li>Response or Action to safety and environmental issues: 1 day</li> <li>Otherwise acknowledge: 3 days<sup>1</sup></li> <li>Action: 14 days (or appropriate Action Plan)</li> </ul>	Contractor's Project Manager	7 days	Submit CCD
3. CCD	Instructs the Contractor to perform work beyond that specified or envisioned in the original contract and undertakes action(s) to make an equitable adjustment to the contract. (CCD)	Contractor's Project Superintendent	<ul style="list-style-type: none"> <li>Acknowledge: 3 days<sup>1</sup></li> <li>Action: 30 days</li> </ul>	CEO or their designee**	7 days	Established dispute resolution and termination process

<sup>1</sup> Process initiated on the last business day of a week shall be acknowledged before 5 p m on next project business day.

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS CONTROL AREAS**

July 15, 2008

**VOC Emission Control Area** - The Contractor is advised that this project may be located in a volatile organic compound (VOC) emissions control area identified in the State Air Control Board Regulations (9 VAC 5-20) and in Table 1 below. Therefore, the following limitations may apply:

- Open burning is prohibited during the months of May, June, July, August, and September in VOC Emissions Control areas
- Cutback asphalt is prohibited April through October except when use or application as a penetrating prime coat or tack is necessary in VOC Emissions Control areas

Table 1. Virginia Department of Environmental Quality Volatile Organic Compound (VOC) Emissions Control Areas\*

VOC Emissions Control Area	VDOT District	Jurisdiction
Northern Virginia	NOVA	Alexandria City Arlington County Fairfax County Fairfax City Falls Church City Loudoun County Manassas City Manassas Park City Prince William County
Northern Virginia	Fredericksburg	Stafford County
Fredericksburg	Fredericksburg	Spotsylvania County Fredericksburg City
Hampton Roads	Fredericksburg	Gloucester County
Hampton Roads	Hampton Roads	Chesapeake City Hampton City Isle of Wight County James City County Newport News City Norfolk City Poquoson City Portsmouth City Suffolk City Virginia Beach City Williamsburg City York County



Richmond	Richmond	Charles City County Chesterfield County Colonial Heights City Hanover County Henrico County Hopewell City Petersburg City Prince George County Richmond City
Western Virginia	Staunton	Frederick County Winchester City
Western Virginia	Salem	Roanoke County Botetourt County Roanoke City Salem City

\* Regulations for the Control and Abatement of Air Pollution (9 VAC 5-20-206)

See the Virginia Code (9 VAC 5 Chapter 40 – Article 39 (Emission Standards for Asphalt Paving Operations (Rule 4-39)) and Article 40 (Emission Standards for Open Burning (Rule 4-40)) for further clarification. In addition to the above requirements, the Contractor’s attention is directed to the requirements of Section 107.14 of the Specifications, because other air pollution requirements may also apply.

VIRGINIA DEPARTMENT OF TRANSPORTATION

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER FROM CONSTRUCTION ACTIVITIES CONTRACTOR AND SUBCONTRACTOR CERTIFICATION STATEMENT**

Order No.: \_\_\_\_\_ Project Number: \_\_\_\_\_

Route: \_\_\_\_\_ Contract ID. #: \_\_\_\_\_

I certify under penalty of law that I understand the terms and conditions of the project contract, plans, permits, specifications and standards related to the erosion and sediment control, stormwater management and stormwater pollution prevention plan requirements for the affected activities associated with this project, the Virginia Stormwater Management Program (VSMP), and the General Permit for the Discharge of Stormwater from Construction Activities, if applicable to this project, issued by the Virginia Department of Conservation and Recreation. The VSMP Permit authorizes the storm water discharges associated with the construction activities from the project site identified and described in the bid documents and subsequent contract including any off-site support activities required for the complete fulfillment of the work therein.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Contracting Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Address/Description of Site: \_\_\_\_\_  
(Include off-site areas)

Certified on this date: \_\_\_\_\_

(Note: This form must be returned with performance and payment bonds)

**100 SERIES SSs (SUPPLEMENTAL SPECIFICATIONS)**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS**SUPPLEMENTAL DIVISION I—GENERAL PROVISIONS****SECTION 101—DEFINITIONS OF ABBREVIATIONS, ACRONYMS, AND TERMS**

**Section 101.02—Terms** of the Specifications is amended to replace the definition for **Notice to Proceed** with the following:

**Notice to Proceed.** A date selected by the Contractor that is no earlier than 15 nor later than 30 calendar days after the date of contract execution on which the Contractor intends to begin the work, or a contract specific date on which the Contractor may begin the work identified as the Notice to Proceed date in the Contract Documents.

**SECTION 102—BIDDING REQUIREMENTS AND CONDITIONS**

**Section 102.04(c) Notice of Alleged Ambiguities** of the Specifications is amended to replace the first paragraph with the following:

If a word, phrase, clause, or any other portion of the proposal is alleged to be ambiguous, the Bidder shall submit to the State Contract Engineer a written notice of the alleged ambiguity not later than 10 days prior to the date of receipt of bids and request an interpretation thereof. This written notice shall be submitted via the CABB (Contractor Advertisement Bulletin Board) system located on the Construction website at [www.VDOT.Virginia.gov](http://www.VDOT.Virginia.gov). Authorized interpretations will be issued by the State Contract Engineer to each person who received a proposal and will be posted on the CABB system.

**SECTION 105—CONTROL OF WORK**

**Section 105.01—Notice to Proceed** of the Specifications is replaced with the following:

Unless otherwise indicated in the Contract, the Notice to Proceed date will be the date selected by the Contractor on which the Contractor intends to begin the work. That date shall be no earlier than 15 nor later than 30 calendar days after the date of contract execution. The State Contract Engineer will contact the Contractor on the date of contract execution to inform him that the contract has been executed. The State Contract Engineer will also confirm this date in the Letter of Contract Execution. Copies of the Letter of Contract Execution will be distributed to Department personnel involved in the administration of the Contract and to the Contractor. Within 10 calendar days after the date of contract execution the Contractor shall submit to the Engineer written notice of the date he has selected as his Notice to Proceed date. If the Contractor fails to provide written notice of his selected Notice to Proceed Date within 10 calendar days of contract execution, the selected Notice to Proceed Date will become the date 15 calendar days after the date of contract execution. The Contractor shall begin work no later than 10 calendar days after the date he has selected as his Notice to Proceed date, unless the Notice to Proceed date is otherwise indicated in the Contract, in which case the Contractor shall begin work within 10 calendar days after the specific Notice to Proceed date indicated in the Contract.

Contract Time will commence on the date of the Notice to Proceed. The Letter of Contract Execution will identify the Chief Engineer's authorized representative, hereafter referred to as the Engineer, who

is responsible for written directives and changes to the Contract. The Engineer will contact the Contractor after notice of award to arrange a pre-construction conference.

In the event the Contractor, for matters of his convenience, wishes to begin work earlier than 15 calendar days or later than 30 calendar days after the date of contract execution, he shall make such a request in writing to the Engineer within 10 calendar days of the date of contract execution or once a Notice to Proceed Date has been established, if he wishes to begin work more than 10 calendar days after his selected Notice to Proceed date or the Notice to Proceed Date indicated in the Contract, he shall make such a request to the Engineer in writing no later than 5 calendar days after the Notice to Proceed date. If this requested start date is acceptable to the Department, the Contractor will be notified in writing; however, the Contract fixed completion date will not be adjusted but will remain binding. The Contractor's request to adjust the start date for the work on the Contract will not be considered as a basis for claim that the time resulting from the Contractor's adjusted start date, if accepted by the Engineer, is insufficient to accomplish the work nor shall it relieve the Contractor of his responsibility to perform the work in accordance with the scope of work and requirements of the Contract. In no case shall work begin before the Department executes the Contract or prior to the Notice to Proceed date unless otherwise permitted by the Contract or authorized by the Engineer. The Contractor shall notify the Engineer at least 24 hours prior to the date on which he will begin the work.

**Section 105.02—Pre-Construction Conference** of the Specifications is amended to replace the first paragraph with the following:

After notification of award and prior to the Notice to Proceed date the Contractor shall attend a pre-construction conference scheduled by the Engineer to discuss the Contractor's planned operations for prosecuting and completing the work within the time limit of the Contract. At the pre-construction conference the Engineer and the Contractor will identify in writing the authorities and responsibilities of project personnel for each party. The pre-construction conference may be held simultaneously with the scheduling conference when the Engineer so indicates this in advance to the Contractor. When these are simultaneously held, the Contractor shall come prepared to discuss preparation and submittal details of the progress schedule in accordance with the requirements of the Contract.

**Section 105.10(c)(1)—Steel Structures** of the Specifications is replaced with the following:

Working drawings for steel structures, including metal handrails, shall consist of shop detail, erection, and other working drawings showing details, dimensions, sizes of units, and other information necessary for the fabrication and erection of metal work.

**Section 105.14—Maintenance During Construction** of the Specifications is amended to add the following:

The Contractor shall provide at least one person on the project site during all work operations who is currently verified either by the Department in Intermediate Work Zone Traffic Control, or by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS). This person must have the verification card with them while on the project site. This person shall be responsible for the oversight of work zone traffic control within the project limits in compliance with the contract requirements involving the plans, specifications, the VWAPM, and the MUTCD. This person's duties shall include the supervision of the installation, adjustment (if necessary), inspection, maintenance and removal when no longer required of all traffic control devices on the project.

If none of the Contractor's on-site personnel responsible for the supervision of such work has the required verification with them or if they have an outdated verification card showing they are not currently verified either by the Department in Intermediate Work Zone Traffic Control, or by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS) all work on the project will be suspended by the Engineer.

The Contractor shall provide at least one person on site who is, at a minimum, verified by the Department in Basic Work Zone Traffic Control for each construction and/or maintenance operation that involves installing, maintaining, or removing work zone traffic control devices. This person shall be responsible for the placement, maintenance and removal of work zone traffic control devices.

In the event none of the Contractor's on-site personnel of any construction/maintenance operation has, at a minimum, the required verification by the Department in Basic Work Zone Traffic Control, that construction/maintenance operation will be suspended by the Engineer until that operation is appropriately staffed in accordance with the requirements herein.

**Section 105.15(b) Mailboxes and Newspaper Boxes** of the Specifications is replaced with the following:

- (b) **Mailboxes and Newspaper Boxes:** When removal of existing mailboxes and newspaper boxes is made necessary by construction operations, the Contractor shall place them in temporary locations so that access to them will not be impaired. Prior to final acceptance, boxes shall be placed in their permanent locations as designated by the Engineer and left in as good condition as when found. Boxes or their supports that are damaged through negligence on the part of the Contractor shall be replaced at his expense. The cost of removing and resetting existing boxes shall be included in other pay items of the Contract. New mailboxes designated in the plans shall be paid for in accordance with the provisions of Section 521 of the Specifications.

## **SECTION 107—LEGAL RESPONSIBILITIES**

**Section 107.13—Labor and Wages** of the Specifications is amended to add the following:

- (c) **Job Service Offices:** In advance of the Contract starting date, the Contractor may contact the Job Service Office of the Virginia Employment Commission at the nearest location to secure referral of available qualified workers in all occupational categories. The closest office may be obtained by accessing the VEC website at <http://www.vec.virginia.gov> and "clicking" on "VEC Workforce Centers".

**Section 107.14(f) Training** of the Specifications is amended to replace 5 and 6 with the following:

5. If the Contract provides a pay item for trainees, training shall be in accordance with the requirements of Section 518 of the Specifications.

**Section 107.16(a) Erosion and Siltation** of the Specifications is amended to replace the fourth paragraph with the following:

For projects that disturb 10,000 square feet or greater of land or 2,500 square feet or greater in Tidewater, Virginia, the Contractor shall have within the limits of the project during land disturbance activities, an employee certified by the Department in Erosion and Sediment control who shall inspect erosion and siltation control devices and measures for proper installation and operation and promptly report their findings to the Inspector. Inspections shall include all areas of the site disturbed by construction activity and all off site support facilities covered by the project's Stormwater Pollution Prevention Plan. Inspections shall be conducted at least once every 14 calendar days and within 48 hours following any runoff producing storm event (Note: If an inspection is conducted as a result of a storm event, another inspection is not required for 14 calendar days following provided there are no more runoff producing storm events during the that period). For those areas that have been temporarily stabilized or runoff is unlikely to occur due to winter conditions (e.g., the site is covered with snow or ice or frozen ground exists), inspections shall be conducted at least once a month. Those definable areas where final stabilization has been achieved will not require further inspections provided such areas have been identified in the project's Stormwater Pollution Prevention Plan. Failure of the Contractor to maintain a certified employee within the limits of the project will result in the Engineer suspending work related to any

land disturbing activity until such time as a certified employee is present on the project. Failure on the part of the Contractor to maintain appropriate erosion and siltation control devices in a functioning condition may result in the Engineer notifying the Contractor in writing of specific deficiencies. Deficiencies shall be corrected immediately. If the Contractor fails to correct or take appropriate actions to correct the specified deficiencies within 24 hours after receipt of such notification, the Department may do one or more of the following: require the Contractor to suspend work in other areas and concentrate efforts towards correcting the specified deficiencies, withhold payment of monthly progress estimates, or proceed to correct the specified deficiencies and deduct the entire cost of such work from monies due the Contractor. Failure on the part of the Contractor to maintain a Department certified erosion and sediment control employee within the project limits when land disturbance activities are being performed will result in the Engineer suspending work related to any land disturbance activity until such time as the Contractor is in compliance with this requirement.

**Section 107.16(e) Storm Water Pollution Prevention Plan** of the Specifications is replaced with the following:

**(e) Storm Water Pollution Prevention Plan and Virginia Stormwater Management Program General Permit for the Discharge of Stormwater from Construction Activities**

A Stormwater Pollution Prevention Plan (c) identifies potential sources of pollutants which may reasonably be expected to affect the stormwater discharges from the construction site and any off site support areas and describes and ensures implementation of practices which will be used to reduce pollutants in such discharges.

The SWPPP is comprised of, but not limited to, the Erosion and Sediment Control (ESC) Plan, the Stormwater Management (SWM) Plan and related Specifications and Standards contained within all contract documents and shall be required for all land-disturbing activities that disturb 10,000 square feet or greater, or 2,500 square feet or greater in Tidewater, Virginia.

Land-disturbing activities that disturb one acre or greater, or 2,500 square feet or greater in an area designated as a Chesapeake Bay Preservation Area, require coverage under the Department of Conservation and Recreation's Virginia Stormwater Management Program (VSMP) General Permit for the Discharge of Stormwater from Construction Activities (hereafter referred to as the VSMP Construction Permit). Where applicable, the Department will apply for and retain coverage under the VSMP Construction Permit for those land disturbing activities for which it has contractual control.

The required contents of a SWPPP for those land disturbance activities requiring coverage under the VSMP Construction Permit are found in Section II D of the General Permit section of the VSMP Regulations (4VAC50-60-1170). While a SWPPP is an important component of the VSMP Construction Permit, it is only one of the many requirements that must be addressed in order to be in full compliance with the conditions of the permit.

The Contractor and all other persons that oversee or perform activities covered by the VSMP Construction Permit shall be responsible for reading, understanding, and complying with all of the terms, conditions and requirements of the permit and the project's SWPPP including, but not limited to, the following:

1. Project Implementation Responsibilities

The Contractor shall be responsible for the installation, maintenance, inspection, and, on a daily basis, ensuring the functionality of all erosion and sediment control measures and all other stormwater and pollutant runoff control measures identified within or referenced within the SWPPP, plans, Specifications, permits, and other contract documents.

The Contractor shall take all reasonable steps to prevent or minimize any stormwater or non-stormwater discharge that will have a reasonable likelihood of adversely affecting human health or public and/or private properties.

## 2. Certification Requirements

In addition to satisfying the personnel certification requirements contained herein, the Contractor shall certify his activities by completing, signing, and submitting Form C-45 VDOT SWPPP Contractor and Subcontractor Certification Statement to the Engineer at least 7 days prior to commencing any project related land-disturbing activities, both on-site and off-site.

## 3. SWPPP Requirements for Support Facilities

Where not included in the plans, the Contractor shall develop erosion and sediment control plan(s) and stormwater pollution prevention plan(s) for submission and acceptance by the Engineer prior to usage of any on-site or off-site support facilities including but not limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle storage and fueling areas, storage areas for fertilizers or chemicals, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction process. Such plans shall document the location and description of potential pollutant sources from these areas and shall include a description of the controls to reduce, prevent and control pollutants from these sources including spill prevention and response. The Contractor shall submit such plans and documentation as specified herein to the Engineer and, upon review and approval, they shall immediately become a component of the project's SWPPP and VSMP Construction Permit (where applicable) and shall be subject to all conditions and requirements of the VSMP Construction Permit (where applicable) and all other contract documents.

## 4. Reporting Procedures

### a. Inspection Requirements

The Contractor shall be responsible for conducting inspections in accordance with the requirements herein. The Contractor shall document such inspections by completion of Form C-107 (a) and (b), Construction Runoff Control Inspection Form and Continuation Sheet, in strict accordance with the directions contained within the form.

### b. Unauthorized Discharge Requirements

The Contractor shall not discharge into state waters sewage, industrial wastes, other wastes or any noxious or deleterious substances nor shall otherwise alter the physical, chemical, or biological properties of such waters that render such waters detrimental for or to domestic use, industrial consumption, recreational or other public uses.

#### (1) Notification of non-compliant discharges

The Contractor shall immediately notify the Engineer upon the discovery of or potential of any unauthorized, unusual, extraordinary, or non-compliant discharge from the land disturbing activity. Where immediate notification is not possible, such notification shall be not later than 24 hours after said discovery.

#### (2) Detailed report requirements for non-compliant discharges

The Contractor shall submit to the Engineer within 5 days of the discovery of any actual or potential non-compliant discharge a written report describing details of the discharge to include its volume, location, cause, and any apparent or potential effects



on private and/or public properties and state waters or endangerment to public health, as well as steps being taken to eliminate the discharge. A completed Form C-107 (a) and (b) shall be included in such reports.

5. Changes, Deficiencies and Revisions

a. Changes and Deficiencies

The Contractor shall report to the Engineer when any planned physical alterations or additions are made to the land disturbing activity or deficiencies in the project plans or contract documents are discovered that could significantly change the nature or increase the quantity of the pollutants discharged from the land disturbing activity to surface waters.

b. Revisions to the SWPPP

Where site conditions, construction sequencing or scheduling necessitates revisions or modifications to the erosion and sediment control plan or any other component of the SWPPP for the land disturbing activity, such revisions or modifications shall be approved by the Engineer and shall be documented by the Contractor on a designated plan set (Record Set).

Such plans shall be maintained on the project site or at a location convenient to the project site where no on site facilities are available and shall be available for review upon request during normal business working hours.

**Section 107.21—Size and Weight Limitations** of the Specifications is amended to add the following:

- (d) **Construction Loading of Structures** - In the construction, reconstruction, widening, or repair of bridge, culvert, retaining wall and other similar type structures including approaches, the Contractor shall consider construction loads during the planning and prosecution of the work. If the loading capacity of these type structure(s) is not shown in the contract documents, the Contractor is responsible for contacting the office of the appropriate district bridge engineer to obtain the loading capacity information. Construction loads include but are not limited to the weight of cranes, trucks, other heavy construction or material delivery equipment, as well as the delivery or storage of materials placed on or adjacent to the structure or parts thereof during the various stages (phases) of the work in accordance with the Contractor's proposed work plan. The Contractor shall consider the effect(s) of construction loads on the loading capacity of these type structure(s) in his sequencing of the work and operations, including phase construction. At the Engineer's request the Contractor shall be prepared to discuss or review his proposed operations with the Engineer with regard to construction loads to demonstrate he has taken such into consideration in the planning and execution of the work.

**SECTION 108—PROSECUTION AND PROGRESS OF WORK**

**Section 108.01—Prosecution of the Work** of the Specifications is amended to replace the first paragraph with the following:

The Contractor shall begin work on the Contract within 10 calendar days after the date selected by the Contractor as his Notice to Proceed date or within 10 calendar days after the specific Notice to Proceed date indicated in the Contract, unless otherwise altered or amended by specific language in the Contract or as permitted by the provisions of Section 105.01 or Section 108.02 of the Specifications.

**Section 108.04—Determination and Extension of Contract Time Limit** of the Specifications is amended to replace the second paragraph with the following:

With a fixed date contract when contract execution is not within 60 calendar days after the opening of bids, or when the Contractor is unable to commence work because of any failure of the Department, or when the Contractor is delayed because of the fault of the Department, the Contractor will be given an extension of time based on the number of days delayed beyond the 60 calendar days. No time extension will be allowed for a delay in the date of contract execution when the delay is the fault of the Contractor.

**Section 108.04(a) Fixed Date** of the Specifications is amended to add the following after the first paragraph as currently written:

If the Contract identifies a contract-specific Notice to Proceed date and the Contract is not executed by that date, the Contractor will receive an extension of time equal to the number of days between the contract-specific Notice to Proceed date and the eventual date of contract execution. If the Notice to Proceed date is selected by the Contractor and after prior approval the Engineer directs the Contractor not to begin work on that date, the Contractor will receive an extension of time equal to the number of days between the Contractor's selected Notice to Proceed date and the eventual date the Engineer informs the Contractor that he may commence the work.

**Section 108.07—Default of Contract** of the Specifications is amended to replace condition (a) with the following:

- (a) fails to begin the work under the Contract within 10 calendar days after the Contractor's selected Notice to Proceed date, or within 10 calendar days after a contract specific Notice to Proceed date indicated in the Contract, except as otherwise permitted by specific contract language or the provisions of Section 105.01 or Section 108.02 of the Specifications.

## **SECTION 109—MEASUREMENT AND PAYMENT**

**Section 109.01—Measurement by Weight** is amended to replace the first paragraph and second paragraph including subparagraphs 1-4 with the following:

- (a) **Measurement by Weight:** Materials that are measured or proportioned by weight shall be weighted on accurate scales as specified in this Section. When material is paid for on a tonnage basis, personnel performing the weighing shall be certified by the Department and shall be bonded to the Commonwealth of Virginia in the amount of \$10,000 for the faithful observance and performance of the duties of the weighperson required herein. The bond shall be executed on a form having the exact wording as the Weighpersons Surety Bond Form furnished by the Department and shall be submitted to the Department prior to the furnishing of the tonnage material.

The Contractor shall have the weighperson perform the following:

1. Furnish a signed weigh ticket for each load that shows the date, load number, plant name, size and type of material, project number, schedule or purchase order number, and the weights specified herein.
2. Maintain sufficient documentation so that the accumulative tonnage and distribution of each lot of material, by contract, can be readily identified.
3. Submit by the end of the next working day a summary of the number of loads and total weights for each type of material by contract.

**Section 109.01—Measurement by Weight** is also amended to delete the third paragraph.

**Section 109.09—Payment For Material On Hand** of the Specifications is replaced with the following:

When requested in writing by the Contractor, payment allowances may be made for material secured for use on the project. Such material payments will be for only those actual quantities identified in the contract, approved work orders, or otherwise **authorized and documented by the Engineer** as required to complete the project and shall be in accordance with the following terms and conditions:

- (a) **Structural Steel or Reinforcing Steel:** An allowance of 100 percent of the cost to the Contractor for structural steel **or reinforcing steel** materials secured for fabrication not to exceed 60 percent of the contract price may be made when such material is delivered to the fabricator and has been adequately identified for exclusive use on the project. **The provisions of this section for steel reinforcement will only apply where the quantity of steel reinforcement is identified as a separate and distinct bid item for payment.** An allowance of 100 percent of the cost to the Contractor for superstructure units and reinforcing steel, not to exceed 90 percent of the contract price, may be made when fabrication is complete. Prior to the granting of such allowances, the materials and fabricated units shall have been tested or certified and found acceptable to the Department and shall have been stored in accordance with the requirements specified herein. Allowances will be based on invoices, bills, or the estimated value as approved by the Engineer and will be subject to the retainage requirements of Section 109.08. **For the purposes of this section fabrication is defined as any manufacturing process such as bending, forming, welding, cutting or coating with paint or anti-corrosive materials which alters, converts, or changes raw material for its use in the permanent finished work.**
- (b) **Other Materials:** For aggregate, pipe, guardrail, signs and sign assemblies, and other nonperishable material, an allowance of 100 percent of the cost to the Contractor for materials, not to exceed 90 percent of the contract price, may be made when such material is delivered **to the project** and stockpiled or stored in accordance with the requirements specified herein. Prior to the granting of such allowances, the material shall have been tested and found acceptable to the Department. Allowances will be based on invoices, bills, or the estimated value of the material as approved by the Engineer and will be subject to the retainage provisions of Section 109.08.
- (c) **Excluded Items:** No allowance will be made for fuels, form lumber, falsework, temporary structures, or other work that will not become an integral part of the finished construction. **Additionally, no allowance will be made for perishable material such as cement, seed, plants, or fertilizer.**
- (d) **Storage:** Material for which payment allowance is requested shall be stored in an approved manner in areas where damage is not likely to occur. If any of the stored materials are lost or become damaged, the Contractor shall repair or replace them **at no additional cost to the Department. Repair or replacement of such material will not be considered the basis for any extension of contract time.** If payment allowance has been made prior to such damage or loss, the amount so allowed or a proportionate part thereof will be deducted from the next progress estimate payment and withheld until satisfactory repairs or replacement has been made.

When it is determined to be impractical to store materials within the limits of the project, the Engineer may approve storage on private property or, for structural units and reinforcing steel, on the manufacturer's or fabricator's yard. Requests for payment allowance for such **stored** material shall be accompanied by a release from the owner or tenant of such property or yard agreeing to permit the removal of the materials from the property without cost to the Commonwealth.

- (e) **Materials Inventory:** If the Contractor requests a payment allowance for properly stored material, he shall submit a certified and itemized inventory statement to the Engineer no earlier than five days and no later than two days prior to the progress estimate date. The statement shall be submitted on forms furnished by the Department and shall be accompanied by **supplier's or manufacturer's** invoices or other documents that will verify the material's cost. Following the initial submission, the Contractor shall submit to the Engineer a monthly-certified update of the itemized inventory statement within the same time frame. The updated inventory statement shall show additional materials received and stored with invoices or other documents and shall list materials removed from storage since the last certified inventory statement, with appropriate cost data reflecting the change in the inventory. If the Contractor fails to submit the monthly-certified update within the specified time frame, the Engineer will deduct the full amount of the previous statement from the progress estimate.

At the conclusion of the project, the cost of material remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

**— DIVISION II—MATERIALS —**

**200 SERIES SPs (SPECIAL PROVISIONS)**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**CRUSHED HYDRAULIC CEMENT CONCRETE (CHCC)**  
(USED AS SUBBASE AND AGGREGATE BASE MATERIAL)

January 14, 2008c

**SECTION 208—SUBBASE AND AGGREGATE BASE MATERIAL** of the Specifications is amended as follows:

**Section 208.02—Materials** is replaced with the following:

- (a) **Subbase material** may consist of any mixture of natural or crushed gravel, crushed stone or slag, crushed hydraulic cement concrete (CHCC), natural or crushed sand; with or without soil mortar. Subbase material may be used in a stabilized or unstabilized form.
- (b) **Aggregate base material** may be designated as Type I or Type II as follows: **Type I** shall consist of crushed stone, crushed slag, crushed hydraulic cement concrete (CHCC), crushed gravel or any combination of these material: with or without soil mortar or other admixtures. Crushed gravel shall consist of particles of which at least 90 percent by weight of the material retained on the No. 10 sieve shall have at least one face fractured by artificial crushing. **Type II** shall consist of gravel, stone, or slag screening; fine aggregate and crushed coarse aggregate; sand-clay-gravel mixtures; crushed hydraulic cement concrete; or any combination of these materials; with or without soil mortar or other admixtures. Aggregate base materials Type I or II may be used in a stabilized or unstabilized form.
- (c) **Crushed Hydraulic Cement Concrete** shall not be used as Subbase or aggregate base material when any subsurface drainage system, such as standard underdrains (UD-4 or UD-5) and /or a stabilized open graded aggregate drainage layer (OGDL) is present, except when the CHCC is cement stabilized.

**Section 208.03(b) Atterberg Limits** is amended to add the following:

**Plasticity:** Subbase and aggregate base materials shall be either non-plastic (PI=0) or shall conform to the requirements of Table II-11 of the Specifications when tested in accordance with VTM-7. If the material is classified as non-plastic (PI=0), in accordance with VTM-7, the Liquid Limit requirement will be waived. Exceptions to this provision are noted as follows:

- 1. 100% CHCC and 20% or less CHCC Blends will be tested and subject to penalty as noted in Table II-11 of the Specifications for the plasticity index, excluding Liquid Limit penalties.
- 2. Greater than 20% CHCC Blends will follow testing guidelines as set forth in Section 208.06 (b) for Atterburg limits.

**Section 208.03** is amended to add the following:

- (h) **Deleterious Material:** The quantity of deleterious materials present in stockpiles of Crushed Hydraulic Cement Concrete, to be used in blending with virgin aggregates or as 100 percent CHCC, shall not exceed the following values:

MATERIAL	PERCENT BY WEIGHT (MASS)
Asphalt Concrete	5.0
Glass and Metals	5.0

**Section 208.04—Job-Mix Formula** is replaced by the following:

- (a) The Contractor shall submit, or shall have the source of supply submit, for the Engineer's approval, a job-mix formula for each mixture to be supplied for the project prior to starting work. The formula shall be within the design range specified in Table II-9 of the Specifications. If unsatisfactory results or other conditions make it necessary, the Contractor shall prepare and submit a new job-mix formula for approval.
- (b) A job mix formula shall be submitted for the engineer's approval for each category of CHCC mixture used. Designated categories shall indicate the mixture percentage of CHCC used according to the following criteria:
  1. **Category 1:** 100% CHCC  
**Category 2:** 20% or less CHCC ( $\leq 20\%$ )  
**Category 3:** greater than 20% CHCC but less than 100% CHCC ( $>20\% < 100\%$ )
  2. The quantity of CHCC in the mix shall be expressed as a percentage of the total mix.

**Section 208.06—Acceptance** is replaced with the following:

- (a) The Contractor shall provide the quality assurance necessary for the Engineer to determine conformance to the required grading and Atterberg limits of subbase and aggregate base material.

Sampling and testing for determination of grading and Atterberg limits shall be performed by the Contractor. The Contractor shall provide copies of test results to the Department on forms furnished by the Department and shall maintain appropriate current quality control charts. The Department will perform independent monitor tests at a laboratory of its choice. If there is a statistically significant difference between the two sets of results, an investigation will be made to determine the reason for the difference. If it is determined that the material does not conform to the requirements of the Contract, the material will be rejected or a payment adjustment will be made in accordance with the requirements of Section 208.08 of the Specifications.

Determination of grading and Atterberg limits will be based on a mean of the results of tests performed on four samples taken in a stratified random manner from each 2,000-ton lot. Lots of 4,000 tons may be used when the normal daily production of the source from which the material being obtained is more than 2,000 tons. Unless otherwise approved, samples shall be obtained from the approximate center of truckloads of material. Any statistically acceptable method of randomization may be used to determine the time and location of the stratified random sample to be taken. The Department shall be advised of the method to be used prior to the beginning of production.

A lot will be considered acceptable for grading if the mean of the test results is within the deviation from the job-mix formula specified in Table II-10 of the Specifications.

A lot will be considered acceptable for Atterberg limits if the mean of the test results is less than the maximum for the liquid limit and plasticity index specified in Table II-11 of the Specifications.

If the liquid limit exceeds 30 or the plasticity index exceeds 6 for Type I base material or No. 19 subbase material; or the plasticity index exceeds 9 for Type II base material or subbase



materials No. 20, 21, 21A, 21B, or 22 on any individual sample; that portion of the lot from which the sample was taken will be considered a separate part of the lot and shall be removed from the road.

If either the amount of material in the lot is less than 2,000 tons (4,000 tons if applicable), the job-mix formula is modified within a lot, or a portion of the lot is rejected on the basis of individual test results, the mean test results of the samples taken will be compared to the job-mix formula with the tolerances given in Tables II-10 and II-11 of the Specifications for the number of tests performed.

If a visual examination reveals that material in any load is obviously contaminated or segregated, the load will be rejected without additional sampling or testing of the lot. If it is necessary to determine grading or Atterberg limits of material in an individual load, one sample (taken from the load) will be tested and the results compared to the job-mix formula with the tolerances given in Tables II-10 and II-11 of the Specifications for one test. Results obtained in the testing of a specific individual load will apply only to the load in question.

- (b) The following applies specifically to the use of Crushed Hydraulic Cement Concrete (CHCC) mixtures. All provisions for acceptance of these products shall conform to the same criteria as in (a) herein with the following additions:
1. **100% CHCC** shall conform to the requirements of this special provision.
  2. **20% or Less CHCC Blends** shall conform to the requirements of this special provision.
  3. **Greater than 20% CHCC Blends** shall conform to the following:
    - a. The virgin aggregate portion of the blend will be tested for Atterberg limits, prior to CHCC blending.
    - b. Price adjustments for Liquid Limit and the Plasticity Index of the virgin aggregates used in the blend with CHCC shall be in accordance with Table II-11 of the Specifications.
    - c. No additional testing for Liquid Limit or Plasticity Index will be required on the final blended product.
  4. All shipments of products containing CHCC must be designated on the shipping ticket (scale ticket) by the use of the letter "R". Examples: [22R, 21AR and 21BR] for: Aggregate Base material, Type I or Subbase materials.

—**200 SERIES SSs (SUPPLEMENTAL SPECIFICATIONS)**—

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

**SUPPLEMENTAL SECTION 211—ASPHALT CONCRETE**

**SECTION 211—ASPHALT CONCRETE** of the Specifications is amended as follows:

**Section 211.01—Description** is replaced with the following:

Asphalt concrete shall consist of a combination of mineral aggregate and asphalt material mixed mechanically in a plant specifically designed for such purpose.

An equivalent single-axle load (ESAL) will be established by the Engineer, and SUPERPAVE mix types may be specified as one of the types listed as follows:

Mix Type	Equivalent Single-Axle Load (ESAL) Range (millions)	Minimum Asphalt Performance Grade (PG) <sup>2</sup>	Aggregate Nominal Maximum Size <sup>1</sup>
SM-9.0A	0 to 3	64-16	3/8 in
SM-9.0D	3 to 10	70-16	3/8 in
SM-9.0E	Above 10	76-22	3/8 in
SM-9.5A	0 to 3	64-16	3/8 in
SM-9.5D	3 to 10	70-16	3/8 in
SM-9.5E	Above 10	76-22	3/8 in
SM-12.5A	0 to 3	64-16	1/2 in
SM-12.5D	3 to 10	70-16	1/2 in
SM-12.5E	Above 10	76-22	1/2 in
IM-19.0A	Less than 10	64-16	3/4 in
IM-19.0D	10 to 20	70-16	3/4 in
IM-19.0E	20 and above	76-22	3/4 in
BM-25.0A	All ranges	64-16	1 in
BM-25.0D	Above 10	70-16	1 in

<sup>1</sup>**Nominal Maximum Size** is defined as one sieve size larger than the first sieve to retain more than 10 percent aggregate.

<sup>2</sup>**Minimum Asphalt Performance Grade (PG)** is defined as the minimum binder performance grade for the job mixes as determined by AASHTO T170 or AASHTO M320.

Asphalt concrete shall conform to the requirements for the mix type designated.

At the Contractor's option, Warm Mix Asphalt (WMA) additive or process may be used in lieu of the appropriate Hot Mix Asphalt (HMA).

**Section 211.02(h) antistripping additive** is amended by adding the following to the second paragraph:

When a Warm Mix Asphalt (WMA) additive or process, as described in 211.02(i) of the Specifications, is used in lieu of Hot Mix Asphalt (HMA) in the production of asphalt

concrete, the minimum TSR requirement shall be 0.80 for the design and production tests.

**Section 211.02(j)1** is replaced with the following

1. Asphalt surface, intermediate and base mixtures containing RAP should use the performance grade (PG) of asphalt cement as indicated in Table II-I4A, however, the choice of PG to use in the mix shall be the responsibility of the Contractor in order to meet the requirements of Section 211.01 of the Specifications.

**Section 211.02—Materials** is amended by adding the following:

- (k) **Warm Mix Asphalt (WMA)** additives or processes shall be approved by the Department prior to use. Approved materials and processes shall be obtained from the Department's approved list which is included in the Materials Division's Manual of Instructions.

**TABLE II-12A AGGREGATE PROPERTIES** is amended to add **Mix Type IM-19.0E** as follows:

**TABLE II-12A  
Aggregate Properties**

Mix Type	Coarse Aggregate Properties			Fine Aggregate Properties	
	CAA		ASTM D4791 F & E "(5:1) % by weight	SE	FAA
	1 fractured face	2 fractured faces			
IM-19.0 E	95% min.	90% min.	10% max. <sup>1</sup>	45% min.	45% min.

**TABLE II-13 ASPHALT CONCRETE MIXTURES: DESIGN RANGE** is amended to add **Mix Type IM-19.0E** to IM-19.0 A,D as follows:

**TABLE II-13  
Asphalt Concrete Mixtures: Design Range<sup>1</sup>**

Mix Type	Percentage by Weight Passing Square Mesh Sieves										
	2 in	1 1/2 in	1 in	3/4 in	1/2 in	3/8 in	No. 4	No. 8	No. 30	No. 50	No. 200
IM-19.0 A,D,E			100	90-100	90 max.	--	--	28-49			2-8

TABLE II-14 MIX DESIGN CRITERIA is replaced with the following:

**TABLE II-14  
Mix Design Criteria**

Mix Type	VTM (%) Production  (Note 1)	VFA (%) Design	VFA (%) Production (Note 2)	Min. VMA (%)	Fines/Asphalt Ratio (Note 3)	No. of Gyration			Density (%) at
						N Design	N Initial	N Max	N Initial
SM-9.0A <sup>Notes 1,2,3</sup>	2.0-5.0	75-80	70-85	16	0.6-1.3	65	7	100	≤ 90.5
SM-9.0D <sup>Notes 1,2,3</sup>	2.0-5.0	75-80	70-85	16	0.6-1.3	65	7	100	≤ 89.0
SM-9.0E <sup>Notes 1,2,3</sup>	2.0-5.0	75-80	70-85	16	0.6-1.3	65	7	100	≤ 89.0
SM-9.5A <sup>Notes 1,2,3</sup>	2.0-5.0	73-79	68-84	15	0.6-1.2	65	7	100	≤ 90.5
SM-9.5D <sup>Notes 1,2,3</sup>	2.0-5.0	73-79	68-84	15	0.6-1.2	65	7	100	≤ 89.0
SM-9.5E <sup>Notes 1,2,3</sup>	2.0-5.0	73-79	68-84	15	0.6-1.2	65	7	100	≤ 89.0
SM-12.5A <sup>Notes 1,2,3</sup>	2.0-5.0	70-78	65-83	14	0.6-1.2	65	7	100	≤ 90.5
SM-12.5D <sup>Notes 1,2,3</sup>	2.0-5.0	70-78	65-83	14	0.6-1.2	65	7	100	≤ 89.0
SM-12.5E <sup>Notes 1,2,3</sup>	2.0-5.0	70-78	65-83	14	0.6-1.2	65	7	100	≤ 89.0
IM-19.0A <sup>Notes 1,2,3</sup>	2.0-5.0	69-76	64-81	13	0.6-1.2	65	7	100	≤ 90.5
IM-19.0D <sup>Notes 1,2,3</sup>	2.0-5.0	69-76	64-81	13	0.6-1.2	65	7	100	≤ 89.0
IM-19.0E <sup>Notes 1,2,3</sup>	2.0-5.0	69-76	64-81	13	0.6-1.2	65	7	100	≤ 89.0
BM-25.0A <sup>Notes 2,3,4</sup>	1.0-4.0	67-87	67-92	12	0.6-1.3	65	7	100	≤ 89.0
BM-25.0D <sup>Notes 2,3,4</sup>	1.0-4.0	67-87	67-92	12	0.6-1.3	65	7	100	≤ 89.0

<sup>1</sup>SM = Surface Mixture; IM = Intermediate Mixture; BM = Base Mixture.

**Note 1:** Asphalt content should be selected at 4.0 % Air Voids,

**Note 2:** During production of an approved job mix, the VFA shall be controlled within these limits.

**Note 3:** Fines-asphalt ratio is based on effective asphalt content.

**Note 4:** Base mix shall be designed at 2.5% air voids. BM-25.0 A shall have a minimum asphalt content of 4.4% unless otherwise approved by the Engineer. BM-25.0D shall have a minimum asphalt content of 4.6% unless otherwise approved by the Engineer.

**Section 211.03—Job-Mix Formula** is amended to replace (c) with the following:

- (c) Three trial blends for gradation shall be run at one asphalt content.

**Section 211.03—Job-Mix Formula** is amended to replace (d)8 with the following:

8. For surface mixes, permeability test data shall be submitted in accordance with VTM 120 using either single point verification or the regression method for each surface mix having a different gradation. If the average of the permeability results from the single point verification method exceeds  $150 \times 10^{-5}$  cm/sec, or if the regression method predicts a permeability exceeding  $150 \times 10^{-5}$  cm/sec at 7.5% voids, the Contractor shall redesign the mixture to produce a permeability number less than  $150 \times 10^{-5}$  cm/sec.

**Section 211.03—Job-Mix Formula** is amended to replace (f) with the following:

- (f) A determination will be made that any asphalt concrete mixture being produced conforms to the job-mix formula approved by the Department. The Department and Contractor will test the mixture using samples removed from production. The following tests will be conducted to determine the properties listed:

Property	Test
Asphalt content	VTM-102, (VTM-36 when approved)
Gradation	AASHTO T-30
SUPERPAVE properties	AASHTO R35
Asphalt cement material	AASHTO T316 or T-201

For Warm Mix Asphalt (WMA), SUPERPAVE properties will be determined by the Department and Contractor once the WMA has been allowed to cool to 100 degrees F or less and reheated based on the mix designation in Section 211.03(d)6 of the Specifications.

The Department will perform rut testing in accordance with the procedures detailed in VTM-110. If the results of the rut testing do not conform to the following requirements, the Engineer reserves the right to require adjustments to the job-mix formula:

Mix Designation	Maximum Rut Depth, mm
A	7.0
D	5.5
E, (S)	3.5

After calibration of the gyratory compactor is completed, adjustments to the job-mix formula may be required by the Engineer.

In the event the Department determines that the mixture being produced does not conform to the approved job-mix formula and volumetric properties specified in Table II-14 based on the Department's or Contractor's test results, the Contractor shall immediately make corrections to bring the mixture into conformance with the approved job-mix formula or cease paving with that mixture.

Subsequent paving operations using either a revised or other job-mix formula that has not been verified as described herein shall be limited to a test run of 100 to 300 tons of mixture if such material is to be placed in Department project work. No further paving for the Department using that specific mixture shall occur until the acceptability of the mixture being produced has been verified using the 100 to 300 ton constraint.

**TABLE II-14A  
Recommended Performance Grade of Asphalt Cement**

Mix Type	Percentage of Reclaimed Asphalt Pavement (RAP) in Mix		
	%RAP ≤ 20.0%	20.0% < %RAP ≤ 30%	20.0% < %RAP ≤ 35%
SM-9.0A, SM-12.5A, SM-9.5A,	PG 64-22	PG 64-22	PG 64-22
SM-9.0D, SM-12.5D, SM-9.5D,	PG 70-22	PG 64-22	PG 64-22
IM-19.0A	PG 64-22	PG 64-22	PG 64-22
IM-19.0D	PG 70-22	PG 64-22	PG 64-22

**TABLE II-14A**  
**Recommended Performance Grade of Asphalt Cement**

Mix Type	Percentage of Reclaimed Asphalt Pavement (RAP) in Mix		
	%RAP ≤ 20.0%	20.0% < %RAP ≤ 30%	20.0% < %RAP ≤ 35%
BM-25.0A	PG 64-22		PG 64-22
BM-25.0D	PG 70-22		PG 64-22

Based on rut testing performed by the Department and/or field performance of the job mix, the Engineer reserves the right to require adjustments to the job-mix formula.

**Section 211.04—Asphalt Concrete Mixtures** is amended by replacing (b) with the following:

- (b) **Types IM-19.0A, IM-19.0D, and IM-19.0E asphalt concrete** shall consist of crushed stone, crushed slag, or crushed gravel and fine aggregate, slag or stone screenings, or a combination thereof combined with asphalt cement.

**NOTE:** At the discretion of the Engineer, an intermediate mix may be designated as either SM-19.0A or SM-19.0D. When designated as such, no more than 5 percent of the aggregate retained on the No. 4 sieve may be polish susceptible. All material passing the No. 4 sieve may be polish susceptible.

**Section 211.04—Asphalt Concrete Mixtures** is amended to replace (e) with the following:

- (e) **Type SM-9.5, SM-12.5, IM-19.0 and BM-25.0 asphalt concrete** may be designated E (polymer modified), or stabilized (S). Asphalt concrete mixtures with the E designation may not be stabilized.
1. **Type E asphalt mixtures** shall consist of mixes incorporating a neat asphalt material with polymer modification complying with the requirements of PG 76-22 and have a rolling thin film oven test residue elastic recovery at 77 degrees F of a minimum of 70 percent when tested in accordance with ASTM D 6084 procedure A. E designated mixtures shall not contain more than 15 percent reclaimed asphalt pavement (RAP) material.
  2. **Type (S) asphalt mixtures** shall consist of mixes incorporating a stabilizing additive from the Department's approved list found in the Materials Division's Manual of Instructions. These mixes shall be designated with an (S) following the standard mix designation. The minimum required additive shall be as specified on the Department's approved list found in the Materials Division's Manual of Instructions.
  3. **Type L asphalt mixtures** will be allowed to contain a 100 percent polishing coarse and fine aggregate. These mixes shall be designated with a L following the standard mix designation.

**Section 211.06—Tests** is replaced with the following:

The Department may sample materials entering into the composition of the asphalt concrete, the mixture, or the completed pavement. The Contractor shall cooperate with the Engineer in obtaining these samples. When samples are obtained from the pavement, the resulting voids shall be filled and refinished by the Contractor without additional compensation.

Abson recovery samples shall be PG graded according to the requirements of AASHTO M 320-05. Samples meeting the required grades specified in Section 211.01 of the Specifications shall be acceptable.

When the Department performs PG grading on the asphalt in a Contractor's liquid asphalt storage tank, the Engineer will notify the asphalt concrete producer and binder supplier if tests indicate that the binder properties of the asphalt material differ from those of the approved job-mix. The asphalt concrete producer and binder supplier shall determine corrective action with the approval of the Engineer.

**Section 211.08—Acceptance** is amended to replace the second paragraph with the following:

Acceptance for gradation and asphalt cement content will be based on the mean of results of eight tests performed on samples taken in a stratified random manner from each 4,000-ton lot (8,000-ton lots may be used when the normal daily production of the source from which the material is being obtained is in excess of 4,000 tons). Unless otherwise approved by the Engineer, samples shall be obtained from the approximate center of the truckload of material. Any statistically acceptable method of randomization may be used to determine when to take the stratified random sample; however, the Department shall be advised of the method to be used prior to the beginning of production.

**Table II-15 PROCESS TOLERANCE** is replaced with the following:

**TABLE II-15  
Process Tolerance**

Tolerance on Each Laboratory Sieve and Asphalt Content: Percent Plus and Minus												
No. Tests	Top Size <sup>1</sup>	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 30	No. 50	No. 200	A.C.
1	0.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0	5.0	2.0	.60
2	0.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7	4.3	3.6	1.4	0.43
3	0.0	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.3	2.8	1.1	0.33
4	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	2.5	1.0	0.30
5	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.7	2.2	0.9	0.27
6	0.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.0	0.8	0.24
7	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.3	1.9	0.8	0.23
8	0.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.1	1.8	0.7	0.21
12	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.4	0.6	0.17

<sup>1</sup>Defined as the sieve that has 100% passing as defined in Table II-13.

**Section 211.09** is amended to delete the last three paragraphs.

**Section 211.10—Referee System** is amended to replace (a) and (b) with the following:

- (a) In the event the test results obtained from one of the eight samples taken to evaluate a particular lot appear to be questionable, the Contractor may request in writing that the results of the questionable sample be disregarded, whereupon the Contractor shall have either an AASHTO-accredited lab or Department lab perform tests on five additional samples taken from randomly selected locations in the roadway where the lot was placed.



In the event the Engineer determines that one of the 8 test results appears to be questionable, the Department will perform tests on five additional samples taken from the randomly selected locations in the roadway where the lot was placed. The test results of the seven original, i.e. unquestioned, samples will be averaged with the test results of the five road samples, and the mean of the test values obtained for the twelve samples will be compared to the requirements for the mean of twelve tests as specified in Table II-15.

- (b) In the event the Contractor questions the mean of the eight original test results obtained for a particular lot, the Contractor may request in writing approval to have either an AASHTO-accredited lab or Department lab perform additional testing of that lot.

In the event the Engineer determines that the mean of the eight original test results are questionable, the Department will perform additional testing of that lot. The test results of the eight samples will be averaged with the test results of the four additional samples taken from randomly selected locations in the roadway where the lot was placed, and the mean of the test values obtained from the twelve samples will be compared to the requirements for the mean of twelve tests as specified in Table II-15.

If the Contractor requests additional tests, as described in (a) or (b) herein, the Contractor shall sample the material and have either an AASHTO-accredited lab or Department lab test the material in accordance with Department-approved procedures. The Engineer reserves the right to observe the sampling and testing.

In the event the mean of the test values obtained for the twelve samples conforms to the requirements for the mean of twelve tests, the material will be considered acceptable. In the event that the mean of the test values obtained for the twelve samples does not conform to the requirements for the mean result of twelve tests, the lot will be adjusted in accordance with the adjustment rate specified in Section 211.09 of the Specifications.

Samples of the size shown herein shall be saw cut by the Contractor for testing without the use of liquids:

Application Rate	Minimum Sample Size
125 lb/yd <sup>2</sup>	8 by 8 in
150 lb/yd <sup>2</sup>	7 by 7 in
200 lb/yd <sup>2</sup>	6 by 6 in
300 lb/yd <sup>2</sup>	5 by 5 in

**Section 211.15—Initial Production** is replaced with the following:

- (a) **Warm Mix Asphalt (WMA):** At the start of production, the Contractor shall place no more than 500 tons or up to one day’s production as directed by the Engineer at an approved site, which may be the project site, so the Engineer can examine the process control of the mixing plant, the Contractor’s placement procedures, surface appearance of the mix, compaction patterns of the Contractor’s roller(s), and correlation of the nuclear density device.
- (b) **Hot Mix Asphalt (HMA):** At the start of production of a mix not previously used on a state roadway, the Contractor shall place 100 to 300 tons or up to one day’s production as directed by the Engineer at an approved site, which may be the project site, so the Engineer can examine the process control of the mixing plant, the Contractor’s placement procedures, surface appearance of the mix, compaction patterns of the Contractor’s roller(s), and correlation of the nuclear density device.

The material shall be placed at the specified application rate and will be paid for at the contract unit price for the specified mix type. The Engineer will determine the disposition of material that was not successfully produced and/or placed due to negligence in planning, production, or placement by the Contractor.

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**SUPPLEMENTAL SECTION 214—HYDRAULIC CEMENT**

**SECTION 214—HYDRAULIC CEMENT** of the Specifications is amended as follows:

**Section 214.02(b) Portland cements** is amended by replacing 1. with the following:

1. The SO<sub>3</sub> content as specified in AASHTO M85 will be permitted, provided supporting data specified in AASHTO M85 are submitted to the Department for review and acceptance prior to use of the material.

**Section 214.02(b) Portland cements** is amended by deleting 3., 4., and 5.

**Section 214.02—Detail Requirements** is amended by adding the following:

- (c) **Expansive hydraulic cement** shall conform to the requirements of ASTM C 845 Type K.

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**SUPPLEMENTAL SECTION 215—HYDRAULIC CEMENT CONCRETE ADMIXTURES**

**SECTION 215—HYDRAULIC CEMENT CONCRETE ADMIXTURES** of the Specifications is amended as follows:

**Section 215.02(g) Fly ash** is replaced with the following:

(g) **Pozzolan** shall conform to Section 241 of the Specifications.

**Section 215.02—Materials** is amended by adding the following:

(k) **Metakaolin** shall conform to the requirements of AASHTO M321

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**SUPPLEMENTAL SECTION 217—HYDRAULIC CEMENT CONCRETE**

**SECTION 217—HYDRAULIC CEMENT CONCRETE** of the Specifications is amended as follows:

**Section 217.02(a) Cementitious Materials** is replaced with the following:

**Cementitious materials** shall be a blend of mineral admixtures and Portland cement or a blended cement. In overlay concretes, expansive hydraulic cement is permitted in lieu of Portland cement. Portland cement (Types I, II, III) blended cements (Type IP, Type IS) or expansive cement (Type K) shall comply with Section 214 of the Specifications. Flyash, ground granulated iron blast-furnace slag (GGBFS), silica fume or metakaolin shall conform to Section 215 of the Specifications. As a portion of the cementitious material, Table 1 lists the minimum percents of specific pozzolans required by mass of the cementitious material depending on the alkali content of the cement. Any other mineral admixture or any other amount or combination of mineral admixtures may be used if approved by the Engineer. As a portion of the cementitious material, the fly ash content shall not exceed 30 percent for Class F, the ground granulated blast-furnace slag content shall not exceed 50 percent and the silica fume content shall not exceed 10 percent unless approved by the Engineer. Class C Flyash or other pozzolans may be used provided the contractor demonstrates that the percent usage of Class C Flyash or other pozzolans have a maximum expansion of 0.15% according to ASTM C227 at 56 days using borosilicate glass as aggregate. Blended cements require no further pozzolan additions to meet minimum pozzolan content to compensate for the alkali-silica reaction.

Up to 7 percent silica fume may be added to all combinations of cementitious materials to reduce early permeability without approval by the Engineer. Other silica fume additions must be approved by the Engineer.

Table 1 – Minimum percent pozzolan required by mass of cementitious material as a portion of the total cementitious materials and are based upon the alkali content of the cement.

	Total Alkalies of Cement is less than or equal to 0.75%	Total Alkalies of Cement is greater than 0.75% and less than or equal to 1.0%
Class F Flyash	20%	25%
GGBF Slag	40%	50%
Silica Fume	7%	10%
Metakaolin	7%	10%

**TABLE II-17 Requirements for Hydraulic Cement Concrete** is replaced with the following:

**TABLE II-17  
Requirements for Hydraulic Cement Concrete**

Class of Concrete	Design Min. Laboratory Compressive Strength at 28 Days (f'c) (psi)	Aggregate Size No. <sup>6</sup>	Design Max. Laboratory Permeability at 28 Days (Coulombs) <sup>5</sup>	Design Max. Laboratory Permeability at 28 days - Over tidal water (Coulombs) <sup>5</sup>	Nominal Max. Aggregate Size (in)	Min. Grade Aggregate	Min. Cementitious Content (lb./cu yd)	Max. Water /Cementitious Mat. (lb. Water/lb. Cement)	Consistency (in of slump)	Air Content (percent) <sup>1</sup>
A5 Prestressed and other special designs <sup>2</sup>	5,000 or as specified on the plans	57 or 68	1,500	1,500	1	A	635	0.40	0-4	4 1/2 ± 1 1/2
A4 General	4,000	56 or 57	2,500	2,000	1	A	635	0.45	2-4	6 1/2 ± 1 1/2
A4 Post & rails	4,000	7,8 or 78	2,500	2,000	0.5	A	635	0.45	2-5	7 ± 2
A3 General	3,000	56 or 57	3,500	2,000	1	A	588	0.49	1-5	6 ± 2
A3a Paving	3,000	56 or 57	3,500	3,500	1	A	564	0.49	0-3	6 ± 2
A3b Paving	3,000	357	3,500	3,500	2	A	N/A	0.49	0-3	6 ± 2
B2 Massive or lightly Reinforced	2,200	57	N.A.	N.A.	1	B	494	0.58	0-4	4 ± 2
C1 Massive Unreinforced	1,500	57	N.A.	N.A.	1	B	423	0.71	0-3	4 ± 2
T3 Tremie seal	3,000	56 or 57	N.A.	N.A.	1	A	635	0.49	3-6	4 ± 2
Latex hydraulic cement concrete overlay <sup>3</sup>	3,500	7,8 or 78	1,500	1,500	0.5	A	658	0.40	4-6	5 ± 2
Silica fume, silica fume /Class F Fly Ash or silica fume/slag concrete overlay <sup>4</sup>	5000	7,8 or 78	1,500	1,500	0.5	A	658	0.40	4-7	6 ± 2
Class F Fly Ash or slag overlay	4000	7,8 or 78	1,500	1,500	0.5	A	658	0.40	4-7	6 ± 2

(See next page for notes on TABLE II-17).

(See next page for notes on TABLE II-17).

----- (TABLE II-17 Notes) -----

- <sup>1</sup> When a high-range water reducer is used, the upper limit for entrained air may be increased by 1% and the slump shall not exceed 7 inches.
- <sup>2</sup> When Class A5 concrete is used as the finishing bridge deck riding surface, or when it is to be covered with asphalt concrete with or without waterproofing, the air content shall be  $5 \frac{1}{2} \pm 1 \frac{1}{2}$  percent.
- <sup>3</sup> The latex modifier content shall be 3.5 gallons per bag of cement. Slump shall be measured approximately 4.5 minutes after discharge from the mixer.
- <sup>4</sup> Silica fume with a minimum of 7% by weight of cementitious material; silica fume with a range of 2.5-5 % shall be combined with Class F Fly Ash in range of 15-20% and minimum cement of 77.5% by weight of cementitious material; silica fume with a range of 2.5-5% shall be combined with Ground Granulated Blast Furnace Slag in the range of 30-35% and a minimum cement of 67.5% by weight of cementitious material.
- <sup>5</sup> The permeability testing does not apply to small bridges identified on the bridge plans and to concrete structures and incidental concrete as described in Sections 219, 232, 302, 415, 502, 504, 506 and 519. Curing and testing of test cylinders for permeability will be in accordance with VTM 112.
- <sup>6</sup> The contractor may use different aggregate sizes or a combination of sizes to increase the coarse aggregate content of the concrete as approved by the Engineer. The maximum size of the coarse aggregate shall not exceed 2.5 inches.

**Note:** With the approval of the Engineer, the Contractor may substitute a higher class of concrete for that specified at the Contractor's expense.

**Section 217.02(b) Formulated latex modifier** is amended by adding the following:

For latex-modified concrete, Type I, Type II, Type III or Type K, cement shall be used without mineral admixtures.

**Section 217.04(a)4. Admixtures** is replaced with the following:

4. **Admixtures** shall be dispensed and used according to the manufacturer's recommendations. They shall be added within a limit of accuracy of 3 percent, by means of an approved, graduated, transparent, measuring device before they are introduced into the mixer. If more than one admixture is to be used, they shall be released in sequence rather than in the same instant. Once established, the sequence of dispensing admixtures shall not be altered. However, when the amount of admixture required to give the specified results deviates appreciably from the manufacturer's recommended dosage, use of the material shall be discontinued.

**Section 217.05—Equipment** is amended to replace the first paragraph with the following:

Equipment and tools necessary for handling materials and performing all parts of the work will be approved by the Engineer and must be in accordance with one of the following procedures:

1. having a current National Ready Mix Concrete Association Plant and Truck Certification, or
2. having a Department approved self-certification program in-place prior to the production of concrete for the Department.

Failure to comply with one or the other of these procedures will result in the concrete production being unapproved and work will not be allowed to proceed.

**Section 217.05(a) Batching Equipment** is amended to replace the second paragraph with the following:

Scales used for weighing aggregates and cement shall be approved and sealed in accordance with the requirements of Section 109 of the Specifications.

**Section 217.07—Proportioning Concrete Mixtures** is amended to replace the first paragraph with the following:

The Contractor is responsible for having a Certified Concrete Plant Technician available during batching operations, and a Certified Concrete Field Technician shall be present during placing operations.

**Section 217.07—Proportioning Concrete Mixtures** is amended to delete the third paragraph beginning with “**A Certified Concrete Batchers**”.

**Section 217.08—Acceptance** is replaced with the following:

(a) **Air Consistency Tests:** Air and consistency tests will be performed by the Department prior to discharge of concrete into the forms to ensure that specification requirements are consistently being complied with for each class of concrete. The sample secured for the tests shall be taken after at least two cubic feet of concrete has been discharged from the delivery vehicle. The two cubic feet discharged is not to be used as part of the test sample. Any deviation from sampling and testing procedures must be approved by the Engineer. The Contractor shall provide a receptacle conforming to the requirements of ASTM C31, Section 5.9, for the Department’s use in obtaining the sample. If either determination yields a result that is outside of the allowable range for air content or consistence, the following procedure will be used:

1. The Engineer will immediately perform a recheck determination. If the results confirm the original test results, the load will be rejected.
2. The Contractor’s representative will be immediately informed of the test results.
3. The Contractor’s representative shall notify the producer of the test results through a pre-established means of communication.

The Engineer may perform any additional tests deemed necessary and reject all remaining material that fails the tests.

Entrained air content will be determined in accordance with the requirements of ASTM C231 or ASTM C173. Acceptance or rejection will be based on the results obtained from these tests.

In general, a mixture that contains the minimum amount of water consistent with the required workability shall be used. Consistency will be determined in accordance with the requirements of ASTM C143. Adding cement to loads previously rejected for excessive water content or consistency will not be permitted.

(b) **Strength Tests:** The 28-day compressive strengths ( $f'_c$ ) specified in Table II-17 are the strengths used in the design calculations. The Engineer will verify design strengths by tests made during the progress of the work in accordance with the requirements of ASTM C31 (Standard Practice for Making and Curing Concrete Test Specimens in the Field) and ASTM C39 (Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens) with the exception that the fresh concrete sample used for testing is to be secured after at least two cubic feet has been discharged from the delivery vehicle. The two cubic feet discharged is not to be used as part of the test sample. Any deviation from



sampling and testing procedures must be pre-approved by the Engineer. The use of ASTM C42 (Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete) will be at the Engineer's discretion. If the 28-day design compressive strength ( $f'_c$ ) test results do not conform to the strength requirements specified in Table II-17, immediate steps shall be taken to adjust the mixture design. In addition, the Engineer may require removal of or corrective measures be applied to any concrete that does not meet the requirements of Table II-17. If the concrete cylinder strength,  $f'_{cyl}$ , is less than the specified compressive strength found in Table II-17, the criteria in Table II-17A shall apply:

**Table II – 17A Price Reduction or Action Taken due to  $f'_{cyl}$  not meeting the specification value  $f'_c$  listed in Table II-17**

Condition	Concrete is a Pay Item	Concrete is <u>Not</u> a Pay Item
$f'_{cyl}$ is greater than or equal to 98% $f'_c$	A	A
$f'_{cyl}$ is greater than or equal to 90% $f'_c$ and less than 98% $f'_c$	B	C
$f'_{cyl}$ is less than 90% $f'_c$	D	D
$f'_{cyl}$ is not available due to the Contractor's inappropriate handling and storage of specimens in accordance with ASTM C31	D	D

$f'_c$  is the 28-day design compressive strength found in Table II-17.

$f'_{cyl}$  is the actual average tested strength of the standard-cured concrete cylinder made and tested in accordance with ASTM C31 and ASTM C39.

A = full payment

B = pay reduction =  $[(f'_c - f'_{cyl})/f'_c] \times$  contract unit price for concrete per  $yd^3 \times$  number of  $yds^3$  the concrete represents] or \$500, whichever is greater.

C = pay reduction =  $[(f'_c - f'_{cyl})/f'_c] \times 5 \times$  Contractor's invoice price for concrete per  $yd^3 \times$  number of  $yds^3$  the concrete represents] or \$500, whichever is greater.

D = The Contractor shall submit an investigative plan stamped by a Virginia-licensed Professional Engineer outlining how the Contractor shall demonstrate that the in-place concrete meets the structural strength requirements of the design. For barriers, parapets, railings, etc., no reduction in concrete strength below  $0.9f'_c$  shall be allowed. For all other applications, the investigative plan must be approved by the Department's Engineer prior to the execution of the investigation. All costs associated with this investigation shall be borne by the Contractor. After the investigation is completed, a report shall be submitted to the Engineer showing the results of the analysis, testing and conclusions of the Virginia-licensed Professional Engineer and recommendations for action proposed by the Contractor to be taken with the concrete that did not meet the strength requirements. The

Department retains all rights to determine if the action proposed with regard to the concrete in question is acceptable. If the Department concurs with the proposed action and the concrete meets the structural strength requirements of the design and remains in place, any price reduction will be taken by Method B if the concrete is a pay item or Method C if the concrete is not a pay item. If the concrete does not meet the structural requirements of the design, the concrete shall be removed and replaced at no cost to the Department. The maximum penalty assessed for low strength concrete left in place will be 10% as specified in Table II-17A not including the cost of the investigation and any corrective measures taken by the Contractor.

No calculated penalty less than \$500 will be assessed. The Contractor shall have the right to remove and replace concrete failing to meet specifications at the Contractor's cost.

Before concrete is placed, the Contractor shall provide a storage chamber at his expense for temporary storage of the Department's concrete cylinders. The contractor shall be responsible for maintaining the chamber such that the concrete test cylinders are kept in a continuously moist condition and within a temperature range of 60 degrees F to 80 degrees F. The chamber shall be equipped with a continuously recording thermometer accurate to  $\pm 2$  degrees F for the duration of concrete cylinder curing. The chamber shall be located in an area where the test cylinders will not be subject to vibration and shall be of sufficient size or number to store, without crowding or wedging, the required number of test cylinders as determined by the Contractor based on his plan of operations. Location of the chamber is subject to approval by the Engineer.

When use of high-early-strength hydraulic cement concrete is required, it shall conform to the requirements specified in Table II-17 except that the 28-day strength shall be obtained in 7 days. Up to 800 pounds per cubic yard of Type I, Type II or Type III cement may be used to produce high-early-strength concrete.

(c) **Concrete Temperature** shall be measured in accordance with the requirements of ASTM C1064.

(d) **Quality Assurance** for Low Permeability Concrete:

**General:**

At least two trial batches, using job materials, with permissible combination of cementitious materials shall be prepared, and test specimens shall be cast by the Contractor and tested by the Department for permeability and strength at least a month before the field application. The permeability samples shall be cylindrical specimens with a 4-inch diameter and at least 4-inches in length. Cylinders will be tested at 28 days in accordance with VTM 112. The test value shall be the result of the average values of tests on two specimens from each batch. Permeability values obtained from trial batches shall be 500 coulombs below the maximum values specified in Table II-17 of the Specifications to be acceptable.

**Acceptance Tests:**

For each set of cylinders made for compressive strength tests, two additional cylinders shall be made for the permeability test. The Department will be responsible for making and testing all permeability test specimens.

If the average permeability test result is equal to or less than the value for the specified class of concrete in Table II-17, then full payment will be made for the lot the average

permeability test result represents. However, if the average permeability test result exceeds the coulomb value in Table II-17, payment for that lot of concrete shall be reduced by 0.005 percent for each coulomb above the coulomb value in Table II-17 multiplied by the bid item cost of the concrete times the number of cubic yards or cubic meters of concrete in the lot. The reduction in price will not exceed 5 percent of the bid price of the concrete. Any concrete with a coulomb value that exceeds the maximum required in Table II-17 by 1000 coulomb will be rejected. However, bridge deck concrete with any coulomb value exceeding the maximum required by over 1000 coulomb may be accepted by the Engineer at 95 percent of the bid price if the concrete in question has the required strength and meets other specification requirements, and the Contractor applies, at his own expense, an approved epoxy concrete overlay to the top of the entire deck. In such case deck grooving will not be required. Epoxy overlays over latex overlays will not be permitted. The adjustment to the roadway grade shall be made as required by the Engineer at the Contractor's expense.

Similarly, concrete in abutments and pier caps with coulomb value exceeding the maximum required in Table II-17, by more than 1000 coulomb may be accepted at 95 percent of the bid price if it has the required strength and meets other specification requirements, and the Contractor applies at his own expense, one coat of Type EP-3B and one coat of EP-3T in conformance with the requirements of Section 243.02 of the Specifications, on top of the pier cap or abutment seat.

**Section 217.09(b) Ready Mixed Concrete** is amended to replace the second paragraph with the following:

Each load of transit or shrink-mixed concrete shall be accompanied by Form TL-28 signed by the VDOT Certified Concrete Field Technician or a designated company representative working under the direction of the VDOT Certified Concrete Field Technician. The form shall be delivered to the Inspector at the site of the work. Loads that do not carry such information or that do not arrive in satisfactory condition shall not be used.

**Section 217.09(b) Ready-Mixed Concrete** is amended to replace the fourth paragraph and the table with the following:

Each batch of concrete shall be delivered to the site of work and discharged within 90 minutes of the time the cement is introduced into the mixture unless approved otherwise by the Engineer.

**Section 217.09(b)1. Transit mixing** is amended to replace the first paragraph with the following:

1. **Transit mixing:** Concrete shall be mixed in a truck mixer. Mixing shall begin immediately after all ingredients are in the mixer and shall continue for at least 70 revolutions of the drum or blades at the rate of at least 14 but no more than 20 revolutions per minute.

**— DIVISION III—ROADWAY CONSTRUCTION —**

**300 SERIES SPs (SPECIAL PROVISIONS)**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**NO PLAN AND MINIMUM PLAN CONCEPT**

December 6, 2007cc  
Reissued July 2008c

**I. DESCRIPTION**

This work shall consist of all construction or reconstruction activities in accordance with the applicable requirements of the Specifications, except where otherwise specified in this provision, and in conformity with the lines, grades and typical sections shown or established by the Engineer. This work shall include clearing and grubbing; excavation within the area of the typical section(s), construction of embankments and shoulders, construction of connections with intersecting roads, streets and entrances, both public and private, and the construction of all ditches and channels within the area of the right-of-way or easements. Unless otherwise specified, this work shall include the removal and disposal of existing road surface material, abandoned pipe culverts and minor structures. The existing road surface material shall be salvaged and used for maintenance of traffic, except when the Engineer determines that this condition is impractical.

**II. MATERIALS**

Materials shall be in accordance with the applicable requirements of the Specifications, except as otherwise specified in this provision or elsewhere in the contract documents.

**III. TESTING**

Testing on this project will be in accordance with the policy for testing on no plan and minimum plan projects in Sections 207 and 208 of the Specifications and the Material Division's Manual of Instructions.

**IV. PROCEDURES**

The Contractor shall perform all construction or reconstruction activities in accordance with the applicable requirements of the Specifications, except as specified as follows:

The roadway centerline shall be in accordance with the centerline shown on the plans or established by the Engineer. The grade shall generally follow that shown on the plans. In the absence of a grade line on the plans, the proposed grade shall generally follow the existing grade as directed by the Engineer. The approximate depth of centerline cuts and fills shall be obtained from the plans, except that at certain locations and at the discretion of the Engineer, a minimum number of centerline grade stakes may be furnished by the Department whereby the approximate depth of centerline cuts and fills may be obtained therefrom. Slope tolerances specified in the Specifications are waived; however, all disturbed slopes shall be uniformly grooved or rough graded as directed by the Engineer.

The roadbed shall be shaped and worked until it is smooth and free from large clods or other material unfit for use in the roadbed. Sharp breaks in the roadbed shall be eliminated and the final grade shall be compacted. The maximum gradient on all connections with intersecting roads, streets and entrances shall not exceed 10 percent, unless otherwise noted on plans or directed by the Engineer. Ditchlines shall be graded to facilitate drainage and to prevent the impoundment of water.

Excess material from slides, ditches and channels, slopes or drainage easements, and unsuitable material cut from below grade, which cannot be used to flatten fill slopes within the right-of-way or easements, shall be disposed of by the Contractor in accordance with Section 106.04 of the Specifications.

The construction or clean out of ditches or channels extending beyond the roadway right-of-way, the removal and disposal of slide material and the removal and disposal of unsuitable material required to be removed from below subgrade will be classified as extra excavation.

## V. MEASUREMENT AND PAYMENT

Measurement and payment for items of work shall be in accordance with the applicable requirements of the Specifications, except as specified as follows:

**Grading** will be paid for at the contract lump sum price, which price shall be full compensation for mobilization when not specified as a separate bid item; for the cost of clearing and grubbing; for all regular excavation; for construction of embankments, grading of unpaved shoulders and ditches and channels; for allaying of dust when not specified as a separate bid item; for removal and disposal of excess or unsuitable material above grade; and for removal and disposal of existing minor structures and roadway surface materials.

**Extra excavation**, when specified as a bid item, will be measured in cubic yards in accordance with Section 109.01 of the Specifications and will be paid for at the contract unit price per cubic yard; which price shall be full compensation for performing the required excavation and disposing of material in accordance with Section 106.04 of the Specifications or as directed by the Engineer. When not specified as a contract bid item, extra excavation will be paid for at the unit price of sixteen dollars (\$16.00) per cubic yard.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Grading	Lump Sum
Extra Excavation	Cubic Yard

—**300 SERIES SSs (SUPPLEMENTAL SPECIFICATIONS)**—



VIRGINIA DEPARTMENT OF TRANSPORTATION  
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS**SUPPLEMENTAL SECTION 303—EARTHWORK**

**SECTION 303—EARTHWORK** of the Specifications is amended as follows:

**Section 303.02—Materials** is amended to add the following:

- (e) **Seed** shall conform to Section 244.02(c) of the Specifications.

**Section 303.03—Erosion and Siltation Control** is amended to replace the second paragraph the following:

Erosion and siltation control devices and measures shall be maintained in a functional condition at all times. Temporary and permanent erosion and siltation control measures shall be inspected in accordance with the requirements of Section 107.16(a) of the Specifications. Deficiencies shall be immediately corrected. The Contractor shall make a daily review of the location of silt fences and filter barriers to ensure that they are properly located for effectiveness. Where deficiencies exist, corrections shall be made immediately as approved or directed by the Engineer.

**Section 303.03(b) Soil Stabilization** is amended to replace the last paragraph with the following:

Areas that cannot be seeded because of seasonal or adverse weather conditions shall be mulched to provide some protection against erosion to the soil surface. Mulch shall be applied in accordance with the requirements of Section 603.03(e) of the Specifications and paid for in accordance with the requirements of Section 603.04 of the Specifications. Organic mulch shall be used, and the area then seeded as soon as weather or seasonal conditions permit in accordance with the requirements of Section 603.03 of the Specifications. Organic mulch includes: straw or hay, fiber mulch, wood cellulose, or wood chips conforming to the requirements of Section 244.02(g) of the Specifications.

**Section 303.03(f) Sediment Traps and Sediment Basins** is replaced with the following:

- (f) **Sediment Traps and Sediment Basins:** Sediment traps shall be utilized where the storm water runoff from disturbed areas is comprised of flow from a total drainage area of less than 3 acres. Sediment basins shall be utilized where the storm water runoff from disturbed areas is comprised of flow from a total drainage area of 3 or more acres. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be stabilized immediately.

**Section 303.03—Erosion and Siltation Control** is amended to add the following:

- (h) **Temporary Diversion Dike:** This work shall consist of constructing temporary diversion dikes at the locations designated on the plans and in accordance with the plan details and the Specifications, stabilizing with seed and mulch, maintaining, removing when no longer required, and restoration of the area.

Temporary diversion dikes shall be installed as a first step in land-disturbing activities and shall be functional prior to upslope land disturbance. The dike shall be constructed to prevent failure in accordance with Section 303.04 of the Specifications. Seeding and mulch shall be applied to the dike in accordance with Section 603 of the Specifications immediately following its construction. The dikes should be located to minimize damages by construction operations and traffic.

The Contractor shall inspect the temporary diversion dikes after every storm and repairs made to the dike, flow channel, outlet, or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages to the dikes caused by construction traffic or other activity must be repaired before the end of the working day.

**Section 303.06(e)—Erosion Control Items** is amended to replace “6. **Geotextile fabric**” with the following:

- 6. **Geotextile fabric** attached to brush barriers or existing fence or used for another function specified on the plans will be measured in square yards, complete-in-place, excluding laps, and will be paid for at the contract unit price per square yard. This price shall include trimming the brush barrier; furnishing, installing, maintaining, and removing the fabric; and dressing and stabilizing the area.

The brush barrier will not be measured for separate payment. The cost thereof shall be included in the price for clearing and grubbing.

**Section 303.06(e)—Erosion Control Items** is amended to replace “15. **Drop Inlet Silt Trap**” and its corresponding Pay Item and Pay Unit with the following:

**15. Inlet protection:**

- a. **Inlet Protection Type A** will be measured in units of each and will be paid for at the contract unit price per each location shown or specified. The price shall include furnishing and installing temporary filter barrier including posts and top rails, coarse aggregate and, if required, sediment forebay. This price shall also include maintenance and removal until no longer required. Inlet Protection Type A will be paid for only one time during the duration of the project.
- b. **Inlet Protection Type B** will be measured in units of each and will be paid for at the contract unit price per each location shown or specified. The price shall include furnishing and installing hardware mesh cloth, concrete blocks, wooden studs, coarse aggregate, and maintenance and removal until no longer required. Inlet Protection Type B will be paid for only one time during the duration of the project.
- c. **Inlet Protection Type C** will be measured and paid for in accordance with the individual pay items and pay units shown in the Standard Drawing for EC-6, Type C. The individual pay items for Inlet Protection Type C will be paid for only one time during the duration of the project for each location shown or specified

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Inlet protection Type A	Each
Inlet protection Type B	Each

**Section 303.06(e)—Erosion Control Items** is amended to add the following:

18. **Temporary diversion dike** will be measured and paid for in units of feet, complete-in-place. This price shall be full compensation for installing the diversion dike, stabilizing with seed and mulch, maintaining, removing when no longer required, and restoration of the area.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Temporary Diversion Dike	Foot

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

**SUPPLEMENTAL SECTION 315—ASPHALT CONCRETE PLACEMENT**

**SECTION 315—ASPHALT CONCRETE PAVEMENT** of the Specifications is amended as follows:

The Table of Contents for the 2007 Road and Bridge Specifications is revised to rename **SECTION 315—ASPHALT CONCRETE PAVEMENT** as **SECTION 315—ASPHALT CONCRETE PLACEMENT**.

**Section 315.01—Description** is replaced with the following:

This work shall consist of constructing one or more courses of asphalt concrete on a prepared foundation in accordance with the requirements of these specifications and within the specified tolerances for the lines, grades, thicknesses, and cross sections shown on the plans or as established by the Engineer. At the Contractor's option, the asphalt concrete mix may be produced using a warm-mix additive or process approved by the Department. When used, the temperature placement limitations for Warm Mix Asphalt (WMA) shall be applied.

**Section 315.02(d) Liquid asphalt coating (emulsion) for rumble strip** is replaced with the following:

- (d) **Liquid asphalt coating (emulsion) for rumble strip** shall conform to the requirements of Section 210 of the Specifications. For centerline rumble strips, CSS-1h or CQS-1h conforming to Section 210 of the Specifications shall be used. The CSS-1h or CQS-1h may be diluted by up to 30 percent at the emulsion manufacturer's facility.

**Section 315.03(a) Hauling Equipment** is replaced with the following:

- (a) **Hauling Equipment:** Trucks used for hauling asphalt mixtures shall have tight, clean, smooth metal or other non-absorptive/inert material bodies equipped with a positive locking metal tailgate. Surfaces in contact with asphalt mixtures shall be given a thin coat of aliphatic hydrocarbon invert emulsion release agent (nonpuddling), a lime solution, or other material on the Department's list of approved release agents. Except where a nonpuddling release agent is used, the beds of dump trucks shall be raised to remove excess agent prior to loading. Only a nonpuddling agent shall be used in truck beds that do not dump. Each truck shall be equipped with a tarpaulin or other cover that will protect the mixture from moisture and foreign matter and prevent the rapid loss of heat during transportation.

**Section 315.03—Equipment** is amended by adding the following:

- (e) **Material Transfer Vehicle (MTV):** When required in the Contract, a MTV shall be a self-propelled storage unit capable of receiving material from trucks, storing the material and transferring the material from the unit to a paver hopper insert via a conveyor system. The required paver hopper insert and unit shall have a combined minimum storage capacity of 15 tons. Prior to placing the asphalt material on the roadway surface, the storage unit or paver hopper insert must be able to remix the material in order to produce a uniform, non-segregated mix, having a uniform temperature.

**Section 315.04—Placement Limitations** is replaced with the following:

Asphalt concrete mixtures shall not be placed when weather or surface conditions are such that the material cannot be properly handled, finished, or compacted. The surface upon which asphalt mixtures are to be placed shall be free of standing water, dirt, and mud and the base temperature shall conform to the following:

(a) **Warm Mix Asphalt (WMA):**

1. **When the base temperature is above 40 degrees F**, laydown will be permitted at any temperature below the maximum limits given in Section 211.08 of the Specifications.
2. **When the laydown temperature is between 301 degrees F and 325 degrees F**, the number of compaction rollers will be the same number as required for 300 degrees F or less.

(b) **Hot Mix Asphalt (HMA):**

1. **When the base temperature is above 80 degrees F**, mixture laydown will be permitted at any temperature conforming to the limits specified in Section 211 of the Specifications.
2. **When the base temperature is between 40 degrees F and 80 degrees F**, the Nomograph, Table III-2, shall be used to determine the minimum laydown temperature of the asphalt concrete mixes. At no time should the minimum base temperature for base (BM) and intermediate (IM) mixes be less than 40 degrees F. At no time should the minimum laydown temperature for base (BM) and intermediate (IM) mixes be less than 250 degrees F.

For surface mixes (SM), at no time should the minimum base and laydown temperatures be less than the following:

<b>PG Binder/Mix Designation</b>	<b>Percentage of Reclaimed Asphalt Pavement (RAP) Added to Mix</b>	<b>Minimum Base Temperature</b>	<b>Minimum Placement Temperature</b>
PG 64-22 (A)	<=20%	40 °F	250 °F
PG 64-22 (A)	>20%	50 °F	270 °F
PG 70-22 (D)	<=30%	50 °F	270 °F
PG 76-22 (E)	<=15%	50 °F	290 °F
PG 64-22 (S)	<=30%	50 °F	290 °F

- (3) **When the laydown temperature is between 301 degrees F and 325 degrees F**, the number of compaction rollers will be the same number as required for 300 degrees F.

Intermediate and base courses that are placed at rates of application that exceed the application rates shown in Table III-2 shall conform to the requirements for the maximum application rate shown for 8-minute and 15-minute compaction rolling as per number of rollers used.

Should the Contractor be unable to complete the compaction rolling within the applicable 8-minute or 15-minute period, the placing of asphalt mixture shall either cease until sufficient rollers are used or other corrective action is taken to complete the compaction rolling within the specified period.

Compaction rolling shall be completed prior to the mat cooling down to 175 degrees F. Finish rolling may be performed at a lower mat temperature.

The final asphalt pavement finish course shall not be placed until construction pavement markings are no longer required.

**Section 315.05(b) Conditioning Existing Surface** is replaced with the following:

- (b) **Conditioning Existing Surface:** When the surface of the existing pavement or base is irregular, it shall be brought to a uniform grade and cross section as directed by the Engineer. The surface on which the asphalt concrete is to be applied shall be prepared in accordance with the requirements of the applicable specifications and shall be graded and compacted to the required profile and cross section.

When specified, prior to placement of asphalt concrete, longitudinal and transverse joints and cracks shall be sealed by the application of an approved joint sealing compound.

Contact surfaces of curbing, gutters, manholes, and other structures projecting into or abutting the pavement and cold joints of asphalt shall be painted with a thick, uniform coating of asphalt prior to placement of asphalt mixture.

A tack or prime coat of asphalt will be required as specified below and shall conform to the applicable requirements of Section 310 and Section 311 of the Specifications. Asphalt classed as cutbacks or emulsions shall be applied ahead of the paving operations, and the time interval between applying and placing the paving mixture shall be sufficient to ensure a tacky residue providing maximum adhesion of the paving mixture to the base. The mixture shall not be placed on tack or prime coats that have been damaged by traffic or contaminated by foreign material. Traffic shall be excluded from such sections.

1. **Priming and Tacking:**

- a. **Priming aggregate base or subbase:** Unless otherwise specified in the contract documents, priming with asphalt material will not be required on aggregate subbase or base material prior to the placement of asphalt base, intermediate or surface layers.
- b. **Tacking:** Application of tack at joints, adjacent to curbs, gutters, or other appurtenances, shall be applied with a hand wand or with spray bar at the rate of 0.2 gallon per square yard. At joints, the tack applied by the hand wand or a spray bar shall be 2 feet in width with 4 to 6 inches protruding beyond the joint for the first pass. Tack for the adjacent pass shall completely cover the vertical face of the mat edge, so that slight puddling of asphalt occurs at the joint, and extend a minimum of 1 foot into the lane to be paved.

Milled faces that are to remain in place shall be tacked in the same way for the adjacent pass. Use of tack at the vertical faces of longitudinal joints will not be required when paving in echelon.

On rich sections or those that have been repaired by the extensive use of asphalt patching mixtures, the tack coat shall be eliminated when directed by the Engineer.

Tack shall not be required atop asphalt stabilized open-graded material drainage layers.

Tack shall be applied between the existing asphalt surface and each asphalt course placed thereafter.

2. **Removing depressions and elevating curves:** Where irregularities in the existing surface will result in a course more than 3 inches in thickness after compaction, the surface shall be brought to a uniform profile by patching with asphalt concrete and thoroughly tamping or rolling until it conforms with the surrounding surface. The mixture used shall be the same as that specified for the course to be placed.

When the Contractor elects to conduct operations to eliminate depressions, elevate curves, and place the surface course simultaneously, he shall furnish such additional spreading and compacting equipment as required to maintain the proper interval between the operations.

**Section 315.05(c) Placing and Finishing** is amended to replace the second paragraph with the following:

A continuous line to mark the edge of pavement and provide proper control of pavement width and horizontal alignment will not be required for this contract.

And to add the following paragraphs:

Prior to application of tack coat and commencement of paving operations the Contractor shall clean the existing pavement surface of all accumulated dust, mud, or other debris that may affect the bond of the new overlay, as determined by the Engineer. The Contractor shall ensure the surface remains clean until commencement and during paving operations. The cost for cleaning and surface preparation shall be included in the bid price for asphalt concrete.

When required in the Contract, a MTV shall be used during the placement of designated asphalt mixes on full lane width applications.

**Section 315.05(d) Compacting** is amended by replacing the fifth paragraph with the following:

Rolling shall begin at the sides and proceed longitudinally parallel with the center of the pavement, each trip overlapping at least 6 inches, gradually progressing to the crown of the pavement. When abutting a previously placed lane, rolling shall begin at the outside unconfined side and proceed toward the previously placed lane. On superelevated curves, rolling shall begin at the low side and proceed to the high side by overlapping of longitudinal trips parallel with the centerline.

**Section 315.05(e)** is replaced with the following:

(e) **Density:** Density shall be determined in accordance with the following:

1. The Contractor shall perform roller pattern and control strip density testing on surface, intermediate, and base courses in accordance with the requirements of VTM-76. The Contractor shall have a certified Asphalt Field Technician perform all density testing.

Density shall be determined with a thin-lift nuclear gauge conforming to the requirements of VTM-81 or from the testing of plugs/cores taken from the roadway where the mixture was placed. Density test locations shall be marked and labeled in accordance with the requirements of VTM-76. When acceptance testing is performed with a nuclear gauge, the Contractor shall have had the gauge calibrated within the previous 12 months by approved calibration service.

In addition, the Contractor shall maintain documentation of such calibration service for the 12-month period from the date of the calibration service. The required density of the compacted course shall not be less than 98.0 percent and not more than 102.0 percent of the target control strip density.

Nuclear density roller pattern and control strip density testing shall be performed on asphalt concrete overlays placed directly on surface treatment roadways and when overlays are placed at an application rate less than 125 pounds per square yard, based on 110 pounds per square yard per inch, on any surface. In these situations, sawed plugs or core samples will not be required and the minimum control strip densities as specified in Table III-3 will be waived. The required density of the compacted course shall be not less than 98.0 percent and not more than 102.0 percent of the target control strip.

**TABLE III-3  
Density Requirements**

<b>Mixture Type</b>	<b>Min. Control Strip Density (%)<sup>1</sup></b>
SM-9.5A, 12.5A	92.5
SM-9.5D, 12.5D	92.2
SM-9.5E, 12.5E	92.2
IM-19.0A, IM-19.0D, IM-19.0E	92.2
BM-25.0A, BM-25.0D	92.2

<sup>1</sup>The control strip density requirement is the percentage of theoretical maximum density of the job-mix formula by SUPERPAVE mix design or as established by the Engineer based on two or more production maximum theoretical density tests.

The project will be divided into "control strips" and "test sections" by the Engineer for the purpose of defining areas represented by each series of tests.

- a. Control Strip: Control strips shall be constructed in accordance with the requirements of these specifications and VTM-76.

The term *control strip density* is defined as the average of 10 determinations selected at stratified random locations within the control strip.

One control strip shall be constructed at the beginning of work on each roadway and shoulder course and on each lift of each course. An additional control strip shall be constructed when a change is made in the type or source of materials or compaction equipment; whenever a significant change occurs in the composition of the material being placed from the same source; or when there is a failing control strip. During the evaluation of the initial control strip, paving operations may continue. However, paving and production shall be discontinued during construction and evaluation of additional control strips. In the event that two consecutive control strips fail, subsequent paving operations shall cease until corrective action(s) has been taken with the approval of the Engineer. If it is determined with the Engineer's approval that the density cannot be obtained because of the condition of the existing pavement structure, the target control strip density shall be determined from the roller pattern that achieves the optimum density and shall be used on the remainder of the roadway that exhibits similar pavement conditions.



Either the Engineer or Contractor may initiate an additional control strip at any time.

The length of the control strip shall be approximately 300 feet and the width shall not be less than 6 feet. On the first day of construction or beginning of a new course, the control strip shall be started between 500 and 1,000 feet from the beginning of the paving operation. The control strip shall be constructed using the same paving, rolling equipment, procedures, and thickness as shall be used on the remainder of the course being placed.

One reading shall be taken at each of 10 stratified random locations. No determination shall be made within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base mixes. The average of these 10 determinations shall be the control strip density recorded to the nearest 0.1 pound per cubic foot. The minimum control strip density shall be determined in accordance with the requirements of VTM-76.

The control strip shall be considered a lot. If the control strip density conforms to the requirements specified in Table III-3, the control strip will be acceptable and the control strip density shall become the target control strip density. If the density does not conform to the requirements specified in Table III-3, the tonnage placed in the control strip and any subsequent paving prior to construction of another control strip will be paid for in accordance with Table III-4 on the basis of the percentage of the Table III-3 value achieved. The Contractor shall take corrective action(s) to comply with the density requirement specified in Table III-3.

**TABLE III-4  
Payment Schedule for Lot Densities**

% of Target Control Strip Density	% of Payment
Greater than 102.0	95
98.0 to 102.0	100
97.0 to less than 98.0	95
96.0 to less than 97.0	90
Less than 96.0	75

- b. Test section (lot): For the purposes of acceptance, each day's production shall be divided into lots (test sections). The standard size of a lot shall be 5,000 linear feet of any pass 6 feet or greater made by the paving train for the thickness of the course. Pavers traveling in echelon will be considered as two passes. Each lot shall be divided into five sublots of equal length. When a partial lot occurs at the end of a day's production or upon completion of the project, the lot size shall be redefined as follows: If the partial lot contains one or two sublots, the sublots will be added to the previous lot. If the partial lot contains three or four sublots, the partial lot will be redefined to be an entire lot. Each lot shall be tested for density by taking a nuclear density reading from two random locations, or by taking one plug/core from a random location, selected by the Engineer within each subplot. Tests shall not be taken within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base

mixes. The average of the subplot results will be compared to the target control strip density to determine the acceptability of the lot. Once the average density has been determined, the Contractor will not be permitted to provide additional compaction to raise the average. If two consecutive sublots produce density results less than 98 percent or more than 102 percent of the target control strip density, the Contractor shall immediately notify the Engineer and institute corrective action. By the end of the day's operations, the Contractor shall furnish the test data developed during the day's paving to the Engineer.

The tonnage of each lot will be based on the lot's width and length and the mixture application rate as designated in the Contract or as revised by the Engineer. Payment will be made in accordance with the requirements of Table III-4.

The Engineer at any time on any project may perform lot density verification testing. Lot density verification is performed by testing plugs. The Contractor shall be responsible for taking plugs for testing. Testing of the plugs will be done by the Engineer.

Surface, Intermediate, and Base mixes:

Two plugs shall be taken by the Contractor per Verification, Sampling and Testing (VST) lot at locations identified by the Engineer. If the density of the plugs does not conform to the requirements for the lot in question or the same payment percentage determined by the Contractor's testing for that lot, then the Contractor may request the referee procedure to be invoked. One additional plug from the remaining sublots will be taken. Payment for that lot, based on the results of the initial two plugs/cores or referee procedure, will be in accordance with the specifications in Table III-4 on the basis of the percentage of the Table III-3 value achieved.

2. **Surface, intermediate, and base courses** not having a sufficient quantity of material to run a roller pattern and control strip shall be compacted to a minimum density of 91.5 percent of the theoretical maximum density as determined in accordance with the requirements of VTM-22. The Contractor shall be responsible for cutting cores or sawing plugs for testing by the Department. If the density is less than 91.5 percent, payment will be made in accordance with the requirements of Table III-5.

**TABLE III-5**

**Payment Schedule for Surface, Intermediate and Base Courses (Not sufficient quantity to perform density roller pattern and control strip )**

% TMD	% of Payment
Greater than 91.5	100
90.2-91.4	95
88.3-90.1	90
Less than 88.2	75

Any section in which a mixture (e.g., SM-9.0) is being placed at an application rate of less than 125 pounds per square yard, based on 110 pounds per square yard per inch, that does not have a sufficient quantity of material for a roller pattern and control strip shall be compacted by rolling a minimum of three passes with a minimum 8-ton roller. No density testing will be required.

**Section 315.05(g) Rumble Strips** is amended to replace fourth paragraph with the following:

Following the cutting and cleaning of the depressions of waste material, the entire rumble strip area shall be coated with liquid asphalt coating (emulsion) using a pressure distributor. For rumble strips installed on the shoulder, the approximate application rate shall be 0.1 gallons per square yard. For rumble strips installed in a new asphalt concrete surface (new construction or overlay) along the centerline, no sealing of the rumble strip area shall be performed. When the rumble strip is installed along the centerline in an existing asphalt concrete surface (i.e. more than one year since placement), the approximate application rate shall be 0.05 gallons per square yard. The application temperature shall be between 160 degrees F and 180 degrees F. For shoulder rumble strips only, overspray shall not extend more than 2 inches beyond the width of the cut depressions and/or shall not come in contact with pavement markings.

**Section 315.08—Measurement and Payment** is amended to include the following:

**Material Transfer Vehicle (MTV)**, when required in the Contract, will not be measured for separate payment. The cost for furnishing and operating the MTV shall be included in the price bid for other appropriate items.

**Warm Mix Asphalt (WMA)** additive or process will not be measured for separate payment, the cost of which, shall be included in the price bid for other appropriate items.

**— DIVISION IV—BRIDGES AND STRUCTURES —**

NONE

**— DIVISION V—INCIDENTAL CONSTRUCTION —**

**500 SERIES SPs (SPECIAL PROVISIONS)**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**CG-12 DETECTABLE WARNING SURFACE**

February 12, 2003ccc  
Reissued July 2008c

**I. DESCRIPTION**

This work shall consist of providing all labor, tools, equipment, and materials required to construct sidewalk with detectable warning surfaces in the location(s) specified on the plans or in the proposal. The Contractor shall perform the work according to the details shown on the plans or in this special provision, Section 504 of the Specifications, and as directed by the Engineer.

**II. MATERIALS**

Materials shall conform to the requirements of Section 504 of the Specifications except as follows:

In lieu of concrete, solid brick pavers, or concrete pavers, other permanent, durable materials suitable for heavy traffic outdoor areas approved by the Department may be used to construct the detectable warning areas where called for in the plans and other contract documents. Solid brick pavers and concrete paver units shall conform to the details and requirements shown in the plans. Other durable materials shall be in accordance with Department approved manufacturer's design and specification requirements.

There shall be a minimum of 70 percent contrast in light reflectance between the detectable warning area and adjoining surfaces. The detectable warning can optionally be "safety yellow". The material used to provide visual contrast shall be an integral part of the detectable warning surface. Both the truncated domes and the underlying surface must meet the contrast requirement. The contrast in percent shall be determined by:

$$\text{Contrast} = [ ( B1 - B2 ) / B1 ] \times 100$$

where B1=light reflectance value (LRV) of the lighter area and B2=light reflectance value (LRV) of the darker area. Note that in any application both white and black are never absolute; thus, B1 never equals 100 and B2 is always greater than 0.

When visual contrast other than "safety yellow" is used, provide verification of contrast. Verification of visual contrast is required.

**III. PROCEDURES**

Construct sidewalk ramp according to Section 504 of the Specifications except for detectable warning/truncated domes that shall be furnished or constructed in accordance with the details in this specification, the manufacturer's recommendations, the Special Design Drawing and the Plans.

**IV. MEASUREMENT AND PAYMENT**

**CG-12 Detectable Warning Surface** will be measured in square yards and paid for at the contract unit price per square yard, complete-in-place. This price shall be full compensation for furnishing and installing approved truncated dome finished materials including but not limited to concrete, brick or concrete pavers, other Department approved materials, integral visual contrast, dowels and all other labor, tools, equipment, materials and incidentals necessary to fully complete the work.

Payment will be made under:

**Pay Item**

**Pay Unit**

CG-12 Detectable Warning Surface

Square yard



VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**POWDER COATED GALVANIZED GUARDRAIL**

January 26, 2012

**I. DESCRIPTION**

This work consists of surface preparation and application of powder coating over galvanized metal railing elements and hardware in shop facilities as shown in these specifications, plans or as directed by the Engineer.

**II. QUALIFICATIONS**

The powder coating applicator shall have a minimum of two years continuous and successful experience with powder coating of industrial metal products, in particular the application of such systems over galvanized products.

**III. MATERIALS**

The polyester powder shall be a super durable TGIC (Triglycidyl Isocyanurate) polyester thermoset coating. The powder coat color applied shall be RAL 8028 in a semi-matte finish or as specified on plans.

Coating used for the repair of the galvanized coat shall conform to the requirements of ASTM A 780. Material used for touch up for powder coat shall be an aliphatic polyurethane top coat selected from VDOT's approved System B, List 13 and shall be colored to Federal color 595-20040.

**IV. SUPPLIER / APPLICATOR QUALIFICATIONS**

The polyester powder shall be supplied by one of the manufacturers listed in Appendix A of this provision. Application of the polyester powder shall be performed by one of the powder coating facilities also listed in Appendix A, or approved by the Department.

**V. SURFACE PREPARATION AND APPLICATION**

The powder coating applicator shall identify to the galvanizer all guardrail beam, components and assemblies surfaces receiving powder coating to ensure the galvanizing method used on assemblies is compatible with subsequent application of powder coating.

All surfaces of beams, components and assemblies receiving powder coating shall not be water-quenched, nor receive a chromate conversion coating after the galvanizing process.

Prior to galvanizing operations, the galvanizing facility shall inspect and remove all sharp edges on rails, posts, or other hardware used in assemblies. The easing of all sharp edges is essential to the durability of the powder coating process and failure on the part of the galvanizing facility to perform this step will be cause for rejection of the material.

After galvanizing, all components shall be thoroughly protected from rain or moisture during storage and shipment to the powder coating facility.

Galvanized surfaces receiving powder coating shall be cleaned and prepared for coating in accordance with SSPC SP 16, including appendices and ASTM D 6386, Sections 5.1 through 5.3, Section 5.4.1 and Section 5.4.3 respectively. The resultant profile of galvanized layer produced shall be 1.0 to 1.5 mils as determined by ASTM D 4417, Method C.

Thickness of the galvanized layer shall be measured before and after sweep blasting in accordance with SSPC PA-2 to ensure all components conform to ASTM A 123 or ASTM A 153 as applicable. Any locations found having insufficient thickness shall be repaired in accordance with ASTM A 780.

The powder coating applicator shall notify the Engineer of all surface cleaning and preparation activities, and shall provide the Engineer an opportunity to perform quality assurance inspection, at the completion of surface cleaning and preparation activities prior to beginning powder coating application.

After surface preparation, all components receiving powder coating shall be sufficiently preheated to prevent pin holes from forming in the polyester powder. The coating shall be applied at a cured film thickness of 7 +/- 2 mils in accordance with the powder coating manufacturer's recommendations. The applied film thickness of the polyester powder shall be measured in accordance with ASTM D 7091 and SSPC PA 2.

Using a 67-1/2 volt wet sponge detector, the polyester coating shall be checked for holidays, pinholes and discontinuities. There shall be no more than one deficiency per 5 square feet. Deficiencies exceeding this level of acceptance shall be handled in accordance with section **VII. Quality Control Testing** herein.

## **VI. SUBMITTALS**

**A.** The galvanizing company shall submit the following information on standard company letterhead to the Engineer for approval:

1. Statement reading "We (Company name) verify neither water quenching nor a chromate conversion coating has been used or will be on any surfaces that are to be powder coated for this VDOT project." List Project Number.
2. Report and document the coating thickness by material category and the applied coating thickness to metal railing elements, in mils, in accordance with ASTM 123 and coat weight in oz/ft<sup>2</sup> in accordance with ASTM A 153 as applicable.

**B.** The powder coating applicator shall submit the following quality control information to the Engineer for approval on standard company letterhead:

1. The name, location, and contact information of the firm performing the powder coating operations.
2. Quality control (QC) program(s) established and routinely followed by the firm performing the powder coating operation. Company forms documenting inspection and testing of coatings as part of the QC program shall be included in the submittal.
3. Project specific powder coating plan – This plan shall include the identification of the powder manufacturer, coating product name and number applied, specific cleaning process or processes used in surface preparation, report type and hardness of abrasive used, zinc galvanizing thickness prior to sweep blast operations, zinc galvanizing thickness after sweep blast operations, surface profile achieved, pre-heating times and temperatures used for coating applied, process of powder coating application, testing and inspection

conducted to ensure proper curing, processes for shop and field coating repair, handling instructions, and storage processes taken for the assemblies being coated for projects.

4. Manufacturer's product data and MSDS sheets for all pre-wash solutions, solvents, powder coating and coating repair materials used.

## VII. QUALITY CONTROL TESTING

The firm performing the powder coating operation shall conduct, or make arrangements for QC testing on assemblies receiving powder coating for this project in accordance with the powder coating firm's QC program as documented in item 2 of the Submittal subsection above. Testing may be performed on coated surfaces of production fabricated items, or on representative test panels coated alongside the production fabricated items being coated.

Test panels shall be a minimum of 1 foot sections of metal railing and posts of the same dimensions being fabricated. Test panels shall be galvanized, cleaned and powder coated in the same process along with production items being coated. There shall be a minimum of one set of tests representing each cycle of production items coated and cured. Additional tests shall be performed at the request of the Engineer.

Repair of damaged coatings on production fabricated items shall be the responsibility of the powder coating applicator, and shall be in accordance with the project specific powder coating plan as approved by the Engineer. At a minimum, the QC testing shall include the following requirements:

1. Holiday inspection for deficiencies including pinholes and discontinuities, and visual inspection of other unacceptable surface imperfections.
2. Coating thickness measurement as noted above in section **V. SURFACE PREPARATION AND APPLICATION**.
3. Hardness testing in accordance with ASTM D 3363, with the finish coat providing a minimum hardness value of 2H.
4. Adhesion testing in accordance with ASTM D 4541 with a minimum of 1,500 - 2,000 psi adhesion.
5. Powder Coating Institute (PCI) # 8 recommended procedure for solvent cure test.

Film thickness shall be determined after the coat is fully cured by the use of a magnetic-pull-off or electronic dry film thickness gauge. The magnetic or electronic gauge shall be calibrated in accordance with manufacturer's instructions. Film thickness shall be measured in accordance with ASTM D 7091 and SSPC PA 2.

If a question arises about an individual coat thickness or coverage, it will be verified using a Tooke gauge, according to ASTM D 4138. If the Tooke gage shows the galvanization or powder coat to be less than the specified minimum thickness, the rail or component will be rejected even if the thickness of the total system equals or exceeds the total specified thickness.

The results of the QC testing shall be documented in a QC report, and submitted to the Engineer for approval.

The Engineer shall be provided notice and access to all rails, components and test panels at the powder coating facility for the purposes of acceptance inspection, including notice and access to witness all hardness and adhesion testing performed for QC testing. Rail(s), components and assemblies not meeting the above requirements will be subject to rejection by the Engineer.

Rejected beam, components and assemblies shall be repaired or re-coated by the powder coating applicator in accordance with the project specific powder coating plan as approved by the Engineer and be re-tested to confirm QC requirements at no additional expense to the Department.

Beam, components and assemblies shall not be shipped from the powder coating firm's facility to the project site until the Contractor receives the Engineer's approval of the above submittal information and quality control report.

## **VIII. SHIPPING AND ERECTION**

After curing and acceptance, the powder coating applicator shall protect the coated assemblies with multiple layers of wrapping, or other protective materials specified in the project specific powder coating plan.

During storage and subsequent shipping, each assembly shall be separated from other assemblies by expanded polystyrene spacers and other spacing materials specified in the project specific powder coating plan.

All guardrail and components shall be off-loaded and erected using extreme care to ensure coatings are not damaged. Upon delivery to the project site coated assemblies and hardware shall be thoroughly inspected by the Engineer for any coating defects or damage. If damage is found, the Engineer will determine if the extent of the damage will constitute a cause for rejection.

It is strongly recommended a representative from the powder coating applicator's firm be present to witness proper handling and erection processes are being employed by the Contractor to minimize or eliminate coating damage. Wood or other suitable material shall be used to protect tops of posts when pile driving.

All coating damage due to shipping, storage, handling, and erection operations shall be repaired by the Contractor at no additional expense to the Department. The Contractor shall provide the Engineer access to all locations of all powder coated members for verification of coating conditions prior to and following all coating repairs.

Repair damaged surfaces as follows:

1. Prepare surfaces in accordance with SSPC-SP 1 followed by SSPC-SP 2 or SSPC-SP 3. Solvents or degreasers used in SP 1 preparation shall be acceptable to the powder manufacturer and the manufacturer of the coating used for repair. Proof of acceptability shall be furnished to the Engineer. Extend the prepared area at least 2 inches into adjacent, tightly adhering, intact coating.
2. Feather the existing coating system surrounding each repair location. Feather the repair area for a distance of 1 inch to 2 inches to provide a smooth, tapered transition into the existing intact coating.
3. When the steel substrate is exposed in the repair area, the surface shall be prepared in accordance with SSPC SP11. Apply a coat of Organic Zinc primer conforming to ASTM A 780 in accordance with manufacturer's instructions and feather back existing coatings as stated above before re-application of topcoat.
4. The coating thickness of the touch-up material shall be the same thickness as the polyester and can be applied in multiple coats.

## **IX. WARRANTY**

Powder coated guardrail shall be warranted as specified herein for a period of three years from the date of acceptance. Should the coating system fail within three years after the project has been accepted, the coating shall be repaired by the Contractor in conjunction with the powder applicator at no cost to the Department. The extent and method of repair must be acceptable and agreed upon by the Department. System failure does not include damage from external agents, such as scraping from snow removal equipment, vandalism, debris impacts, collisions, etc., or normal loss of gloss and color. Once the duplex system (galvanizing and powder coating) has been accepted, a failure shall mean any visible corrosion, blistering, checking, cracking, or delamination (peeling) of the coating.

## **APPENDIX A**

### **POWDER COATING MANUFACTURERS**

Nortek Powder Coating, LLC  
5900 Success Drive  
Rome, NY 13440  
Ph: (888) –nortek7  
www.nortekpowder.com

Polytech Coating Labs  
P.O. Box 111  
951 Morgantown Road  
Reading, Pa. 19607  
Ph: (610) 375-1417  
www.polytechcoatinglabs.com

Protech, Inc.  
939 Monocacy Road  
York, Pa. 17404  
Ph: (713) 939-4000  
www.protechpowder.com

TCI Powder Coatings  
P.O. Box 13  
734 Dixon Drive  
Ellaville, Ga. 31806  
Ph: (800) 533-9067  
www.tcipowder.com

Tiger Drylac USA Inc.  
1100 Commons Boulevard  
Reading, Pa. 19605  
Ph: (610) 926-8148  
www.customerserviceeast@tiger-coatings.com

### **FACILITIES FOR APPLICATION OF POLYESTER POWDER OVER GALVANIZED SURFACES**

ASAP Powder Coating, Inc.  
9724 Williamsport Pike  
Falling Waters, WV 25419-3538  
Ph: (304) 274-3200  
www.asappowdercoating.com

Fortress Fusion Coatings, Inc  
P.O. Box 37  
New York Mills, NY 13417  
Ph: (315) 736-8311  
www.whyrust.com

ASCO – American Stripping Co.  
9025 Vassau Court  
Manassas Park, Va. 20111  
Ph: (703) 368-6573  
www.ascoweb.com

Applied Coating Systems, Inc.  
2915 Wilmarco Avenue  
Baltimore, Md. 21223  
Ph: (410) 644-4500

Iron World

Keener Coatings

9390 Davis Avenue  
Laurel, Md. 20723  
Ph: (866) 310-2747  
[www.ironworldfencing.com](http://www.ironworldfencing.com)

2711 Board Road  
York, Pa. 17406  
Ph: (800) 529-3893

Lane Enterprises  
1244 Claremont Road  
Carlisle, Pa. 17013  
Ph: (717) 249-8342  
[www.lane-enterprises.com](http://www.lane-enterprises.com)

Thomarios Powder Coating  
1122 Jacoby Road  
Copley, Oh 44321  
Ph: (330) 670-6400  
[www.thomarios.com](http://www.thomarios.com)

**END OF SECTION**

**SU512000A MOT Lump Sum**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**SECTION 512—MAINTAINING TRAFFIC (LUMP SUM)**

October 2, 2009ac

**SECTION 512** of the Specifications is amended as follows:

**Section 512.03—Procedures** is amended to add the following:

The Contractor shall submit a plan, sequenced with his plan of operations, to the Engineer for maintenance of traffic for his review prior to commencement of work. The plan shall be designed and implemented in accordance with the *Virginia Work Area Protection Manual*, the *MUTCD* and the Department generated project-specific temporary traffic control plan or requirements provided in the Contract Documents. When the Department provides a sequence of construction in the Contract documents the plans or estimated quantities for maintenance of traffic items are for estimating purposes only.

**Section 512.04—Measurement and Payment** is replaced with the following:

Maintenance of traffic including flagger service, pilot vehicles, electronic arrows, warning lights, channelizing devices, traffic barrier service, traffic barrier service guardrail terminals, impact attenuator service, construction pavement markings, construction pavement message markings, temporary pavement markers, eradication of existing pavement markings, temporary detours, aggregate material, Type III barricades, construction signs, and truck mounted attenuators will be paid for on a lump sum basis wherein no measurement will be made. The Contractor's price bid shall include, but not be limited to; providing a person to meet the basic work zone traffic control and intermediate work zone traffic control requirements of Section 105.14 of the Specifications; furnishing, placing, maintaining, replacing, relocating, adjusting, aligning, removing, flagger service, pilot vehicles, warning lights, electronic arrow, channelizing devices, traffic barrier service, traffic barrier service guardrail terminals, impact attenuator service, construction pavement markings, construction pavement message markings, temporary pavement markers, eradication of existing pavement markings, temporary detours, aggregate material, Type III barricades, construction signs, truck mounted attenuators, and all labor, material and equipment incidental to completing this work in accordance with the *Virginia Work Area Protection Manual* and traffic engineering guidelines and principles. Site specific adjustments to maintenance of traffic operations specified by the *Virginia Work Area Protection Manual* and the *MUTCD* such as quantity, location, or spacing of traffic control devices within construction limits or on any approaches to the project, required by the Engineer to improve traffic operation or safety shall be considered an alteration to the character of work in accordance with the provisions of Section 104.02 of the Specifications.

The Contractor will be paid 30-percent of the lump sum bid price upon satisfactory installation of the required maintenance of traffic items to commence construction operations and active prosecution of the work. Contingent upon active pursuit of the work, the Contractor will receive monthly payments for maintenance of traffic based on the daily dollar amount of the bid price for maintenance of traffic until 90-percent of the unit bid price is paid. The remaining 10 percent will be paid for after all maintenance of traffic items are removed at final acceptance of the Contract.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Maintenance of traffic	Lump sum

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
INFORMAL PARTNERING

January 14, 2008

**I. DECLARATION AND DESCRIPTION**

The Virginia Department of Transportation (VDOT) is firmly committed to the formation of a partnering relationship with the Contractor, all subcontractors, suppliers, FHWA representatives; where appropriate, other federal agencies, local government officials, utilities representatives, law enforcement and public safety officials, consultants, and other stakeholders to effectively and efficiently manage and complete each construction or maintenance contract to the mutual and individual benefits and goals of all parties. Partnering is an approach to fulfilling this commitment where all parties to the contract, as well as individuals and entities associated with or otherwise affected by the contract, willingly agree to dedicate themselves by working together as a team to fulfill and complete the construction or maintenance contract in cost effective ways while preserving the highest standards of safety and quality called for by the contract documents combined with the goals of on time/on budget completion. The approach must still allow for the fact that the members of the team share many common interests yet have differing authorities, interests, and objectives that must be accommodated for the project to be viewed as successful by all parties. It is recognized by VDOT that partnering is a relationship in which:

- Trust and open communications are encouraged and expected by all participants
- All parties move quickly to address and resolve issues at the lowest possible level by approaching problems from the perspectives and needs of all involved
- All parties have identified common goals and at the same time respect each other's individual goals and values
- Partners create an atmosphere conducive to cooperation and teamwork in finding better solutions to potential problems and issues at hand

**II. INFORMAL PARTNERING STRUCTURE**

It is the business intent of the Department that **informal** partnering will be required on **this** project, whereby the spirit and principles of partnering are practiced from onsite field personnel to executive level owners and employees. The VDOT Field Guide to Partnering available on the VDOT website <http://www.virginiadot.org/business/resources/partnerfinalallowres.pdf> will be the standard reference guide utilized to structure and guide partnering efforts. This guide will be systematically evaluated to incorporate better practices as our partnering efforts evolve. Of particular note is the need for effective and responsive communication between parties to the partnering relationship as emphasized by the Special Provision for Project Communication and Decision Making now included as standard provision in all contracts advertised by the Scheduling and Contract Division of VDOT.

Informal partnering need not require the services of a professional facilitator and may be conducted by the actual partnering participants themselves. Informal partnering, and more specifically the Partnering Charter, will not change the legal relationship of the parties to the Contract nor relieve either party from any of the terms of the Contract.

**III. PROCEDURES**

The following are general procedures for informal partnering and are not to be considered as inclusive or representative of procedural requirements for all projects. Participants shall consult



the VDOT Field Guide for Partnering for assistance in developing specific guidelines to those efforts required for their individual projects.

At least 5 days prior to or in connection with the preconstruction conference the Contractor shall attend a conference with the Engineer at which time he and the Engineer shall discuss the extent of the informal partnering efforts required for the project, how these have been accommodated in the Contractor's bid and the identity of expectations and stakeholders associated with the project. Informal partnering efforts require the Department and the Contractor to mutually choose a single person from among their collective staffs, or a trained facilitator to be responsible for leading all parties through the VDOT Field Guide to Partnering and any subsequent partnering efforts.

#### **Partnering Meetings During Project Construction**

In informal partnering efforts the Contractor shall provide a location for regularly scheduled partnering meetings during the construction period. Such meetings will be scheduled as deemed necessary by either party. The Contractor and VDOT will require the attendance of their key decision makers, including subcontractors and suppliers. Both the Contractor and VDOT shall also encourage the attendance of affected utilities, concerned businesses, local government and civic leaders or officials, residents, and consultants, which may vary at different times during the life of the Contract. The Department and the Contractor are to agree upon partnering invitees in advance of each meeting. Follow-up partnering workshops may be held throughout the duration of the project as deemed necessary by the Contractor and the Engineer.

#### **IV. MEASUREMENT AND PAYMENT**

**Informal Partnering**, because the extent to which certain partnering activities are pursued is at the Contractor's option, and may vary according to project complexity, work history between the parties, project duration, the Contractor's own unique methods, means, and schedule to execute and complete the work, etc.; will not be paid for as a separate bid item but the all costs associated with informal partnering efforts for the duration of the work shall be considered inclusive and incidental to the cost of other appropriate items.

—500 SERIES SSs (SUPPLEMENTAL SPECIFICATIONS)—

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS**SUPPLEMENTAL SECTION 512—MAINTAINING TRAFFIC**

**SECTION 512—MAINTAINING TRAFFIC** of the Specifications is amended as follows:

**Section 512.03(a) Signs** is amended to replace the last paragraph with the following:

When construction signs are covered to prevent the display of the message, the entire sign shall be covered with silt fence or other materials approved by the Engineer such that no portion of the message side of the sign shall be visible. Plywood shall be used on ground-mounted construction signs only. Attachment methods used to attach the covering material to the signs shall be of a durable construction that will prevent the unintentional detachment of the material from the sign. At no times shall a construction sign and/or post be rotated to prevent the display of the message. In addition, the posts where the signs are being covered shall have two ED-3 Type II delineators mounting vertically on the post below the signs at a height of 4 feet to the top of the topmost delineator. The bottom delineator shall be mounted 6 inches below the top delineator.

**Section 512.03(b) Flagger Service and Pilot Vehicles** is amended to replace the last paragraph with the following:

Portable traffic control signals conforming to the requirements of Section 512.03(h)2 of the Specifications may be used in lieu of flagger service when specified or approved by the Regional Traffic Engineer. When portable traffic control signals are used in lieu of flagger service, the portable traffic control signals will be measured and paid for separately.

**Section 512.03(e)b. Group 2 devices** is amended to replace the first paragraph with the following:

- b. **Group 2 devices** shall be drums or vertical panels. Drums shall be round, or partially round with no more than one flat side; made from plastic; have a minimum height of 36 inches, have a cross-sectional width no less than 18 inches in any direction; and conform to the requirements of the *Virginia Work Area Protection Manual*. Drums shall be designed to allow for separation of ballast and drum upon vehicular impact but not from wind and vacuum created by passing vehicles. Drums of two-piece design, i.e., drum and associated base, shall utilize sufficient amounts of enclosed sand at the base in accordance with the manufacturer's recommendations to provide stable drum support. The base shall be not greater than 5 inches in height. Two-piece drums may also utilize a flared drum foundation and collar of not more than 5 inches in height and of suitable shape and weight to provide stable support. One-piece drums may be used provided they comply with these above requirements.

**Section 512.03 Procedures** is amended to add (r) **Work Zone Traffic Control** as the following:

- (r) **Work Zone Traffic Control**: The Contractor shall provide individuals trained in Work Zone Traffic Control in accordance with the requirements of Section 105.14 of the Specifications.

**Section 512.04 Measurement and Payment** is amended to add the following:

**Basic Work Zone Traffic Control** – Separate payment will not be made for providing a person to meet the requirements of Section 105.14 of the Specifications. The cost thereof shall be included in the price of other appropriate pay items.

**Intermediate Work Zone Traffic Control** - Separate payment will not be made for providing a person to meet the requirements of Section 105.14 of the Specifications. The cost thereof shall be included in the price of other appropriate pay items.

**Section 512.04 Measurement and Payment** is amended to replace the pay item and corresponding pay unit for "**Eradication of existing pavement markings**" with the following:

**Eradication of existing pavement markings** will be measured in linear feet of a 6-inch width or portion thereof as specified herein. Widths that exceed a 6-inch increment by more than 1/2 inch will be measured as the next 6-inch increment. Measurement and payment for eradication of existing pavement markings specified herein shall be limited to linear pavement line markings. Eradication of existing pavement markings will be paid for at the contract unit price per linear foot. This price shall include removing linear pavement line markings and disposing of residue.

**Eradication of existing nonlinear pavement markings** will be measured in square feet based on a theoretical box defined by the outermost limits of the nonlinear pavement marking. Nonlinear pavement markings shall include but not be limited to stop bars, arrows, images and messages. Eradication of existing nonlinear pavement markings will be paid for at the contract unit price per square foot. This price shall include removing nonlinear pavement markings and disposing of residue.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Eradication of existing pavement marking	Linear foot
Eradication of existing nonlinear pavement marking	Square foot

**— DIVISION VI—ROADSIDE DEVELOPMENT —**

NONE

**— DIVISION VII—TRAFFIC CONTROL DEVICES —**

—700 SERIES SSs (SUPPLEMENTAL SPECIFICATIONS)—

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

**SUPPLEMENTAL SECTION 700—GENERAL**

**SECTION 700—GENERAL** of the Specifications is amended as follows:

**Section 700.02(i)** the first sentence is replaced with the following:

**Poles, posts, and overhead sign structures** shall conform to the following:

**Section 700.02(i)2.** is replaced with the following:

2. **Overhead sign structures, signal poles (mast arm and strain), and high-mast lighting poles** shall be steel.

**Section 700.02(i)4. Poles, posts, and overhead sign structures** is replaced with the following:

4. **Sign posts** shall be wood or steel. Square tube post shall be hot-rolled, carbon sheet steel, structural steel quality, conforming to the requirements of ASTM A 1011, Grade 50 except the yield strength after cold-forming shall be 60,000-psi minimum. Steel mounting brackets shall conform to the requirements of ASTM A36. Posts (inside and outside) shall be galvanized in accordance with the requirements of ASTM A653, Coating Designation G-90.

**Section 700.02(i)** the first and second paragraph is replaced with the following:

Lighting, signal, pedestal poles; sign posts; and overhead sign structures not designed to support variable message signs shall conform to the requirements of the 1994 Edition of AASHTO's *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*.

Overhead sign structures, including "butterfly" structures, designed to support variable message signs shall conform to the requirements of the 2001 Edition of AASHTO's *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* and the following clarifications:

- Basic wind speed shall be used in the designs. The alternate method for wind pressures provided in Appendix C shall not be used.
- When the installation location of the structures lies between isotachs, the basic wind speed shall be determined by using the higher adjacent isotach.
- Any optional design parameters indicated in the AASHTO specification that are "allowed when acceptable to the owner" shall not be used for the designs.

Steel poles, posts, and overhead sign structures shall be hot-dip galvanized after fabrication. Except when shop painting is required, steel poles and posts shall be given one shop coat of primer and two field coats of paint and the galvanization finish of overhead sign structures shall be field treated for paint retention and two coats of paint applied.

**Section 700.04(a)1. Grounding Electrodes** is amended to replace the seventh paragraph with the following:

- The Contractor shall install a junction box at the primary grounding electrode location for access to the electrode for connection and testing. Grounding electrode conductors shall



be installed under the bottom flange of the junction box. The grounding electrode shall be centered in the bottom of the junction box with a minimum of 6 inches exposed. The junction box cover shall have the letters "VDOT ELEC" cast in the depression on the top.

**Section 700.04(a)2. Grounding electrode testing** is replaced with the following:

2. **Grounding electrode testing:** Primary grounding electrodes shall be tested after each 10-foot grounding electrode and/or section thereof is installed using the fall of potential (three-point measurement) method. After the primary grounding electrode is installed and tested, the Contractor shall connect to the augmented electrode(s) to conduct a system test. The Contractor shall disconnect the grounding electrode conductor from the service equipment ground bus and bonding bushing before testing the grounding electrodes/system. The Contractor shall test the grounding electrode as required by the manufacturer's instructions for the type of earth testing equipment. The Contractor shall record the readings on a form provided by the Regional Traffic Engineering Office. The completed form shall be signed and submitted to the Engineer after installation of the electrical service grounding.

**Section 700.04(e) Poles, Posts, and Sign Structures** is amended to include the following:

Square tube sign post shall have 7/16-inch (+/- 1/64-inch) openings or knockouts spaced 1-inch on centers on all four sides. When specified on the plans a 2 3/16-inch inner-post shall be used with the 2 1/2-inch post for additional strength. The inner-post shall be no less than 6 feet long.

Where posts are to be mounted on a retaining wall or barrier, the Contractor shall provide a mounting bracket, fabricated from steel conforming to the requirements of ASTM A36 and hot dipped galvanized in accordance with ASTM A123. Mounting bracket shall be designed so no connection to the barrier is made on the traffic side of the barrier and shall be secured to the barrier and wall using stainless steel chemically adhesive anchors.

**Section 700.04(g)1. Electrical service and lighting conductor identification** is amended to replace the fifth paragraph with the following:

Color-coding shall be as follows:

**2-wire circuits, 120 Volts; 3-wire circuits, 120/240 Volts; 3-phase, 4-wire wye circuits, 208/120 Volts and; 3-phase, 4-wire delta circuits, 240 Volts**

Circuit Designation	Color Code
Phase A or Line A	Black
Phase B or Line B	Red or orange*
Phase C	Blue
Grounded Conductor (Neutral)	White or gray** (see exception above)
Equipment Grounding Conductor	Bare, green, or green with one/more yellow stripes

**3-phase, 4-wire wye circuits, 480/277 Volts; 3-phase, 3-wire delta circuits, 480 volts**

Circuit Designation	Color Code
Phase A	Brown
Phase B	Orange
Phase C	Yellow
Grounded Conductor (Neutral)	White or gray** (see exception above)
Equipment Grounding Conductor	Bare, green, or green with one/more yellow stripes

- \* For 3-phase, 4-wire delta circuits, Phase B shall be the high leg and shall be orange.
- \*\* For outer covering of conductors of different systems that is contained within the same enclosure, refer to Article 200 of the NEC.

**Section 700.04(h) Conduit Systems** is amended to include the following:

When a conduit enters a box, fitting, or other enclosure, a bushing shall be provided to protect the conductor cable from abrasion unless the design of the box, fitting, or enclosure is such to afford equivalent protection of the conductor cable.

**Section 700.04(h)2. Buried conduit systems** is amended to replace the second paragraph with the following:

When conduit is to be installed under an existing roadway, entrance, or fixed object and open cutting is not permitted, conduit shall be installed by an approved directional boring method. Conduit for the directional boring method shall be PVC designed specifically for the directional boring operation or high-density PE. When the plans show more than one conduit at a location to be installed by directional boring, with the Engineers approval the Contractor may elect to install multiple conduits into a single bore at no additional cost to the Department.

<b>MAXIMUM PILOT OR BACK REAMER BIT DIAMETER WHEN ROATED 360<sup>0</sup></b>	
<b>NOMINAL INSIDE PIPE DIAMETER INCHES</b>	<b>BIT (REAMER) DIAMETER INCHES</b>
1 - 2"	4" BORE HOLE
2 - 2"	5" BORE HOLE
3 - 2"	8" BORE HOLE
1 - 3"	5" BORE HOLE
2 - 3"	6 ½ " BORE HOLE
3 - 3"	8" BORE HOLE
1 - 4"	6 ½ " BORE HOLE

The Contractor shall use an approved stabilizing agent mixed with potable water to create the drilling fluid (mud slurry) for lubrication and soil stabilization. The fluid viscosity may vary to best fit the soil conditions encountered. Do not use any chemicals or polymer surfactants in the drilling fluid without written consent from the Engineer. The Contractor shall certify to the Engineer in writing that any chemical added to the drilling fluid is environmentally safe and not harmful or corrosive to the conduit system.

The Contractor may elect to use the jacked method to install a pipe sleeve for installation of the required conduit at no additional cost to the Department.

If an obstruction is encountered during the directional boring or jacking operation that requires abandonment of the hole (tunnel), it shall be backfilled with a flowable fill immediately, at no additional cost to the Department.

**Section 700.04(i) Junction Box Covers** is replaced with the following:

- (i) **Junction Boxes** shall be installed as follows:

The junction box site shall be excavated such that the depth of the excavation shall be the height of the junction box plus at least twelve inches to allow for bedding aggregate material and such that the width shall be six to eight inches wider than the junction box.

Bedding material shall be No. 68, No. 78, or No. 8 aggregate or Crushed Glass conforming to No. 78, or No. 8 gradation requirements. Aggregate shall be a minimum of twelve inches in depth and entirely cover the bottom of the junction box excavation. The bedding aggregate shall be leveled and tamped prior to installing the junction box.

Junction box shall be installed and leveled to grade prior to backfilling.

Prior to backfilling the interior of polymer concrete junction boxes (JB-S1, JB-S2 and JB-S3) shall be braced with 2 inch by 4 inch lumber using two braces across the width and one brace across the length of the box or as required by the manufacturer. Bracing shall be installed to facilitate removal once back filling and compaction have been completed. The Contractor shall remove internal bracing after the backfilling and compacting operation has been completed.

The cover of the junction box shall be installed prior to backfilling.

The junction box shall be backfilled and compacted around its perimeter utilizing six to eight inch horizontal lifts to where the concrete collar is to begin. Once the concrete collar has cured the remaining area around the collar shall be backfilled and compacted as stated above. Compaction shall be at least ninety percent of the theoretical maximum density as defined in Section 101.02 of the Specifications. A mechanical tamping device shall be used to compact the backfill and soil layer by layer around the perimeter of the junction box. The wheel of a backhoe or other type vehicle shall not be used for compaction of backfill and soil. The internal bracing shall be removed after backfilling and compaction has been completed. The area around the junction box shall be graded and restored as stated in the Specifications.

Junction boxes shall not be installed or backfilled in standing water. Backfill material shall be free of large stones, wood or other debris and shall not be saturated with water.

If a special tool or wrench is required to remove the cover, the Contractor shall furnish the Engineer with five such tools.

**Section 700.05—Measurement and Payment for Concrete foundations** is replaced with the following:

**Concrete foundations** will be measured and paid for in units of each or cubic yards of concrete as applicable. When paid for in cubic yards of concrete, no payment will be made for concrete in excess of the cubic yards of concrete required by the foundation design unless otherwise approved by the Engineer. This price shall include foundation design, concrete, reinforcing steel, stub poles, slip base, anchor sleeve, anchor bolts, bolt circle templates, grounding equipment, conduits, excavating, backfilling, compacting, disposing of surplus and unsuitable material, and restoring existing areas.

**Section 700.05—Measurement and Payment for Overhead and bridge-mounted sign structures** is replaced with the following:

**Overhead sign structures** will be measured in units of each and will be paid for at the contract unit price per each. This price shall include structural units and supports, hand holes and covers, grounding lugs, electrical systems including conduit and fittings, and identification tags.

**Section 700.05—Measurement and Payment for, Junction boxes** is replaced with the following:

**Junction boxes** will be measured in units of each and will be paid for at the contract unit price per each. This price shall include concrete collars, frames and covers, tools to remove the cover, ground rods, ground conductors, grounding lugs, knockouts, cable racks, bracing, aggregate, excavating, backfilling, compacting, disposing of surplus and unsuitable material, and restoring existing areas.

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**SUPPLEMENTAL SECTION 701—TRAFFIC SIGNS**  
**SECTION 701—TRAFFIC SIGNS**

**SECTION 701—TRAFFIC SIGNS** of the Specifications is amended as follows:

**Section 701.03—Procedures** is amended as follows:

**Section 701.03(a)2. Sign panels** is amended to include the following:

Extruded sign panels shall be in accordance the drawings and Section 229.02(c) of the Specifications.

**Section 701.03(d) Erection** is amended to replace the first sentence of the first paragraph with the following:

Vertical clearance for overhead sign structures shall be no less than 19 feet 0 inch and no more than 21 feet 0 inch from the bottom of the lowest mounted sign panel to the crown of the roadway unless otherwise specified on the plans

**Section 701.03(d) Erection** is amended to delete the last sentence of the first paragraph:

**Section 701.03(d) Erection** is amended to delete the last paragraph:

**Section 701.03(d) Erection** is amended to include the following:

Overlay panels shall be preformed on a flat surface with no protruding bolts or bolt heads on the existing sign panel.

Overlay of overhead sign panels shall be in accordance with the plan details.

## **PROJECT SPECIFIC PROVISIONS**

The following provisions to the Specifications are specific to this project only:

1. **SECTION 102.07—PROPOSAL GUARANTY** of the Specifications is amended to replace the first sentence with the following:

A bid in excess of \$250,000.00 will not be accepted or considered unless accompanied by a guaranty in the form of a bid bond made payable to the City of Williamsburg.

2. **SECTION 102.12—PUBLIC OPENING OF BIDS** of the Specifications is amended to replace the first sentence with the following:

Electronic Bids will not be accepted. Bids will be received and read publicly at the time and place specified in the Notice of Advertisement.

3. **SECTION 221-02—DETAIL REQUIREMENTS** of the Specifications is amended to include following:

(e) **Aggregate** shall be Brown Aggregate per City Standards (as approved by City Engineer).

4. **SECTION 302.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS Sidewalk – Drainage (Sidewalk Bridge)**, will be measured in units of each and will be paid for at the contract unit price per each. This price will include associated curbing, stainless steel screen with steel ties (including associated welding), galvanized steel angle, galvanized anchors, concrete panel with fiber reinforcing, and stone bedding. Installation shall conform with the detail presented in the plans.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Drainage (Sidewalk Bridge)	Each

5. **SECTION 315.02—MATERIALS** of the Specifications is amended to include following:

(i) **Epoxy dark brown coating** shall be applied to all guardrails and guardrail terminals as approved by the City Engineer.

6. **SECTION 504.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS Sidewalk – Brick Paver**, will be measured in square yards of finished surface, complete-in-place, and will be paid for at the contract unit price per square yard. Each structure located within the limits of the sidewalk having an area greater than 1 square yard will be excluded in computing the square yards of sidewalk.

**NS Sidewalk – Concrete Paver**, will be measured in square yards of finished surface, complete-in-place, and will be paid for at the contract unit price per square yard. Each structure located

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within the limits of the sidewalk having an area greater than 1 square yard will be excluded in computing the square yards of sidewalk.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Sidewalk – Brick Paver	Square yard
NS Sidewalk – Concrete Paver	Square yard

7. **SECTION 505.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS Guardrail GR-2** will be measured in linear feet and will be paid for at the contract unit price per linear foot including hardware and epoxy dark brown coating.

The price for reuse guardrail shall include transporting and storing; repairing and installing salvaged guardrail beam; and furnishing and placing guardrail posts, blockouts, and hardware.

**NS Guardrail Terminal GR-6** will be measured in units of each and will be paid for at the contract unit price per each. Price includes dark brown powder coating.

**NS Guardrail Terminal GR-7** will be measured in units of each and will be paid for at the contract unit price per each. Price will include dark brown powder coating.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Guardrail GR-2	Linear foot
NS Guardrail Terminal GR-6	Each
NS Guardrail Terminal GR-7	Each

8. **SECTION 506.04—EASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS WALL (CONCRETE)**, will be measured in linear feet (as measured along top of wall), complete-in-place, within the limits and dimensions as shown on the plans, and will be paid for at the contract unit price per linear foot. This price per linear foot shall include layout for construction, excavation for footing, leveling stone, forming, drains, concrete, epoxy coated steel reinforcing, concrete finishing, placing and compaction of backfill materials, and fine grading of earth to subgrade elevation within the work area of the concrete retaining wall.

**NS WALL (BRICK MASONRY)**, will be measured in linear feet (as measured along top of wall), complete-in-place, within the limits and dimensions as shown on the plans, and will be paid for at the contract unit price per linear foot. This price per linear foot shall include preparation of existing concrete footer for the work (removal of excess mortar, leveling surface of existing concrete footer), doweling for reinforcing bar, brick, mortar, layout for construction, ladder reinforcing, drain holes (cutouts), cleanup and surface finishing/preparation of brick masonry wall.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
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NS Wall (Concrete)	Linear foot
NS Wall (Brick Masonry)	Linear foot

9. **SECTION 507.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS PEDESTRIAN FENCE (42” BLACK 2-RAIL METAL)**, will be measured in linear feet (as measured along top of fence), complete-in-place, within the limits and dimensions as shown on the plans, and will be paid for at the contract unit price per linear foot. This price per linear foot shall include all materials and work associated with the installation of the black metal fence as shown in the plans and as set forth in SECTION 05 52 00 of the project specific provisions.

**NS PEDESTRIAN FENCE (42” WHITE 3-RAIL WOOD)**, will be measured in linear feet (as measured along top of fence), complete-in-place, within the limits and dimensions as shown on the plans, and will be paid for at the contract unit price per linear foot. This price per linear foot shall include pressure treated wood and post materials, excavation of post holes, galvanized fasteners, layout for construction, and double coating of white primer.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Pedestrian Fence (42” Black 2-Rail Metal)	Linear foot
NS Pedestrian Fence (42” White 3-Rail Wood)	Linear foot

10. **SECTION 511.03—MEASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS Dust Control**, will be measured in square yards of disturbed area designated by the Engineer for the purpose of allaying dust, and will be paid for at the contract unit price per square yard.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Dust Control	Square yard

11. **SECTION 603.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to replace with the following:

**Lime**, will not be measured for separate payment, all cost for performing this work shall be included in the price for **Roadside Restoration**.

**Fertilizer**, will not be measured for separate payment, all cost for performing this work shall be included in the price for **Roadside Restoration**.

**Seed**, will not be measured for separate payment, all cost for performing this work shall be included in the price for **Roadside Restoration**.

**Overseeding**, will not be measured for separate payment, all cost for performing this work shall be included in the price for **Roadside Restoration**.



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**Mulch**, will not be measured for separate payment, all cost for performing this work shall be included in the price for **Roadside Restoration**.

**Roadside Restoration**, will be measured in square yards of finished surface, complete-in-place, and will be paid for at the contract unit price per square yard. Prices for roadside restoration shall include application of seed, fertilizer, and lime at the rates scheduled and shall include preparing seed beds; furnishing and applying seed; furnishing and applying mulch; and maintaining seeded areas until final acceptance.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Roadside Restoration	Square yard

12. **SECTION 609.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to replace with the following:

**NS Landscape (Tree Well)**, will be measured in units of each and will be paid for at the contract unit price per each. Price will include the frame and tree grates. Responsibility of frame positioning shall be by the contractor engaged in constructing the brick paver sidewalk. Responsibility of installing the tree grate shall be by the contractor engaged in installing the landscape materials.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Landscape (Tree Well)	Each

13. **SECTION 700.02—MATERIALS (i)** of the Specifications is amended to replace with the following:

- (i) **Sign posts** shall be 2-1/2" solid square tube painted dark green per city standard (available from Korman Signs).

14. **SECTION 701.03—PROCEDURES (a)** of the Specifications is amended to replace with the following:

- (a) **Fabrication:**

1. **Aluminum welds:** Aluminum shall be welded in accordance with the requirements of Section 407.
2. **Sign panels:** Panels shall be fabricated of aluminum 0.100-inch thickness and shall be smooth, flat, and free of metal burrs and splinters. Sign panels for overlays shall be 0.080-gage aluminum alloy conforming to the requirements of Section 229.02(a).
3. **Applying reflective background sheeting:** Sheeting shall be applied in accordance with the requirements of the manufacturer's recommendations.

A single piece of applied sheeting shall be at least 4 by 4 feet on sign panels 16 square feet or more in area, except for sign panels fabricated with fluorescent prismatic lens orange sheeting. Sign panels 16 square feet or more in area and fabricated with fluorescent prismatic lens orange sheeting shall consist of sheeting at least 4 by 2 feet except that one

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piece of sheeting may be less than 2 feet wide to obtain the exact dimension required. Joints, splices, or laps will not be permitted on sign panels less than 16 square feet in area except for the following:

- a. One factory splice from the roll will be permitted.
- b. One joint will be permitted on fluorescent prismatic lens orange signs when one dimension of the panel is greater than 36 inches and less than 48 inches.

When more than one width of sheeting, except fluorescent prismatic lens orange, is applied to a sign panel, sheeting edges shall form a vertical butt joint or may overlap not more than 3/8 inch. Where horizontal joints are used, except for fluorescent prismatic lens orange sheeting, the bottom edge of the top sheeting shall lie over the top edge of the next lower sheeting in a shingle lap of not more than 3/8 inch. Multiple pieces of fluorescent prismatic lens sheeting shall be installed with a gap 1/32 to 1/16 inch between the edges. Sheeting shall be carefully matched to maintain uniform shading and prevent contrast between widths of sheeting.

The finished sign shall be free from cracks, gaps, streaks, wrinkles, blisters, discoloration, buckles, and warps and shall have a smooth surface of uniform color.

4. **Letters, numerals, arrows, symbols, borders, and other features of the sign message:** message shall be formed to provide a continuous stroke width with smooth edges; present a flat surface free from warps, blisters, wrinkles, burrs, and splinters; and conform to the following:

- a. **Type L1, screen process, applied:** Features shall be produced by a direct or reverse screening process approved by the Engineer. Sign messages and borders that are darker than the sign field shall be applied to the reflective sheeting by a direct process. Sign messages and borders that are lighter than the sign field shall be produced by the reverse process in which the message and border are outlined by a color that is darker than the paint or the sheeting on the sign field. Transparent colors, inks, and paints used in the screening process shall be of the type and quality recommended by the sheeting manufacturer.

Screening shall produce a uniform color and tone. Edges of the legend and borders shall not have blemishes.

Signs shall be air dried or baked in accordance with the manufacturer's recommendations to provide a smooth, hard finish.

- b. **Type L2, plastic film sheeting, applied:** Features of the sign message shall be cut from plastic film sheeting of the color specified on the plans. Sheeting shall be an elastomeric pigmented film suitably compounded and processed, coated on one side with an adhesive, and covered with a paper liner that shall be removable from the adhesive without being moistened. Adhesive shall be activated by heat or a solvent recommended by the sheeting manufacturer and shall be suitable for use with a hand roller, squeeze roller, or vacuum applicator that will form a durable bond to wood, metal, plastic, porcelain enamel, paint lacquer, and reflective sheeting. Sheeting shall be at least 0.002 and not more than 0.0035 inch in thickness and sufficiently opaque so that its color will be unaffected by the color of the sign field.

- c. **Type L3, cutout, reflective sheeting, and pressure applied:** Features of the sign message shall be cut from approved reflective sheeting of the color specified on the

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plans. Sheeting shall have heat-activated or pressure-sensitive adhesive and be applied to the background sheeting in accordance with the requirements of the manufacturer's recommendations.

- d. **Type L4, overlay film, pressure applied:** Features of the sign message are created by using a background sheeting of the color needed for the sign message and then applying the overlay film with the sign message areas removed from the film. The overlay film shall be transparent and shall be of the color needed to provide the correct background color of the sign.
- 5. **Joining sign base panels:** Horizontal joints will not be permitted. Where multiple vertical panels adjoin, the face and edges shall be milled or finished to a tolerance of  $\pm 1/32$  inch from a straight plane such that no gap more than 1/16 inch is allowed between panels.
- 6. **Applying the sign message:** Features shall be straight, properly spaced, smooth, and free from irregular edges.
- 7. **Sign finishing:** The complete outer edge, splices, messages, borders, and back of signs shall be sealed after application to the sign panel. Sealant material and its application shall be in accordance with the sheeting manufacturer's recommendations.
- 8. **Rejected sign messages:** Sign messages rejected by the Engineer shall be immediately obliterated by the Contractor.
- 9. **Street Name Signs:** Street name signs shall be dark green with white border, Bookman Font, and Initial Letter Capitalized as approved by the City Engineer.

**END OF SECTION**

- 15. **SECTION 705.04—MEASUREMENT AND PAYMENT** of the Specifications is amended to include the following:

**NS Lighting (Post & Fixture)**, will be measured in units of each, and will be paid for at the contract unit price per each. This price will include both the light fixture and post. This price shall include the body, slipfitters, refractors, ballast, reflectors, sockets with lamps, conductor cables to the termini at the base, photoelectric controls and sockets, adjustment, and testing.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
NS Lighting (Post & Fixture)	Each

- 16. **Amend the following** to the Specifications:

The Contractor shall apply for a VDOT Land Use Permit on behalf of the City of Williamsburg for work within York County along Bypass Road. New sidewalk within York County will be maintained by the City of Williamsburg. The City shall be listed as the Owner and the Contractor shall be the Agent. The performance bond for the project may be used as the Land Use Permit surety providing the bond has a dual obligation rider that specifically lists VDOT as an obligee. Application fees for the Land Use Permit are waived per the regulations because this is a Locally

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Administered VDOT Project. Cost for obtaining the Land Use Permit shall be incidental to the cost of the project and no separate payment shall be made. The Contractor shall complete the following forms in order to be issued the Land Use Permit.

- o [Land Use Permit Application](#) (note that City is the Owner, and Contractor is the Agent)
- o [Land Use Permit Special Provisions](#)
- o [Work Zone Traffic Control Certification Verification](#)
- o [Erosion and Sediment Control Contractor Certification](#)

**END OF SECTION**

**17. Amend the following** to the Specifications:

All components of the water distribution system shall be installed and tested in accordance with the latest edition of the Hampton Roads Planning District Commission (HRPDC) Regional Standards and the Virginia Department of Health Waterworks Regulations. All components of the sanitary sewer system shall be installed and tested in accordance with the latest edition of the HRPDC Regional Standards and the Virginia Department of Health Sewage Collection and Treatment Regulations. The contractor shall use only new materials, parts, and products on all projects. All materials shall be stored so as to assure the preservation of their quality and fitness for the work. A copy of the HRPDC Regional Standards must be kept on-site by the contractor during the full time of installing, testing, and conveying the facilities. The general contractor shall adhere to the provisions of HRPDC Regional Construction Standards and Specifications for the following references, and any related references, as related to sanitary sewer systems and water distribution systems:

- HRPDC Section 700 – Products and Materials
- HRPDC Section 801 – Water Distribution Systems
- HRPDC Section 802 – Sanitary Gravity Sewer Systems
- HRPDC Section 805 – Separation of Water and Sewer
- HRPDC Section 810 – Sewer Pipe Cleaning
- HRPDC Section 811 – Television Inspection
- HRPDC Section 812 – Bypass Pumping
- HRPDC Section 813 – Pipe Rehabilitation by Cured-in-place pipe method
- HRPDC Section 816 – Sewer pipe joint testing
- HRPDC Section 821 – Sanitary Sewer Service Reconnections

**END OF SECTION**

**18. Amend the following** to the Specifications:

**SECTION 05 52 00 - METAL RAILINGS**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Steel square tube railings, balusters, and fittings.

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2. Section 231 - Painting and Coating: Paint finish.

## **1.2 REFERENCE STANDARDS**

- A. ASTM International:
  1. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
  2. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  3. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  4. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
  5. ASTM A513 - Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
- B. National Association of Architectural Metal Manufacturers:
  1. NAAMM Metal Finishes Manual.
- C. National Ornamental & Miscellaneous Metals Association:
  1. NOMMA Guideline 1 - Joint Finishes.
- D. SSPC: The Society for Protective Coatings:
  1. SSPC - Steel Structures Painting Manual.
  2. SSPC Paint 15 - Steel Joist Shop Primer/Metal Building Primer.
  3. SSPC Paint 20 - Zinc-Rich Coating, Type I - Inorganic and Type II - Organic.

## **1.3 SUBMITTALS**

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

## **1.4 QUALITY ASSURANCE**

- A. Perform Work of this Section according to ASTM E985.
- B. Finish joints according to NOMMA Guideline 1.

## **1.5 EXISTING CONDITIONS**

- A. Field Measurements: Verify field measurements prior to fabrication. Indicate field measurements on Shop Drawings.

## **PART 2 PRODUCTS**

### **2.1 PERFORMANCE AND DESIGN CRITERIA**

- A. Design handrail, guardrail, and attachments to resist forces as required by applicable code. Apply loads non-simultaneously to produce maximum stresses.
  1. Guard Top Rail Concentrated Load: 200 lb. (0.89 kN) applied at any point in any direction.

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2. Intermediate Rails, Panels, and Baluster Concentrated Load: 50 lb. (0.22 kN) applied to 1 sq. ft. (300 sq mm) area.

**B. Steel Railing System:**

1. Pipe: ASTM A53 (A53M), Grade B, Schedule 40.
2. Posts: 1-inch (25.4-mm)- square steel tubing; welded joints.
3. Mounting: flanges with steel brackets for embedding in masonry. Prepare backing plate for mounting in masonry construction.]
4. Exposed Fasteners: Flush countersunk bolts; consistent with design of railing.
5. Splice Connectors: Steel welding collars
6. Galvanizing: According to ASTM A123 (A123M); hot-dip galvanized after fabrication.
7. Touchup Primer for Galvanized Surfaces: SSPC Paint 20, Type II - Organic, zinc-rich.

**2.2 FABRICATION**

- A. Fit and shop-assemble components in largest practical sizes for delivery to Site.
- B. Fabricate components with joints tightly fitted and secured. Furnish spigots and sleeves to accommodate Site assembly and installation.
- C. Form simple and compound curves by bending pipe in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of pipe throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of pipe.
- D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- F. Exterior Components: Continuously seal joined pieces by continuous welds. Drill condensate drainage holes at bottom of members at locations not encouraging water intrusion.
- G. Interior Components: Continuously seal joined pieces by continuous welds.
- H. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Verify that field conditions are acceptable and are ready to receive Work.
- B. Verify that concealed blocking and reinforcement are installed and correctly located to receive wall-mounted handrails.

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**3.2 PREPARATION**

- A. Clean and strip primed steel items to bare metal where Site welding is required.
- B. Supply items required to be embedded in masonry with setting templates to appropriate Sections.

**3.3 INSTALLATION**

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Anchor railings to structure with anchors and plates.
- C. Field-weld anchors as indicated on Shop Drawings. Touch up welds with primer. Grind welds smooth.
- D. Conceal bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.
- E. Assemble with spigots and sleeves to accommodate tight joints and secure installation.
- F. Upon final assembly and inspection, paint railing, fasteners, and mounting with two coats of gloss black rust preventing paint.

**END OF SECTION**

## **TRAFFIC MANAGEMENT PLAN**

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### **Introduction**

The City of Williamsburg Department of Public Works proposes a Type A Project - Project consists of sidewalk improvement work at six (6) areas of public streets within the City of Williamsburg totaling approximately 8,832 linear feet. This project will generally consist of

- Removing existing concrete sidewalks and saw-cutting existing pavements.
- Installing new curb and gutter & new concrete sidewalks
- Installing new concrete or paver sidewalks and entrances.
- Installing accessible ramps (CG-12).
- Removing and reinstalling traffic signs where impacted by sidewalk construction.
- Full road restoration in parts of Area 4.

### **TEMPORARY TRAFFIC CONTROL PLAN**

#### **General Notes**

- The work will be carried out per notification by the Contractor to the City of Williamsburg Department of Public Works indicating the locations per Area.
- One lane to two lanes at a time, including shoulders, will be affected during construction activities in or immediately adjacent to the corresponding lane. The Temporary Traffic Control for this project will be installed in accordance with the 2005 Virginia Work Area Protection Manual.
- The limits of the work areas along with the latest Average Daily Traffic Volumes is included in the scoping report.
- Traffic includes a wide variety of traffic types including trucks, commuters, visitors, and residents.

#### **Special Details**

There are no special details for this project that are not addressed in the contract documents, the Special Provisions, and the Virginia Work Area Protection Manual.

### **PUBLIC COMMUNICATIONS PLAN**

City Inspector is to coordinate with the City of Williamsburg Department of Public Works office to publish announcements regarding lane closures for the project. Each lane closure will be governed by the times established by the City Engineer or Designee as shown within the contract.



## **TRANSPORTATION OPERATIONS PLAN**

- 1) The process to notify the Department of Public Works will be :
  - a) Contractor shall advise City Engineer or Designee of planned lane closure schedule by 3 P.M. on Thursday for the following week.
  - b) City Engineer or Designee to submit planned lane closure schedule to Director of Public Works by 9 A.M. on Friday for the following week.
  - c) Director of Public Works to review planned lane closure schedule and return to City Engineer or Designee by 12:00 P.M. Friday.
  - d) Contractor to confirm their intent to install proposed and previously approved lane closures with the City Engineer or Designee a minimum of 24 hours in advance of proposed lane closure as previously scheduled.
  - e) The Department of Public Works Office will use various media publications to announce planned lane closures, if necessary and as deemed appropriate.
  
- 2) The following is a list of local emergency contact agencies:

Emergency 911 Center	911
Fire Department Haz-Mat (if spill involved)	911
Police non-emergency:	757-220-2331
Fire non-emergency:	757-220-6220
Public Works:	757-220-6140
	(After hours 220-6196)
Emergency Operations Center 444 North Boundary Street:	757-220-6171

- 3) Procedures to respond to traffic incidents that may occur in the work Zone:
  - a) Contractor to notify City Police Department and City Inspector assigned to project.
  - b) Depending upon severity of incident, contractor may have to cease work.
  - c) Upon arrival on scene, City Police Department to determine response necessary to allow traveling public around incident.
  - d) City Inspector to notify City Engineer or Designee and Department of Public Works supervisors of incident and take pictures as necessary, especially pictures of contractor's Work zone to verify the proper setup.
  
- 4) Process of notification of incident to be followed is :  
City Inspector to call:
  - a) City Engineer, 757-220-6141
  - b) Department of Public Works, Director, 757-220-6140
  
- 5) The City Police Department will take control of the incident and direct its clearing and restoration to normal traffic conditions. If the incident has injuries or is a hazmat, Fire Department will control the incident.
  
- 6) The City Police Department report of the incident will be reviewed by the City Engineer or Designee and Director of Public Works to determine if any modifications of the Temporary Traffic Control Plan are necessary. If it is determined that it is necessary to alter the plan, then a meeting will be called with the Contractor, City Inspector, City Engineer, Director of Public Works and the Police Department (if necessary) to discuss modification and implementation of an improved traffic control plan.