



CITY OF BUENA VISTA

PROJECT MANUAL

for

**2020 RT. 60 & RT. 501 PAVING PROJECT
BUENA VISTA, VIRGINIA**

Buena Vista Project 2020-02

Prepared for:

**2039 SYCAMORE AVENUE
BUENA VISTA, VA 24416**

Prepared by:

**A. MORTON THOMAS AND ASSOCIATES, INC.
113 MILL PLACE PARKWAY, UNIT 107
VERONA, VIRGINIA 24482**

SET NO.:_____

JUNE 2020

CITY OF BUENA VISTA, VIRGINIA

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INVITATION FOR BID
CITY OF BUENA VISTA, VIRGINIA

Sealed Bids for:

2020 RT. 60 & RT. 501 PAVING PROJECT

Sealed bids will be received by the City of Buena Vista, 2039 Sycamore Avenue, Buena Vista, VA 24416, at or before 3:00 p.m., local time, on July 17, 2020, at which time all bids received will be publicly opened and read. Bids received after 3:00 p.m. will not be accepted or considered.

The Bid Documents may also be examined during business hours at the following locations:

City of Buena Vista, 2039 Sycamore Avenue, Buena Vista, VA 24416, second floor.

Beginning on June 15, 2020 Bid Documents may be either downloaded from A. Morton Thomas & Associates, Inc (AMT Engineering) at the following location:

<http://ftp.amtengineering.com/>

Username: cityofbuenavista

Password: 17-0932.003

Copies of the Bid Documents can also be purchased for \$50.00 each set (non-refundable) from A. Morton Thomas & Associates, Inc. 113 Mill Place Parkway, Unit 107, Verona, VA 24482, telephone (540) 248-1273. Checks for the Bid Documents should be payable to A. Morton Thomas & Associates. Provide a separate payment by check of \$15.00 (non-refundable) per set if shipping is required, payable to A. Morton Thomas & Associates. Cost includes first-class postage or equivalent only.

All Contract Documents prepared and/or furnished by the City shall be the exclusive property of the City of Buena Vista, Virginia, and shall not be used for any other project(s).

Each bidder is solely responsible for ensuring that such bidder has the current complete version of the Bid Documents prepared for the project, including any addenda issued by the City, before submitting a bid.

A non-mandatory pre-bid conference will be conducted via Zoom on Wednesday, July 8, 2020 at 10:00 a.m. It is strongly recommended that Bidders attend this online conference. Those wishing to attend the Zoom meeting should email jhoward@amtengineering.com for a formal meeting invite.

Bidders and all subcontractors are required to comply with all applicable city, state, and federal laws, ordinances, and regulations; and are required to be properly licensed under Sections 54.1-1100, et seq., Code of Virginia (1950), as amended. Bidders shall deposit with their bid a Bid Security executed in the amount and form stipulated in the Instructions to Bidders.

The City expressly reserves the right to cancel this Invitation for Bid and/or reject any or all bids, to waive any informality or irregularity in the bids received, and to accept a bid from the lowest responsive and responsible bidder which is deemed to be in the best interest of the City.

To determine the lowest responsive and responsible bidder who may be awarded a Contract for the Work, the criteria set forth in or requested pursuant to the Instructions to Bidders or in the Bid Documents may be considered.

By submitting a bid, each bidder agrees that this is a solicitation of bids and each bidder agrees to be solely responsible for the cost or expense of its bid and the City shall have no responsibility for such costs or expenses.

If the bid by the lowest responsive and responsible bidder exceeds available funds, the City reserves the right to negotiate with the apparent low bidder pursuant to Section 2.2-4318 of the Code of Virginia. The conditions and procedures under which such negotiation may be undertaken are set forth in Section 2.2-4318, and Section 14.3 of Instructions to Bidders. Any such negotiated Contract shall be subject to final approval by the City in its sole discretion.

Bids may not be withdrawn for a period of sixty (60) calendar days after the opening of bids unless the bid is substantially lower than the other bids because of a clerical error as defined in Section 2.2-4330, of the Code of Virginia (1950), as amended. Pursuant to Section 2.2-4330 (B)(1), the bidder shall give notice in writing and shall submit the original work papers with such notice to the City of its claim of right to withdraw the bid within two (2) business days after the opening of bids.

The Successful Bidder shall comply with the Code of Virginia nondiscrimination provisions of Section 2.2-4311 and the Drug-free workplace provisions of Section 2.2-4312.

Pursuant to Code of Virginia, Section 2.2-4343.1, be advised that the City of Buena Vista does not discriminate against faith-based organizations.

By: Mr. John Cole
Department of Public Works

CITY OF BUENA VISTA, VIRGINIA

INSTRUCTIONS TO BIDDERS

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CITY OF BUENA VISTA, VIRGINIA

INSTRUCTIONS TO BIDDERS

SECTION 1. DEFINITIONS

Definitions contained in Section 1 of the General Conditions are incorporated herein by reference. The bidder should refer to the General Conditions for definitions used in the Contract Documents. Whenever used in the General Conditions or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof, and where applicable to any other legal entity such as a corporation, partnership, limited liability company, etc.

The section and paragraph headings are inserted for convenience only.

SECTION 2. EXAMINATION OF THE SITE AND CONTRACT DOCUMENTS

- 2.1** Each bidder is responsible for examining carefully the site of the Work and the Contract and Bid Documents relating to the Work. By submitting a bid, the bidder acknowledges and agrees that it has examined and considered the conditions to be encountered at and adjacent to the site, the character, quality, and quantities of work to be performed, the material to be furnished, other requirements of the Contract Documents, and to have waived any claim or objection based thereon. Claims as a result of failure to have done such examination will not be considered by the City. See Section 8 of the General Conditions entitled "Conditions at the Site."
- 2.2** Each bidder shall promptly notify, in writing, the Engineer of any ambiguity, inconsistency, or error which may be discovered upon examination of the Invitation for Bid, any Bid Documents, and/or any related documents.

SECTION 3. CLARIFICATION AND ADDENDA

- 3.1 Contact:** Direct contact with any City employee and/or City's consultant (if applicable) without the permission of the City Department of Public Works or her designated representative, on the subject of this bid, is strictly forbidden. Violation of this Instruction may result in disqualification of Bid.
- 3.2 Questions on Contract Documents:** All questions about the meaning or intent of the Contract Documents shall be directed to the Engineer in writing. Questions received less than seven (7) calendar days prior to the date for opening bids may not be answered. Bidders may only rely upon written addenda issued by the Engineer and no other communication or interpretation, whether oral or written, shall have any effect or efficacy.
- 3.3 Addenda:** Each Bidder is solely responsible for ensuring that such Bidder has the current, complete version of the Invitation for Bid documents, including any addenda, before submitting a bid. Receipt by the bidder of such addendum should be acknowledged on the Bid Form and/or addendum.
- 3.4 Interpretation:** All decisions made in good faith by the Engineer on the meaning or interpretation of the Contract Documents shall be final.

- 3.5 Bidders Responsibility:** All bidders are responsible for ensuring that they have received and examined all addenda that may have been issued before submitting their bid.
- 3.6 Quantities:** Where the bid documents stipulate a unit price, the quantities of the work and material set forth in the proposal form or on the plans approximately represent the work to be performed and material to be furnished and are for the purpose of comparing the bids on a uniform basis. Payment shall be made to the Contractor only for the actual quantities of work performed or material furnished in accordance with the plans and specifications and it is understood that the quantities may be increased or decreased as provided in the General Conditions without in any way invalidating the bid prices.

SECTION 4. TIME FOR COMPLETION

- 4.1 Time for Completion:** All work shall be completed before November 20, 2020.
- 4.2 Weather:** The bidder, in preparing and submitting its bid, is required to take into consideration normal weather conditions. Normal weather means a range of weather conditions which might be anticipated, based on weather data for the past ten years. Unusual weather is weather which could not be anticipated based on such data. Normal weather conditions shall be determined from the public historical records available from the National Weather Service. The data sheets to be used shall be for the locality or localities closest to the site of the Work. No additional compensation will be paid to the Contractor because of unusual weather conditions; however, an extension of time for unusual weather may be considered by the City as indicated in the General Conditions.
- 4.3 Liquidated Damages:** The amounts indicated in the Contract for liquidated damages as described in the General Conditions (Section 21) shall be due from and paid by the Contractor to the City for each consecutive calendar day of delay in excess of the stated time required to complete the Work, unless modified by Change Order.

SECTION 5. CONTRACTORS' LICENSES, PERMITS, FEES, AND TAXES

- 5.1 State License:** Bidders and all subcontractors are required to comply with all applicable city, state, and federal laws, ordinances, and regulations, including, but not limited to, registration with the Virginia State Corporation Commission if required by law; and are required to be properly licensed in accordance with Sections 54.1-1100, et seq., of the Code of Virginia, which presently requires one to be licensed as a "Class A Contractor" before submitting a bid of One Hundred Twenty Thousand Dollars (\$120,000) or more; or to be licensed as a "Class B Contractor" before submitting a bid of Ten Thousand Dollars to One Hundred Twenty Thousand Dollars (\$10,000 to \$120,000); or to be licensed as a "Class C Contractor" before submitting a bid of One Thousand Dollars to Ten Thousand Dollars (\$1,000 to \$10,000). There are also cumulative total amounts which can require a certain class of license and bidders should check these requirements as well. Bidders shall show evidence of being properly licensed and supply the documents required in Section 14.4 of these Instructions to Bidders. (See also Section 7 of the General Conditions.)
- 5.2 Other Licenses, Permits, Fees, and Taxes:** Successful Bidder is responsible for paying for all licenses, permits, fees, and taxes applicable to the project. Such charges and fees include, but are not limited to the applicable building permits, mechanical and electrical permits, hauling and dumping of material, and applicable, such bidder will have to possess a City business license. The City of Buena Vista waives the fees associated with business license on City projects. See Section 3 of the General Conditions.

- 5.3 Virginia State Corporation Commission:** Each Bidder who is a stock or nonstock corporation, limited liability company, business trust, or a limited partnership or other business entity shall be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if required by law. Each such Bidder shall include in its bid response the Identification Number issued to it by the Virginia State Corporation Commission (SCC) and should list its business entity name as it is listed with the SCC. Any Bidder that is not required to be authorized to transact business in the Commonwealth as a domestic or foreign business entity as required by law shall include in its bid response a statement describing why the Bidder is not required to be so authorized. (See Va. Code Section 2.2-4311.2).

SECTION 6. PREPARATION AND SUBMISSION OF BIDS

- 6.1 Bid Form:** Bids shall be submitted on the Bid Form furnished, or copy thereof, and shall be completed and signed in ink. A copy of the Bid Form is provided in these specifications for the information of bidders only. Except as may be otherwise stated, all blank spaces in the Bid Form should be filled in and under no conditions shall any changes be made in the phraseology of the Bid Form. Erasures or other changes in a bid amount must be explained or noted over the initials of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the bid documents, or irregularities of any kind, may be rejected by the City as being incomplete and/or non-responsive. NO CHANGES MADE TO THE BID FIGURES BY NOTATIONS ON THE OUTSIDE OF THE ENVELOPE WILL BE CONSIDERED IN THE REVIEW AND TABULATION OF BIDS OR FOR ANY OTHER PURPOSE.
- 6.2 Signatures:** Each bid must give the full business address of the bidder and be signed by bidder with its usual signature. Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which they are incorporated and by the signature and designation of the president or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below each signature. A bid by a person who affixes to his signature the word "President," "Authorized Agent," or other designation without disclosing such principal firm or employer, may be held to be the bid of the individual signing. Satisfactory evidence of the authority of the president or authorized agent signing on behalf of the corporation shall be furnished upon request by the City.
- 6.3 Bid Amounts:** Bidders shall indicate in the appropriate blank spaces on the Bid Form the amounts for the base bid and any alternates, written with ink or typed. Any unit prices for separate items as called for on the Bid Form shall be written with ink or typed in figures in the appropriate blanks.
- 6.4 Bid Package Checklist:** Bidders shall deposit with their bid the documents or information set forth in the Bid Package Checklist. See Section 16 of these Instructions to Bidders.

SECTION 7. RECEIPT AND OPENING OF BIDS

- 7.1 Delivery of Bid:** It is the responsibility of the bidder to assure that its bid is delivered to the place designated for receipt of bids and prior to the time set for receipt of bids. No bids received after the time designated for receipt of bids will be considered.

- 7.2 Receipt of Bid:** The Bid Form, the Bid Security, and all other documents required to be submitted with the bid shall be submitted to Mr. John Cole, Department of Public Works, either at 2039 Sycamore Avenue Buena Vista, Virginia 24416, or via email at JCole@bvcity.org. Bid proposals transmitted through the postal service or other means must be contained in a separate envelope, with no markings other than shown below to prevent accidental opening prior to proposal bid date.

Sealed Bid for 2020 Rt. 60 & Rt. 501 Paving Project
Bid Opening Date – July 17, 2020

Name of Contractor
Address
Telephone Number
Fax Number

Virginia State Contractors License Number: _____

- 7.3 Opening of Bid:** Bids will be opened and read at the time and place stated in the Invitation for Bid. The contents may be made public in accordance with Section 2.2-4342 of the Code of Virginia. The officer or agent of the City, whose duty it is to open them, will decide when the specified time has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.
- 7.4 Withdrawing Bid:** After the date of opening of bids, no bid may be withdrawn for at least sixty (60) calendar days after such opening date, except as provided in Section 12 of these Instructions to Bidders.

SECTION 8. BID SECURITY

Each bid, for construction services in excess of \$100,000, must be accompanied by a Bid Security in an amount equal to five (5%) percent of the maximum possible bid price in accordance with Sections 2.2-4336 and 4338 of the Code of Virginia. The Bid Security shall be furnished in one of the following forms:

- a. Bid Bond, in a form substantially as provided in the Contract Documents, made payable to the City of Buena Vista and properly executed by the bidder as Principal and a Corporate Surety authorized to transact business in the Commonwealth of Virginia. Attorneys-in-fact who execute Bid Bonds must file with the bond a certified copy of their Power of Attorney.
- b. Certified Check, cashier's check, or cash deposited with the City of Buena Vista Treasurer in the face amount required for the Bid Security and made payable to the City of Buena Vista.
- c. Personal Bond, Property Bond, or Letter of Credit issued by an authorized financial institution in the face amount required for the Bid Security, made payable to the City of Buena Vista. These forms of security shall be submitted for review and must be approved by the City Attorney, in his sole discretion, with receipt of bids. Approval will be based upon a determination that the form of security offered will adequately protect the interests of the City as equivalent to a corporate surety's bond.
- d. For return of Bid Security, see Sections 13 and 14 of these Instructions to Bidders.

SECTION 9. INTENT

- 9.1 Work Required:** The City requires that the successful bidder perform a complete and satisfactory job in accordance with the Contract Documents.
- 9.2 Conflicts in Contract Documents:** Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all Contract Documents. In the case of conflict between the Contract Documents, the Contract Documents shall take precedence in the following order: The Contract; addenda starting with the last issued addendum; the Supplemental General Conditions; the General Conditions; the Special Conditions; and the specifications with attachments.
- 9.3 Work Not Described:** All work not specifically described in the Contract Documents, yet required to produce a fully functional and properly operating project, shall be provided even though every item or minor detail for the proper installation or successful operation of the entire Work is not mentioned in the Contract Documents.
- 9.4 Completion of Work:** The Successful Bidder acknowledges and agrees that it has taken into account in its bid the requirements of the bid and Contract Documents, local conditions, availability of material, equipment, labor, and any other factors which may affect the performance of the Work. The Successful Bidder agrees and warrants that it will complete the Work not later than the time period or date indicated for completion.

SECTION 10. MATERIAL AND WORKMANSHIP

- 10.1 "Or Equal" Clause:** The particular brand, make of material, device, or equipment described in the Contract Documents establishes a standard of required function, economy of operation, dimension, appearance, and quality to be met by any proposed substitution. No substitution will be considered unless a written request for approval has been submitted by the bidder and has been received by the Engineer at least ten (10) calendar days prior to the date for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data, and any other information necessary or required by the City for an evaluation. A statement setting forth any changes in other material, equipment, or work that incorporation of the substitute would require shall be included. The burden of proof of merit of the proposed substitute is upon the bidder.
- 10.2 Approval of Substitution:** The City's decision of approval or disapproval of a proposed substitution shall be in its sole discretion and shall be final. If the Engineer approves any proposed substitution, such approval will be set forth in an addendum issued to all recorded bidders. Bidders shall not rely on approvals made in any other manner.
- 10.3 Adaptation Due to Substitution:** The Successful Bidder shall be responsible for making all changes in the Work necessary to adapt and accommodate any equivalent product or item which it uses. The necessary changes shall be made at the Successful Bidder's sole expense.
- 10.4 Material Disposal:** Waste generated from flexible pavement planing shall be disposed of at a location selected by the bidder after approval from the City or selected by the City, but within five (5) miles of the project. This disposal shall be considered incidental to the work and will not be measured for payment.

SECTION 11. STATEMENT OF QUALIFICATIONS

Each bidder shall be prepared to submit evidence of qualifications, experience, and financial ability to perform the Work set forth in the Contract Documents, should such be required by the Contract Documents or requested by the City Department of Public Works. Furthermore, each bidder must notify the City Department of Public Works if bidder has been terminated from any contract or job in the last three (3) years and/or if bidder has been during the last three (3) years debarred from bidding on or performing any federal, state or local procurement or job. If so, bidder must supply details of such matters by separate written statements included with bidder's response. Any bidder who is currently debarred will not be eligible to bid on this project.

SECTION 12. ERRORS IN BIDS

- 12.1 Withdrawal of Bid:** A bidder may withdraw its bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents, and material used in the preparation of the bid sought to be withdrawn.
- 12.2 Withdrawal Procedure:** The bidder shall give notice in writing and shall submit the original work papers with such notice to the City of its claim of right to withdraw its bid within two (2) business days after the conclusion of the opening of bids as set forth in Section 2.2-4330 (B)(1), of the Code of Virginia.
- 12.3 Withdrawal Requirements:** Other applicable provisions of Section 2.2-4330, of the Code of Virginia shall apply to any errors in bids or any requested withdrawal due to errors in bids.

SECTION 13. REJECTION OF BIDS

- 13.1 Rejection of Bids:** The City reserves the right to cancel the Invitation for Bid, to reject any or all bids, to reject the bid of a bidder who is not in a position to perform the contract, or to waive any informalities in any bid.
- 13.2 Bid Security Return for Rejected Bids:** The Bid Security will be returned to all rejected bidders after the City has issued and posted an Award.
- 13.3 Bid Security Return for Unsuccessful Bids:** Should a bid not be accepted by the City within sixty (60) consecutive calendar days after the opening of bids, or within such other time specified in the Bid Documents, each bidder may obtain its Bid Security from the City.

SECTION 14. ACCEPTANCE OF BIDS, EVALUATION OF BIDS, AWARD OF CONTRACT, AND SECURITY REQUIREMENTS

- 14.1 Acceptance of Bids:** Each bidder should submit with its bid: documentation of bidder's legal name and indicate the type of business entity bidder is operating under; i.e., if a corporation, bidder should enclose a copy of the Certificate of Incorporation issued by the State Corporation Commission; if a partnership, bidder should enclose a copy of the relevant portions of the Partnership Agreement; if a limited liability company, bidder should enclose a copy of the Certificate of Organization.

14.2 Evaluation and Award to Lowest Responsive and Responsible Bidder: To determine the lowest responsive and responsible bidder with respect to this bid, the following items may be considered so as to protect the interest of the City:

- a. The total base bid price plus the price of any alternates (aka- additive bid item) the City elects to accept, if any. (This is where a lump sum amount is required.) The City reserves the right to accept alternates in any order or combination.
- b. If a unit price contract is requested, the total amount based on the estimated quantities as set forth in the Bid Form will be considered. (The listed unit prices for each item will control and any multiplication errors may be adjusted by the Purchasing Division using the proper estimated quantities.)
- c. The ability, capacity and skill of the bidder to perform the contract or provide the services and/or items required.
- d. Whether the bidder can perform the contract promptly and within the time specified, without delay or interference.
- e. The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- f. The quality of performance of previous contracts or services.
- g. The previous and existing compliance by the bidder with laws and ordinances relating to the contract, purchase or service.
- h. The equipment and facilities available to the bidder to perform the contract or provide the services and/or items.
- i. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the services and/or items.
- j. The quality, availability and adaptability of the supplies, materials, equipment or services to the particular use required.
- k. The ability of the bidder to provide future maintenance, parts and service for the use of the subject of the purchase or contract, if required.
- l. Bids shall be evaluated based on the requirements set forth in this Invitation for Bid, and other criteria, to determine acceptability such as inspection, testing, quality, workmanship, delivery, suitability for a particular purpose and life cycle cost. The City, in its sole discretion, may elect to waive an informality in any bid.

Should a Contract be awarded to a bidder, it will be awarded to the lowest responsive and responsible bidder.

14.3 Negotiation of Bid: If the bid by the lowest responsive and responsible bidder exceeds available funds, the City reserves the right to negotiate with the apparent low bidder pursuant to Section 2.2-4318 of the Code of Virginia. The conditions and procedures under which such negotiation may be undertaken are that the appropriate City officials shall determine that the lowest responsive and responsible bid exceeds available funds and notify such bidder in writing of its desire to negotiate. Thereafter, negotiations with the apparent low bidder may

be held to obtain a Contract within available funds involving discussions of reduction of quantity, quality, or other cost saving mechanisms. Any such negotiated Contract shall be subject to final approval of the City, in the sole discretion of the City.

14.4 Contract Execution: The Successful Bidder shall be required, within fourteen (14) consecutive calendar days after receipt of the Contract, to return the signed Contract, and furnish to the City all other documents as enumerated hereinafter:

- a. Performance Security (if applicable)
- b. Labor and Material Payment Security (if applicable)
- c. Certificate of Insurance

14.5 Security: A Performance Security and a Labor and Material Payment Security each in the amount of one hundred percent (100%) of the contract amount for all contracts in accordance with Sections 2.2-4337 and 4338 of the Code of Virginia, shall be furnished by the Successful Bidder in one of the following forms:

- a. A Performance Bond and a Labor and Material Payment Bond, on forms as provided in the Contract Documents, made payable to the City of Buena Vista, properly executed by the successful bidder as Principal and a Corporate Surety authorized to transact business in the Commonwealth of Virginia. Attorneys-in-fact who execute the bonds must file with each bond a certified copy of their Power of Attorney.
- b. Certified Checks, Cashier's Check, or Cash Escrow in the face amount required for the Performance Security and the Labor and Material Payment Security each made payable to the City of Buena Vista.
- c. Personal Bond, Property Bond, or Letter of Credit issued by an authorized financial institution in the face amount required for the Performance Security and the Labor and Material Payment Security, made payable to the City of Buena Vista. These forms of security must be approved by the City Attorney, in his/her sole discretion. Approval will be based upon a determination that the form of security offered will adequately protect the interests of the City as equivalent to a corporate surety's bond.

14.6 Bid Security Return for Successful Bid: Upon the execution of the Contract and approval of the Performance and Payment Securities, the Bid Security will be returned to the Successful Bidder upon request. Should the successful bidder fail or refuse to execute the Contract or furnish the required Performance and Payment Securities within the stipulated time, the Bid Security shall be due and paid to the City and the City shall be entitled to collect the Bid Security. In addition, the City may pursue any and all other remedies available to it at law or in equity against said bidder.

SECTION 15. ETHICS IN PUBLIC CONTRACTING

The provisions, requirements, and prohibitions as contained in Sections 2.2-4367 through 2.2-4377, of the Code of Virginia, pertaining to bidders, offerors, contractors, and subcontractors are applicable to this project. Direct contact with any City employee and/or City's consultant (if applicable) without the permission of the City Department of Public Works or her designated representative, on the subject of this bid, is strictly forbidden. Violation of this Instruction may result in disqualification of Bid.

SECTION 16. BID PACKAGE CHECKLIST

The following items must be completed and included in your bid package. Failure to include all required forms may result in rejection of the bid. If any of these documents were not included with your Project Manual, please contact the City Department of Public Works at (540) 261-8600.

- a. Completed Bid Form (all pages)
- b. Properly Executed Bid Security (Bid Bond, Certified or Cashier's Check, etc., if applicable)
- c. Documentation of bidder's legal name and type of business entity
- d. Certificate of Incorporation, if applicable
- e. Partnership Agreement, if applicable
- f. Certificate of Organization, if applicable

SECTION 17. PROTESTS

Any bidder who wishes to protest or object to any award made or other decisions made pursuant to the Invitation for Bid may do so only in accordance with the provisions of Sections 2.2-4357, 4358, 4359, 4360, 4363, and 4364 of the Code of Virginia, and only if such is provided for in such Code section.

SECTION 18. MISCELLANEOUS

- a. No bidder shall confer on any public employee having official responsibility for a purchasing transaction any payment, loan, subscription, advance, deposit or money, service, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is exchanged.
- b. The City may make investigations to determine the ability of the bidder to perform or supply the services or items as described in this Invitation for Bid. The City reserves the right to reject any bid if the bidder fails to satisfy the City that it is qualified to carry out the obligations of the proposed contract.
- c. The Successful Bidder must comply with the nondiscrimination provisions of Section 2.2-4311 of the Code of Virginia, which are incorporated herein by reference.
- d. The Successful Bidder must comply with the drug-free workplace provisions of Section 2.2-4312 of the Code of Virginia, which are incorporated herein by reference.
- e. It is the policy of the City of Buena Vista to maximize participation by minority, women, small, and service-disabled veteran-owned businesses in all aspects of City contracting opportunities.
- f. The Successful Bidder shall comply with all applicable City, State, and Federal laws, codes, provisions, and regulations.
- g. Providers of any outside services shall be subject to the same conditions and requirements as the Successful Bidder in regards to law, code or regulation compliance. The City

reserves the right of approval for any subcontract work, including costs thereof.

- h. This Invitation for Bid and all responses are subject to Section 2.2-4342 of the Code of Virginia regarding public inspection of records and the procedures a bidder must follow to protect trade secrets and proprietary information.
- i. Conflict of Interests Act. The provisions, requirements and prohibitions as contained in Sections 2.2-3100, et. seq. of the Code of Virginia are applicable to this Invitation for Bid.
- j. Insurance. Successful Bidder, and any of its subcontractors, shall, at its or their sole expense, obtain and maintain during the life of the resulting contract the insurance policies and bonds required. Any required insurance policies and bonds shall be effective prior to the beginning of any work or other performance by Successful Bidder, or any of its subcontractors, under any resultant contract. The policies and coverages required are those as may be referred to in the sample contract and/or the general conditions or other documents of this Invitation for Bid.
- k. Each bidder is to notify the City Department of Public Works if any of bidder's owners, officers, employees, or agents, or their immediate family members, is currently, or has been in the past year, an employee of the City of Buena Vista or has any responsibility or authority with the City that might affect the procurement transaction or any claim resulting therefrom. If so, please provide the City Department of Public Works with the complete name and address of each such person and their connection to the City of Buena Vista. Each bidder is advised that the Ethics in Public Contracting and Conflict of Interests Act of the Code of Virginia, as set forth in this Invitation for Bid, apply to this Invitation for Bid. Such information should be provided in writing before the bid opening date or may also be provided with the bid response.

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CITY OF BUENA VISTA, VIRGINIA

BID FORM

DATE: _____

SUBMITTED BY: _____
(Exact Legal Name of Bidder)

NOTE: ALL PAGES OF THE BID FORM ARE TO BE INCLUDED IN THE COMPLETED BID. ALSO, BIDS CONTAINING ANY CONDITIONS, OMISSIONS, UNEXPLAINED ERASURES, ALTERATIONS OR ITEMS NOT CALLED FOR IN THE BID, OR IRREGULARITIES OF ANY KIND, MAY BE REJECTED BY THE CITY AS BEING NON- RESPONSIVE. NO CHANGES ARE TO BE MADE TO THE BID FORM. ANY CHANGES TO A BID AMOUNT MUST BE INITIALED BY THE AUTHORIZED PERSON SIGNING THE BID FORM.

The undersigned hereby proposes and agrees, if this bid is accepted by the City of Buena Vista, to enter into a Contract with the City of Buena Vista, Virginia, (hereafter - City or Owner) to furnish all equipment, materials, labor, and services necessary to provide **asphalt milling and overlay of various portions of Route 60 and Route 501 within the City of Buena Vista and associated work**, in accordance with the Contract Documents as prepared by or for the City of Buena Vista.

Project limits are separated into three sections—two VDOT funded UPCs and one City funded section—but will be bid and constructed under one contract and are generally described as follows:

- Task A – VDOT Project Number U000-103-242, UPC 115105 – East and Westbound lanes Route 60 from East intersection Orchard Avenue to intersection Beech Avenue (0.50 miles).
- Task B – VDOT Project Number U000-103-241 UPC 115104 – North and Southbound lanes Route 501 from 0.03 miles south intersection West 3rd Street to 0.04 miles north intersection Beverly Hollow Lane (0.80 miles).
- Task C – City of Buena Vista Project 2020-02 – North and Southbound lanes Route 501 from 0.04 miles north intersection Beverly Hollow Lane to 0.25 Miles Intersection Beverly Hollow Lane (Southern City Limits) (.25 miles).

The undersigned agrees that the following Unit Prices will become a part of the Contract and in accordance with the Contract Documents shall be used for the purpose of adjusting the Contract Sum up or down for changes made by the City for increased or decreased quantities of work from estimated quantities as indicated on the Project Manual and/or in the Specifications. The Unit Prices shall include all labor, materials, equipment, services, overhead, profit, insurance, bonds, taxes, etc., to cover the finished work of the several kinds called for in place. There is no guaranteed maximum or minimum amount of the quantities for materials listed below.

BID

ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
1	Nontracking Tack Coat	5,457.68	GAL.	\$ _____	\$ _____
2	Asphalt Concrete Ty. SM-9.5A	3,056.30	TON	\$ _____	\$ _____
3	Flexible Pave. Planing 0" – 2"	27,288.38	SY	\$ _____	\$ _____
4	Ty. A Pave. Line Mark 6" (White)	11,419.00	LF	\$ _____	\$ _____
5	Ty. A Pave. Line Mark 4" (Yellow)	21,906.75	LF	\$ _____	\$ _____
6	Ty. A Pave. Line Mark 24" (White)	36.00	LF	\$ _____	\$ _____
7	Ty. B, CI I Pave Symb Marking Single Turn Arrow	8.00	EA	\$ _____	\$ _____
8	Ty. B, CI I Pave Symb Marking Merge LT Arrow	3.00	EA	\$ _____	\$ _____
9	Ty. B, CI I Pmnt Symb Marking Double Turn Arrow Thru / RT Arrow	1.00	EA	\$ _____	\$ _____
10	Maintenance of Traffic MOT	3.00	LS	\$ _____	\$ _____
11	Portable Temp. Rumble Strip Array	8.00	DAY	\$ _____	\$ _____
12	Flagger Service	290.00	HR	\$ _____	\$ _____
TOTAL BID					\$ _____

The undersigned acknowledges the receipt of the following addenda to the Contract Documents:

Addendum Number: _____	Dated: _____
Addendum Number: _____	Dated: _____
Addendum Number: _____	Dated: _____

The undersigned hereby agrees, if this bid is accepted by the City, to commence work with an adequate force and equipment on the date stipulated in the written "Notice to Proceed" from the City Department of Public Works and, unless otherwise directed by the City Department of Public Works to complete all work associated with the **2020 Rt. 60 & Rt. 501 Paving Project** on or before November 20, 2020 and to pay as the sum stated in the Contract for liquidated damages to the City of Buena Vista for each consecutive calendar day in excess of the time indicated to fully and satisfactorily complete the Work. Unless otherwise established in accordance with the contract provisions contained herein, the completion date of this contract will be on or before November 20, 2020.

By submitting a bid, the undersigned agrees it will not withdraw its bid during the time period provided for in the Invitation for Bid, except as provided for therein.

The Bidder, by submission of this bid, hereby certifies that such Bidder has read all of the bid

documents and such Bidder is making the certifications contained in, required by, and/or referred to in the bid documents and agrees to be bound by such certifications. Such Bidder further agrees that Bidder, if awarded a contract for this Project, shall provide the work, services, materials, and any other items as required by the bid documents and in compliance with such bid documents and/or any resultant contract, or referred to therein. Furthermore, if there is any conflict in any of the documents, the more stringent provisions shall take precedence unless otherwise required by HUD, Federal, State, and/or local laws, documents, regulations, rules, and/or procedures, in which case they will take precedence in that order unless otherwise required by law.

The undersigned agrees that if this bid is accepted by the City, the failure or refusal of the undersigned to execute the Contract with the City and furnish to the City the required bonds and certificates of insurance within fourteen (14) consecutive calendar days from receipt of the Contract Documents may result in a payment of the Bid Security to the City as liquidated damages.

The attention of each bidder is directed to Code of Virginia, Sections 54.1 -1100, et. seq., which requires certain licenses for contractors, tradesmen, and others. Each bidder is required to determine which license, if any, it is required to have under such sections. Complete the following:

Bidder _____ does have _____ does not have a Virginia Contractor's License.
(Check appropriate blank.)

If bidder has a Virginia Contractor's License, circle the class bidder has and list the number.

Licensed "Class A", "Class B", or "Class C" Virginia Contractor Number: _____

Identify Specialty: _____

If bidder has another type of Virginia License, please list the type and number:

Type of license: _____ Number: _____

Bidder is a _____ resident or _____ nonresident of Virginia.

(Check appropriate blank. See Code of Virginia, Sections 54.1-1100, et. seq.)

Virginia Code Section 2.2-4311.2 requires a bidder organized or authorized to transact business in the Commonwealth of Virginia pursuant to Title 13.1 or Title 50 of the Code of Virginia, as amended, or as otherwise required by law, to include in its bid the Identification Number issued to such bidder by the Virginia State Corporation Commission (SCC). Furthermore, any bidder that is not required to be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall include in its bid a statement describing why the bidder is not required to be so authorized. Please complete the following by checking the appropriate line that applies and providing the requested information:

A. _____ Bidder is a Virginia business entity organized and authorized to transact business in Virginia by the SCC and such bidder's Identification Number issued to it by the SCC is _____.

B. _____ Bidder is an out-of-state (foreign) business entity that is authorized to transact business in Virginia by the SCC and such bidder's Identification Number issued to it by the SCC is _____.

C. _____ Bidder does not have an Identification Number issued to it by the SCC and such bidder is not required to be authorized to transact business in Virginia by the SCC for the following reason(s):

Please attach additional sheets of paper if you need more space to explain why such bidder is not required to be authorized to transact business in Virginia.

The undersigned states and certifies that it has made a best or good faith effort to seek the participation of and utilize small, minority, women, and service disabled veteran–owned businesses as suppliers and subcontractors whenever possible for this Project.

State the complete legal name of the bidder, exactly as it is recorded with the State Corporation Commission, if recorded there.

LEGAL NAME: _____

BY: _____ TITLE: _____
(TYPED NAME: _____)

SIGNED NAME: _____

State Corporation Commission Identification No.: _____

DELIVERY ADDRESS: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE: _____ FAX: _____

CONTACT EMAIL ADDRESS: _____

DELIVERY OF BIDS: See Section 7.1 of the Instructions to Bidders.

Mr. John Cole
City Department of Public Works
2039 Sycamore Avenue
Buena Vista, VA 24416

Place on front of the envelope the following information.

Sealed Bid for 2020 Rt. 60 & Rt. 501 Paving Project

Bid Opening Date – July 17, 2020

Name of Contractor
Address
Telephone Number
Fax Number

Virginia State Contractors License Number: _____

CITY OF BUENA VISTA, VIRGINIA

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE, THE UNDERSIGNED,
_____, as Principal, and
_____, as Surety, are hereby held and
firmly bound unto the City of Buena Vista as Owner, in the penal sum of (\$_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. Signed, sealed, and delivered this _____ day of _____, 2020.

The condition of the above obligation is such that whereas the Principal has submitted to the City of Buena Vista a certain bid, attached hereto and hereby made a part hereof, to enter a contract in writing for the **2020 Rt. 60 & Rt. 501 Paving Project**.

NOW, THEREFORE, if the bid shall be rejected, or if the bid shall be accepted and the Principal shall execute and deliver to the City a Contract in the Form of Contract contained in the proposed Contract Documents, properly completed in accordance with the bid, and shall furnish bond for his faithful performance of the Contract and for the payment of all persons performing labor or furnishing materials in connection herewith within the specified time period, and shall in all other respects perform the agreement created by the acceptance of the bid, 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 the Surety and its bond shall be in no way impaired or affected by any extension of the time within which the City may accept such bid; and the Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunder 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 first set forth above.

Attest: _____ (SEAL)
Principal

By: _____
Title

Witness to signature of
Attorney-in-Fact: _____ (SEAL)
Surety

Witness By: _____
Attorney-in-Fact

(Attorneys-in-fact affix seal and attach current original or certified copy of power of attorney.)

CITY OF BUENA VISTA, VIRGINIA

SAMPLE CONTRACT

THIS CONTRACT, is dated this _____ day of _____, 2020, between, _____ hereinafter referred to as the "Contractor", and the City of Buena Vista, Virginia, a municipal corporation, chartered under the laws of the Commonwealth of Virginia, hereinafter referred to as the "City" or "Owner";

WITNESSETH:

THAT, WHEREAS, the Contractor has been awarded a contract by the City for furnishing all equipment, materials, goods, labor, and services necessary for providing milling and asphalt overlay of portions of Rt. 60 and Rt. 501 within the City of Buena Vista and associated Work, all in a proper and timely manner and in accordance with the Contract Documents, hereinafter and in the Contract Documents referred to as the "Work";

WHEREAS, the Contractor has entered into a performance and a payment bond, with surety, each in the penalty of One Hundred Percent (100%) of the Contract sum, payable to the City of Buena Vista as required by the Contract Documents;

NOW, THEREFORE, THIS AGREEMENT WITNESSETH:

ARTICLE 1. That, for and in consideration of the sums of money hereinafter specified to be paid by the City to the Contractor for the Work provided in the Contract Documents to be performed by the Contractor, the Contractor hereby covenants and agrees with the City to fully construct, perform, and complete the Work in a good and workmanlike manner in accordance with the Contract Documents to produce a fully functional and properly operating project within the time stipulated, time being made of the essence of this Contract; it being agreed by the parties hereto that the Contract Documents consist of this Contract and those items set forth in the definition of Contract Documents in Section 1 of the General Conditions and includes the following, all of which are and constitute a part of this Contract as if attached hereto or set out in full herein.

Project Manual dated June 2020 including:

- Invitation for Bid
- Instructions to Bidders
- General Conditions
- Supplemental General Conditions, if any,
- Insurance Requirements (Exhibit 1)
- Specifications
- Bid Form completed by Contractor for this project
- Contractor's Performance Security
- Contractor's Labor and Material Payment Security

ARTICLE 2. CONTRACT SUM: The City covenants and agrees to pay the Contractor for the Contractor's complete and satisfactory performance of the Work, in the manner and at the times set out in the Contract Documents, in current funds, the Contract Sum of _____ Dollars (\$_____), as provided for in the Contract Documents and as the Contract Sum may be increased or decreased by additions and/or reductions in the Work or as the Contract Sum may be decreased by the City's assessment

of liquidated damages against Contractor, or by setoff or as provided for in the Contract Documents or as allowed by law.

ARTICLE 3. TIME OF COMMENCEMENT AND COMPLETION: The Contractor shall commence the Work to be performed under this Contract on such date as is established and fixed for such commencement by written notice to proceed given by the City Manager to the Contractor, and the Contractor covenants and agrees to fully construct, perform, and complete the Work on or before November 20, 2020. The Contractor further agrees that the Work shall be started promptly upon receipt of such notice and shall be prosecuted regularly, diligently, and uninterruptedly at a rate of progress that will ensure full completion thereof in the shortest length of time consistent with the Contract Documents.

ARTICLE 4. LIQUIDATED DAMAGES: City and Contractor recognize that time is of the essence in the completion of the Work and that City will suffer loss or damages if the Work is not completed within the period of time stipulated above, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving the actual loss or damages suffered by City if the Work is not completed on time. Accordingly, if such Work is not fully and satisfactorily completed within the period of time set forth in Article 3, the Contractor agrees it shall owe to and pay to City as liquidated damages for loss of City's full use or occupancy of the Work, but not as a penalty, the rate applicable in accordance with the Schedule of Liquidated Damages, Table 4-1, or as otherwise specified in the Contract provisions.

TABLE 4-1
Schedule of Liquidated Damages

Original Contract Amount in Dollars	Daily Charge in Dollars
0.00 – 500,000.00	350
500,000.01 – 2,000,000.00	600
2,000,000.01 – 8,000,000.00	1,350
8,000,000.01 – 15,000,000.00	2,500
15,000,000.01 or more	3,100

Contractor further agrees that any liquidated damages City assesses against Contractor may also be withheld by City from any retainage or other sums City may otherwise owe to Contractor. Contractor hereby waives any defense as to the validity of any liquidated damages stated herein on the grounds such liquidated damages could be void as penalties or are not reasonably related to actual damages. All such liquidated damages are in addition to any other damages the City may be entitled to recover from Contractor.

ARTICLE 5. PAYMENT FOR WORK: Construction estimates for payment, including the final payment request, submitted by the Contractor shall be in accordance with the provisions of Sections 20, 21, and 22 of the General Conditions and such other provisions of the Contract Documents that may be applicable. Final payment will not be made until the Work has been fully and satisfactorily completed, the Contract duly performed, and Certificate of Final Acceptance has been issued by the City Manager or Public Works Director, all as provided for in the Contract Documents.

ARTICLE 6. NONWAIVER: Contractor agrees that the City's waiver or failure to enforce or require performance of any term or condition of this Contract or the City's waiver of any particular breach of this Contract by the Contractor extends to that instance only. Such waiver or failure is not and shall not be a waiver of any of the terms or conditions of this Contract or a waiver of any other breaches of the Contract by the Contractor and does not bar the City from requiring the Contractor

to comply with all the terms and conditions of the Contract and does not bar the City from asserting any and all rights and/or remedies it has or might have against the Contractor under this Contract or by law.

ARTICLE 7. FORUM SELECTION AND CHOICE OF LAW: By virtue of entering into this Contract, the Contractor submits itself to a court of competent jurisdiction in the City of Buena Vista, Virginia, and further agrees that this Contract is controlled by the laws of the Commonwealth of Virginia and that all claims, disputes, and other matters shall only be decided by such court according to the laws of the Commonwealth of Virginia.

ARTICLE 8. SEVERABILITY: If any provision of this Contract, or the application of any provision hereof to a particular entity or circumstance, shall be held to be invalid or unenforceable by a court of competent jurisdiction, the remaining provisions of the Contract shall not be affected and all other terms and conditions of the Contract shall be valid and enforceable to the fullest extent permitted by law.

ARTICLE 9. NONDISCRIMINATION:

A. During the performance of this Contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any Subcontractor, 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 reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
2. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal employment opportunity employer.
3. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

B. The Contractor will include the provisions of the foregoing Subsections A (1), (2), and (3) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

ARTICLE 10. Pursuant to the Code of Virginia, Section 2.2-4343.1, be advised that the City of Buena Vista does not discriminate against faith-based organizations.

ARTICLE 11. COMPLIANCE WITH FEDERAL IMMIGRATION LAW: Contractor agrees that Contractor does not, and shall not during the performance of this Contract, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

ARTICLE 12. COMPLIANCE WITH STATE LAW, FOREIGN AND DOMESTIC BUSINESSES AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA: Contractor shall comply with the provisions of Virginia Code Section 2.2-4311.2, as amended, which provides that a contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law. Contractor shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. The City may void the Contract if the Contractor fails to remain in compliance with the provisions of this section.

ARTICLE 13. CONTRACT SUBJECT TO FUNDING: This Contract is subject to funding and/or appropriations from federal, state, and/or local governments and/or agencies. If any such funding is not provided, withdrawn, or otherwise not made available for this Contract, the Contractor agrees that the City may terminate this Contract on seven (7) days written notice to Contractor, without any penalty or damages being incurred by the City. Contractor further agrees to comply with any applicable requirements of any grants and/or agreements providing such funding.

ARTICLE 14. NOTICES: All notices must be given in writing and shall be validly given if sent by certified mail, return receipt requested, or by a nationally recognized overnight courier, with a receipt. Notices shall be deemed to be effective one day after sending if sent by overnight courier or three (3) days after sending it by certified mail, return receipt requested.

ARTICLE 15. ENTIRE CONTRACT: This Contract is an entire and integrated contract and is not severable, except as set forth in Article 8, and may be modified only by written agreement properly executed by the parties.

SIGNATURE PAGE WILL FOLLOW

IN WITNESS WHEREOF, the parties hereto have signed this Contract by their authorized representatives.

Attest/Witness:

Typed Name of Contractor

By: _____
President/Vice-President; Partner or Owner

Typed or Printed Name and Title

Typed or Printed Name and Title

(Contractor's Corporate Seal)

Attest/Witness:

CITY OF BUENA VISTA, VIRGINIA

By: _____

Typed or Printed Name and Title

Typed or Printed Name and Title

Appropriation and Funds Required for this Contract Certified

Director/Deputy Director of Finance

Date: _____

Account #: _____

CT#: _____

Approved as to form:

Approved as to execution:

City Attorney/Assistant City Attorney

City Attorney/Assistant City Attorney

EXHIBIT 1

TO CONTRACT

BETWEEN CITY OF BUENA VISTA AND **SAMPLE INSURANCE REQUIREMENTS SECTION**

- A. Neither the Contractor nor any subcontractor shall commence work under this Contract until the Contractor has obtained and provided proof of the required insurance coverages to the City, and such proof has been approved by the City. The Contractor confirms to the City that all subcontractors have provided Contractor with proof of such insurance, or will do so prior to commencing any work under this Contract.
- B. Contractor, including all subcontractors, shall, at its and/or their sole expense, obtain and maintain during the life of this Contract the insurance policies and/or coverages required by this section. The City and its officers, employees, agents, assigns, and volunteers shall be added as an additional insured to the general liability and automobile coverages of any such policies and such insurance coverages shall be primary and noncontributory to any insurance and/or self-insurance such additional insureds may have. The Contractor shall immediately notify in writing the City of any changes, modifications, and/or termination of any insurance coverages and/or policies required by this Contract. The Contractor shall provide to the City with the signed Contract an Accord certificate of insurance along with one of the following types of additional insured endorsements:
- (1) ISO endorsement CG 20 33 which provides that the insured status of such entities is automatic if required by a contract or a written agreement otherwise known as a blanket additional insured endorsement. The coverage shall extend to the City and its officers, employees, agents, assigns, and volunteers. (If additional insured status is automatic under a different coverage form, Contractor must attach a copy of the coverage form to its certificate. Any required insurance policies shall be effective prior to the beginning of any work or other performance by Contractor and any subcontractors under this Contract).
- OR
- (2) ISO endorsement CG 20 10 will be issued, prior to the beginning of any work or other performance by Contractor under this Contract, to the City and its officers, employees, agents, assigns, and volunteers naming them as an additional insured under the general liability coverage. (A copy of the binder confirming the issuance must be attached to the certificate. Any required insurance policies shall be effective prior to the beginning of any work or other performance by Contractor and any subcontractors under this Contract).

However, if B (1) or (2) cannot be provided, the City Manager, in such Manager's sole discretion, may approve such other certificate of insurance or insurance document(s) that the City Manager deems acceptable. The Certificate Holder should be addressed as follows: City of Buena Vista, Attn: City Manager, 2039 Sycamore Avenue Buena Vista, VA 24416.

For All Contracts, the following minimum insurance requirements apply:

a. Workers' Compensation and Employers' Liability:

The Contractor shall obtain and maintain the following limits:

Workers' Compensation:	Statutory
Employers' Liability:	\$100,000 bodily injury by accident each occurrence
	\$500,000 bodily injury by disease (policy limit)
	\$100,000 bodily injury by disease each employee

b. Commercial General Liability:

Coverage is to be written on an "occurrence" basis and such coverage shall include broad form extension endorsements for both liability and property damage.

Completed Operations coverage will be required to be maintained for the life of the Contract.

For Limits of Liability see Sections 4.2 and 4.3 of these General Conditions.

c. Automobile Liability:

Limits for vehicles owned, non-owned, hired or borrowed shall not be less than:

- \$1,000,000 Bodily Injury and Property Damage combined single limit per occurrence.

d. Additional Insurance Requirements:

Additional specific insurance coverage minimum requirements to be provided by Contractor may include the following as detailed in the Supplemental General Conditions:

- 1) Builders Risk: At the discretion of the City, the Contractor, at its cost, shall obtain and maintain in the names of the City and the Contractor "all-risk" builders risk insurance (if approved by the City) upon the entire structure or structures on which the Work of this Contract is to be done and upon all material in or adjacent thereto or those that are "off-site" but which are intended for use thereon, to one hundred percent (100%) of the completed value thereof.
- 2) Property Coverage: Installation Floater (and Rigger's Form, if applicable) will be required for the installation of contents or equipment; coverage will begin with supplier and continue until equipment/contents have been fully installed. Floater will be valued for the replacement cost value of equipment/contents including all costs. The Contractor shall provide coverage for portions of the work stored off- site after written approval of the City at the value established in the approval and for portions of the work in transit.
- 3) Special Hazards: In the event special hazards are evident in the work contemplated, or if required by the Contract Documents, the Contractor shall obtain and maintain during the life of the Contract a rider to the policy or policies required, in an amount not less than that stipulated under the above Paragraphs. Should any unexpected special hazards be encountered during the performance of this Contract, the Contractor shall, prior to performing any work involving the special hazard, immediately obtain this insurance as instructed by the City. In the event the special hazard requiring the additional coverage was not a part of the original bid, the

expense of such insurance shall be reimbursed to the Contractor by the City, otherwise the Contractor shall assume full responsibility for the purchase with no charge back to the City.

- 4) Deductible: Deductible/self-insured retention amounts shall be reduced or eliminated upon written request from City. The insurer's cost of defense (and appeal), including attorney's fees, shall not be included within the coverages provided but shall remain the insurer's responsibility.
- 5) Term: Insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective work.
- 6) Limit of Liability: Nothing contained in these insurance requirements is to be construed as limiting the liability of Contractor or Contractor's insurance carriers. City does not in any way represent that the coverage's or the limits of insurance specified is sufficient or adequate to protect Contractor's interests or liabilities, but are merely minimums. The obligation of the Contractor to purchase insurance herein shall not in any way limit the obligation of the Contractor in any event and/or in the event that the City should suffer an injury or loss in excess of the amount recoverable through insurance.

Contracts of \$100,000 or More: The following minimum insurance requirements apply in addition to the above requirements:

- a. Limits of Liability: For the Commercial General Liability policy:
 - \$2,000,000 general aggregate
 - \$1,000,000 products/completed operations aggregate
 - \$1,000,000 personal and advertising injury
 - \$1,000,000 each occurrence

Coverage is to be written on an "occurrence" and "per project" basis and such coverage shall include:

- b. Umbrella Liability Insurance:
This coverage shall be written for minimum limit of:
 - \$5,000,000 each occurrence for Personal and Bodily Injury and Property Damage.

This Policy shall apply in excess and follow form of employer's liability, commercial general liability, and auto liability.

Contracts Less Than \$100,000: The following minimum insurance limits apply unless specified otherwise in the Supplemental General Conditions:

- a. Limits of Liability: For the Commercial General Liability policy:
 - \$1,000,000 general aggregate
 - \$1,000,000 products/completed operations aggregate
 - \$1,000,000 personal and advertising injury
 - \$1,000,000 each occurrence

Proof of Insurance Coverage: The policies of insurance required shall be purchased from a reputable insurer licensed to do business in Virginia and maintained for the life of the Contract by the Contractor. Other insurance requirements include the following:

- a. The Contractor shall furnish the City with the required certificates of insurance showing the insurer, type of insurance, policy number, policy term, deductible, and the amount insured for property coverage's and the limits for liability coverages.
- b. The Contractor shall notify City Manager in writing within thirty (30) consecutive calendar days if any of the insurance coverage's or policies are cancelled or materially altered and Contractor shall immediately replace such policies and provide documentation of such to City Manager.
- c. The required insurance policies and coverages, excluding those for Workers Compensation and Professional Liability, shall name the City of Buena Vista, its officers, agents, volunteers and employees as additional insured's and the certificate of insurance shall show if the policies provide such coverage. Waiver of subrogation is required with respect to any policy of workers' compensation and employers' liability insurance required under this Section. The certificate of insurance shall show if the policies provide such waiver. Additional insured and waiver endorsements shall be received by the City Manager from the insurer with the certificate of insurance unless the City Manager agrees to another process. The City Manager may approve other documentation of such insurance coverages.
- d. Insurance coverage shall be in a form and with an insurance company approved by the City which approval shall not be unreasonably withheld. Any insurance company providing coverage under this Contract shall be authorized to do business in the Commonwealth of Virginia.

END

CITY OF BUENA VISTA, VIRGINIA

CONTRACTOR'S PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

that _____

(Insert full name or legal title and address of Contractor)

as Principal, (hereinafter referred to as "Contractor"),

and _____

(Insert full name or legal title and address of Surety)

Telephone: _____ Fax: _____

as Surety (hereinafter referred to as "Surety"), are held and firmly bound unto the City of Buena Vista, Virginia, a municipal corporation, 2039 Sycamore Avenue Buena Vista, VA 24416, as Obligee (hereinafter referred to as "City" or "Owner"), in the amount of _____ Dollars (\$_____)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents to the terms of this bond.

WHEREAS, Contractor has entered into a Contract with the City dated _____, 2019, incorporating certain specifications prepared by:

A. Morton Thomas and Associates, Inc.
113 Mill Place Parkway, Unit 107
Verona, VA 24482

(which Contract, specifications, and other Contract Documents are hereinafter referred to collectively as the "Contract") for a fully functional and properly operating project, namely **2020 Rt. 60 & Rt. 501 Paving Project**, all in a proper and timely manner and in accordance with the Contract Documents, which Contract is expressly incorporated herein by reference and made a part of this bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall promptly and faithfully perform the Contract, in strict conformity with each and every requirement of the Contract, then this obligation shall be null and void; otherwise, this Performance Bond shall remain in full force and effect and is subject to the following conditions:

- a. Any alteration which may be made in the terms of the Contract, including, without limitation, the amount to be paid or the work to be done under it, or the giving by the City of any extension of time for the performance of the Contract or any other forbearance of any nature whatsoever on the part of either the City or the Contractor to the other shall not in any way release the Contractor and the Surety, or either of them,

their heirs, executors, administrators, successors, or assigns from their liability hereunder, and notice of such alteration, extension, or forbearance is hereby expressly waived by Surety.

- b. IT IS NOT INTENDED BY ANY OF THE PROVISIONS OF ANY PART OF THIS BOND TO CONFER A BENEFIT UPON ANY OTHER PERSON OR ENTITY NOT A PARTY TO THIS PERFORMANCE BOND OR TO AUTHORIZE ANY PERSON OR ENTITY NOT A PARTY TO THIS BOND TO MAINTAIN A SUIT PURSUANT TO THE TERMS OR PROVISIONS OF THIS BOND OTHER THAN THE CITY OR ITS SUCCESSORS OR ASSIGNS.
- c. The Surety hereby submits itself to a court of competent jurisdiction in Buena Vista, Virginia, and agrees that any suit or action hereunder shall be brought only in a Virginia court of competent jurisdiction in the City of Buena Vista or in the United States District Court for the Western District of Virginia, Lynchburg Division, and not elsewhere.
- d. Any suit under this bond must be instituted within two (2) years after (i) completion of the Contract, including the expiration of all warranties and guarantees, or (ii) discovery of the defect or breach of warranty, if the action be for such, in all other cases.
- e. The provisions of this bond shall be governed by and interpreted to be consistent with the laws of the Commonwealth of Virginia.

SIGNED AND SEALED this ____ day of _____, 20____, in the presence of:

WITNESS:

CONTRACTOR

By: _____(Seal)

(Type Name and Title)

WITNESS:

SURETY

By: _____(Seal) Attorney-in-Fact

(Type Name and Title)

(Attorneys-in-fact affix seal and attach original or certified copy of current power of attorney.)

CITY OF BUENA VISTA, VIRGINIA

CONTRACTOR'S LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

that _____

(Insert full name or legal title and address of Contractor)

as Principal, (hereinafter referred to as "Contractor"),

and _____

(Insert full name or legal title and address of Surety)

Telephone: _____ Fax: _____

as Surety (hereinafter referred to as "Surety"), are held and firmly bound unto the City of Buena Vista, Virginia, a municipal corporation, 2039 Sycamore Avenue Buena Vista, VA 24416, as Obligee (hereinafter referred to as "City" or "Owner"), for the use and benefit of Claimants as herein below defined, in the amount of _____

Dollars (\$_____), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents to the terms of this bond.

WHEREAS, Contractor has entered into a Contract with the City dated _____, 20__, incorporating certain specifications and drawings prepared by:

A. Morton Thomas and Associates, Inc.
113 Mill Place Parkway, Unit 107
Verona, VA 24482

(which Contract, specifications, drawings, and other Contract Documents are hereinafter referred to collectively as the "Contract") for providing a fully functional and properly operating project, namely, **2020 Rt. 60 & Rt. 501 Paving Project** all in a proper and timely manner and in accordance with the Contract Documents, which Contract is expressly incorporated herein by reference and made a part of this bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall promptly make payment to all Claimants, as hereinafter defined, for all material furnished or labor supplied or performed in the prosecution of the work provided for in the Contract, then this obligation shall be void; otherwise this Labor and Material Payment Bond shall remain in full force and effect and is subject to the following conditions:

- a. Any alteration which may be made in the terms of the Contract, including, without limitation, the amount to be paid or the work to be done under it, or the giving by the City of any extension of time for the performance of the Contract or any other forbearance of any nature whatsoever on the part of either the City or the Contractor to the other shall not in any way release the Contractor and the Surety, or either of them, their heirs, executors, administrators, successors, or assigns from their liability hereunder, and notice of such alteration, extension, or forbearance is hereby expressly waived by Surety.
- b. A Claimant is defined as one who has and fulfills a contract to supply labor or materials, or both, to the Contractor or to any of the Contractor's subcontractors, in the prosecution of work provided for in the Contract, labor and material being construed to include, without limitation, public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the site, or who may otherwise be allowed by law to file a claim against the Contractor and/or Surety.
- c. The Contractor and Surety hereby jointly and severally agree with City that every Claimant, as defined in paragraph b, **who has a direct contractual relationship with the Contractor and** who has performed labor or furnished material in accordance with the Contract in the prosecution of the work provided for in the Contract and who has not been paid in full therefore before the expiration of ninety (90) days after the day on which such Claimant performed the last such labor or furnished the last of such materials for which Claimant claims payment, or as may otherwise be allowed by law, may bring an action on this payment bond to recover any amount due Claimant for such labor or material, and may prosecute such action to final judgment and have execution on the judgment. The Contractor and Surety expressly agree that City shall not be liable for the payment of any judgment, costs, or expenses resulting from any such suit and that neither Contractor nor Surety shall cause City to be named as a party in any such suit.
- d. The Contractor and Surety hereby jointly and severally agree with City that every Claimant, as defined in paragraph b, who has direct contractual relationship with any subcontractor, but who has no contractual relationship, express or implied, with such Contractor, may bring an action on this bond only if the Claimant has given written notice to the Contractor within **ninety (90)** days from the day on which the Claimant performed the last of the labor or furnished the last of the materials for which payment is claimed, stating with substantial accuracy the amount claimed and the name of the person for whom the work was performed or to whom the material was furnished, or as may otherwise be allowed by law. **Notice to the Contractor shall be given as set forth in Virginia Code §2.2-4341 and Claimants are advised to review such Code Section.** The Contractor and Surety expressly agree that City shall not be liable for the payment of any judgment, costs, or expenses resulting from any such suit and that neither Contractor nor Surety shall cause City to be named as a party in any such suit.

- e. The Surety hereby submits itself to a court of competent jurisdiction in Buena Vista, Virginia, and agrees that any suit or action hereunder by any Claimant shall be brought only in a Virginia court of competent jurisdiction in and for the City of Buena Vista, or in the United States District Court for the Western District of Virginia, Lynchburg Division, and not elsewhere.
- f. Any suit or action hereunder shall be brought within one year after the day on which the person bringing such action last performed labor or last furnished or supplied materials.
- g. The provisions of this bond shall be governed by and interpreted to be consistent with the laws of the Commonwealth of Virginia, including, but not limited to Virginia Code §2.2-4341.

SIGNED AND SEALED this ____ day of _____, 20____, in the presence of:

WITNESS:

CONTRACTOR

By: _____(Seal)

(Type Name and Title)

SURETY

WITNESS:

By: _____(Seal) Attorney-In-Fact

(Type Name and Title)

(Attorneys-in-fact affix seal and attach current original or certified copy of power of attorney.)

CITY OF BUENA VISTA, VIRGINIA

AFFIDAVIT OF PAYMENT OF CLAIMS

By: _____

(Insert Exact Name and Address of Firm)

This day _____ personally appeared before me, a Notary Public in and for the City (County) of _____, and, being by me first duly sworn states that all subcontractors and suppliers of labor and materials have been paid all sums due them for work performed or materials furnished in the performance of the Contract between the City of Buena Vista, Virginia, and _____, Contractor, dated _____, 20____, for _____

_____ or arrangements have been made by the Contractor satisfactory to such subcontractors and suppliers with respect to the payment of such sums as may be due from the Contractor to the subcontractors and suppliers.

CONTRACTOR: _____

BY: _____

PRINTED OR TYPED NAME AND TITLE: _____

Commonwealth of Virginia at Large:

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires on the _____ day of _____, _____.

Notary Public

Printed Name of Notary Public

CITY OF BUENA VISTA, VIRGINIA

CERTIFICATE OF FINAL ACCEPTANCE

This Certificate is subject to the terms and conditions of the Contract Documents, including but not limited to Section 20.8 of the General Conditions. The City, Contractor, and Engineer, if applicable, hereby agree that the date fixed for Final Acceptance of the Work by the City is _____.
_____.

The establishment of a date of Final Acceptance and/or the acceptance of the Work does not relieve the Contractor of any responsibility for any faulty materials or workmanship or operate to relieve the Contractor or its Surety from any obligation under the Contract with the City or the Performance Bond or Labor and Material Payment Bond.

ENGINEER: _____

PROJECT NUMBER: _____

PROJECT: _____

CONTRACTOR: _____

_____ Engineer	_____ By	_____ Date
-------------------	-------------	---------------

_____ Contractor	_____ By	_____ Date
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_____ City Department of Public Works	_____ By	_____ Date
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CITY OF BUENA VISTA, VIRGINIA

GENERAL CONDITIONS

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CITY OF BUENA VISTA, VIRGINIA

GENERAL CONDITIONS

SECTION 1. DEFINITIONS

Whenever used in these General Conditions or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof, and where applicable to any other legal entity such as a corporation, partnership, limited liability company, etc.

The section and paragraph headings are inserted for convenience only.

Addenda: Written or graphic instruments issued prior to the opening of bids that clarify, correct, or change the Bidding Requirements or the Contract Documents.

Bidder: The person, firm, corporation, or other entity interested in submitting a bid for the Work to be performed.

Change Order: A document issued by Engineer on or after the effective date of the Contract which is agreed to by the Contractor and approved by the City, and which authorizes an addition, deletion, or revision in the Work, including any adjustment in the Contract Price and/or the Contract Time.

City or Owner: The City of Buena Vista, Virginia, or its authorized representative.

City Department of Public Works: The City Department of Public Works or his authorized representative.

Code of Virginia: Refers to the Code of Virginia (1950), as amended. (Sometimes referred to as Va. Code or Virginia Code.)

Commonwealth: Unless otherwise noted, this term shall be interpreted as the FAA of the City of Buena Vista, Virginia.

Confirmation of verbal instructions (COVI): Contractor-requested written confirmation of the City's instructions concerning the Work. When time and/or costs are or will be impacted, the Contractor must comply with the requirements applicable to requests for adjustments of the Contract amount or Contract time.

Contract Documents: These documents include, but are not limited to, the Project Manual, Invitation for Bid, the Instructions to Bidders, the Bid Form, the Contract, the Bonds or other Bid Security, the General Conditions, Supplementary General Conditions, Special Conditions, the Specifications, Addenda or Change Orders, the Plans and Drawings, any Supplemental Drawings, and any additional documents incorporated by reference in the above.

Contract: The written agreement between the parties concerning the performance of the Work and consisting of the Contract Documents.

Contractor: The person, firm, corporation, or other entity entering into a contractual agreement with the City to perform the Work.

Contractor change requests (CCR): Requests where the Contractor asks the City to make an

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 Contract.

Defect, Defective, or Deficient: An adjective or noun which when modifying or referring to the word Work refers to Work or any part thereof that is unsatisfactory, faulty, or does not conform to the Contract Documents, or does not meet the requirements of any inspections, standards, tests, or approvals referred to in the Contract Documents.

Department: Reference in this document as well as the 2016 VDOT Road & Bridge Specifications to "Department" shall be construed to refer to the City of Buena Vista, except in references to approvals and certifications provided by VDOT, VDOT as author of the 2016 VDOT Road & Bridge Specifications, or where related to matters of VDOT final approval and acceptance the Work.

Document(s): This term includes, but is not limited to: writings, drawings, items on which words, symbols, or marks are recorded; electronic data of any type; videotapes, recordings, photographs and negatives, digital or otherwise; and any other form of data, writing, or information compilation, however recorded or stored, and regardless of physical form or characteristics.

Engineer: This term including, but not limited to "Chief Engineer", Areal Construction Engineer, etc. shall be interpreted as the Engineer who contracts with the City to provide the engineering services for the project. The Engineer is a separate Contractor and is referred to herein as the Engineer. The term includes any associates or consultants employed by the firm to assist in providing the engineering services.

Field Order: A written order issued by Engineer which clarifies the requirements of the Contract by giving a more complete expression of the drawings or specifications or other documents without any change in the design, the Contract price, or the Contract time.

Final Acceptance: The City's acceptance of the project from the Contractor upon confirmation from Engineer and the Contractor that the project is apparently complete in accordance with the Contract requirements.

Notice: All written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with the Contract requirements. Any written notice by either party to the Contract shall be sufficiently given if delivered to or at the last known business address of the person, firm, or corporation constituting the party to the Contract, or to his, her, their, or its authorized agent, representative, or officer.

Notice to Proceed: A written notice given by the Engineer at the City's discretion to the Contractor fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents.

Project Inspector: One or more individuals employed by the City to inspect the Work and/or to act as Resident Inspector to the extent required by the City. The City has contracted with A. Morton Thomas and Associates to provide this service.

Provide: Shall mean to furnish and install ready for its intended use.

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

Requests for Contractor action (RCA): Requests where the City asks the Contractor to take certain action that is in the best interests of the project and/or is required for proper completion of all or a portion of the Work.

Requests for Department action (RDA): Requests where the Contractor asks the City to take certain action that the Contractor feels is required for proper completion of all or a portion of the Work.

Requests for Information (RFI): Requests where either the Contractor or the City asks that the other party supply information to provide better understanding of or to clarify a certain aspect of the Work.

Subcontractor: A person, firm, partnership, corporation, or other entity having a direct contract with the Contractor or with any other Subcontractor for the performance of the Work. It includes one who provides on-site labor, but does not include one who only furnishes or supplies material for the project.

Submittals: All drawings, diagrams, illustrations, brochures, schedules, samples, electronic data and other data required by the Contract Documents which are specifically prepared by or for the Contractor, Subcontractor, or Supplier, and submitted by the Contractor to illustrate the material, equipment, or layouts, or some other portion of the Work.

Successful Bidder: The bidder to whom the City makes an award.

Supplier: A manufacturer, fabricator, distributor, material man, or vendor who provides only material or supplies for the project, but does not provide on-site labor.

Work or Project: The entire completed construction or the various separately identifiable parts thereof as required by the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating material and equipment into the construction.

SECTION 2. INDEMNITY PROVISIONS

2.1 Indemnity: Contractor shall indemnify and hold harmless City and its officers, agents, and employees against any and all liability, losses, damages, claims, causes of action, suits of any nature, costs, and expenses, including reasonable attorney's fees, resulting from or arising out of Contractor's or its employees, agents, or subcontractors actions, activities, or omissions, negligent or otherwise, on or near City's property or easement or arising in any way out of or resulting from any of the work to be provided under this Contract, and this includes, without limitation, any fines or penalties, violations of federal, state, or local laws or regulations, personal injury, wrongful death, or property damage claims or suits, breach of contract claims, indemnity claims, and any other damages, losses, and/or claims of any type.

2.2 Hazardous Material: While on City's property or easement and in its performance of this Contract, Contractor shall not transport, dispose of or release any hazardous substance, material, or waste, except as necessary in performance of its Work under this Contract and in any event Contractor shall comply with all federal, state, and local laws, rules, regulations, and ordinances controlling air, water, noise, solid wastes, and other pollution, and relating to the storage, transport, release, or disposal of hazardous material, substances or waste. Regardless of City's acquiescence, Contractor shall indemnify and hold City, its officers, agents, and employees harmless from all costs, claims, damages, causes of action, liabilities, fines or penalties, including reasonable attorney's fees, resulting from Contractor's violation

of this paragraph and agrees to reimburse City for all costs and expenses incurred by City in eliminating or remedying such violations. Contractor also agrees to reimburse City and hold City, its officers, agents, and employees harmless from any and all costs, expenses, attorney's fees and all penalties or civil judgments obtained against the City as a result of Contractor's use or release of any hazardous substance or waste onto the ground, or into the water or air from or upon City's premises. (See also Section 13.2 of these General Conditions.)

- 2.3 Patents:** The Contractor shall protect, indemnify, and hold harmless the City from any and all demands for fees, claims, suits, actions, causes of action, or judgments based on the alleged infringement or violation of any patent, invention, article, trademark, arrangement, or other apparatus that may be used in the performance of the Contract or the Work.

SECTION 3. LAWS, REGULATIONS, PERMITS, AND IMMIGRATION LAW

- 3.1 Regulations:** The Contractor shall fully comply with all local, state, and federal ordinances, laws, and regulations, including without limitation all applicable building and fire code sections of the Occupational Safety and Health Act (OSHA), and the Virginia Uniform Statewide Building Code, and obtain all required licenses and permits, including business license, building permits, and pay all charges and expenses connected therewith. Contractor further agrees that Contractor does not, and shall not during the performance of this Contract; knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- 3.2 Permits:** The Contractor shall, at its sole cost, obtain all required permits from the appropriate authorities, including the City of Buena Vista. This includes, but is not limited to, all permits for any excavations in any public right-of-way. No delay or extension of time or any claim for additional compensation of any type shall be granted for failure to obtain any required permits.
- 3.3 Litter:** In accordance with the Virginia Anti-Litter Law, receptacles sufficient to contain workmen's litter and construction wastes capable of being spread by wind or water shall be located on the construction site. The number and size of receptacles required shall be determined by the Contractor.
- 3.4 Asbestos License:** The Contractor, if not licensed as an asbestos abatement contractor or a Roofing, Flooring, and Siding (RFS) contractor in accordance with Section 54.1-514, of the Code of Virginia, shall have all asbestos related work performed by subcontractors who are duly licensed as asbestos contractors or RFS contractors as appropriate for the work required.

SECTION 4. CONTRACTORS' AND SUBCONTRACTORS' INSURANCE

Neither the Contractor nor any subcontractor shall commence work under this Contract until the Contractor has obtained and provided proof of the required insurance under this Section to the City. The Contractor confirms that all subcontractors have provided the Contractor with proof of insurance. Contractor further warrants that proof of coverage as provided to the City responds on a primary basis in the event of an uninsured or underinsured subcontractor. All such insurance shall be primary and non-contributory to any insurance or self-insurance the City may have in force.

- 4.1 For All Contracts,** the following minimum insurance requirements apply:

a. Workers' Compensation and Employers' Liability:

The Contractor shall obtain and maintain the following limits:

Workers' Compensation: Statutory

Employers' Liability: \$100,000 bodily injury by accident each occurrence

\$500,000 bodily injury by disease (policy limit)

\$100,000 bodily injury by disease each employ

b. Commercial General Liability: Coverage is to be written on an "occurrence" basis and such coverage shall include broad form extension endorsements for both liability and property damage. Completed Operations coverage will be required to be maintained for the life of the Contract. For Limits of Liability see Sections 4.2 and 4.3 of these General Conditions.

c. Automobile Liability: Limits for vehicles owned, non-owned, hired or borrowed shall not be less than:

- \$1,000,000 Bodily Injury and Property Damage combined single limit per occurrence.

d. Additional Insurance Requirements: Additional specific insurance coverage minimum requirements to be provided by Contractor may include the following as detailed in the Supplemental General Conditions:

1) Builders Risk: At the discretion of the City, the Contractor, at its cost, shall obtain and maintain in the names of the City and the Contractor "all-risk" builders risk insurance (if approved by the City) upon the entire structure or structures on which the Work of this Contract is to be done and upon all material in or adjacent thereto or those that are "off-site" but which are intended for use thereon, to one hundred percent (100%) of the completed value thereof.

2) Property Coverage: Installation Floater (and Rigger's Form, if applicable) will be required for the installation of contents or equipment; coverage will begin with supplier and continue until equipment/contents have been fully installed. Floater will be valued for the replacement cost value of equipment/contents including all costs. The Contractor shall provide coverage for portions of the work stored off-site after written approval of the City at the value established in the approval and for portions of the work in transit.

3) Special Hazards: In the event special hazards are evident in the work contemplated, or if required by the Contract Documents, the Contractor shall obtain and maintain during the life of the Contract a rider to the policy or policies required, in an amount not less than that stipulated under the above Paragraphs. Should any unexpected special hazards be encountered during the performance of this Contract, the Contractor shall, prior to performing any work involving the special hazard, immediately obtain this insurance as instructed by the City. In the event the special hazard requiring the additional coverage was not a part of the original bid, the expense of such insurance shall be reimbursed to the Contractor by the City, otherwise the Contractor shall assume full responsibility for the purchase with no

charge back to the City.

- 4) Deductible: Deductible/self-insured retention amounts shall be reduced or eliminated upon written request from City. The insurer's cost of defense (and appeal), including attorney's fees, shall not be included within the coverages provided but shall remain the insurer's responsibility.
- 5) Term: Insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective work.
- 6) Limit of Liability: Nothing contained in these insurance requirements is to be construed as limiting the liability of Contractor or Contractor's insurance carriers. City does not in any way represent that the coverage's or the limits of insurance specified is sufficient or adequate to protect Contractor's interests or liabilities, but are merely minimums. The obligation of the Contractor to purchase insurance herein shall not in any way limit the obligation of the Contractor in any event and/or in the event that the City should suffer an injury or loss in excess of the amount recoverable through insurance.

4.2 Contracts of \$100,000 or More: The following minimum insurance requirements apply in addition to the above requirements:

a. Limits of Liability: For the Commercial General Liability policy:

- \$2,000,000 general aggregate
- \$1,000,000 products/completed operations aggregate
- \$1,000,000 personal and advertising injury
- \$1,000,000 each occurrence

Coverage is to be written on an "occurrence" and "per project" basis and such coverage shall include:

b. Umbrella Liability Insurance:

This coverage shall be written for minimum limit of:

- \$5,000,000 each occurrence for Personal and Bodily Injury and Property Damage

This Policy shall apply in excess and follow form of employer's liability, commercial general liability, and auto liability.

4.3 Contracts Less Than \$100,000: The following minimum insurance limits apply unless specified otherwise in the Supplemental General Conditions:

a. Limits of Liability: For the Commercial General Liability policy:

- \$1,000,000 general aggregate
- \$1,000,000 products/completed operations aggregate

- \$1,000,000 personal and advertising injury
- \$1,000,000 each occurrence

4.4 Proof of Insurance Coverage: The policies of insurance required by Sections 4.1, 4.2, or 4.3 shall be purchased from a reputable insurer licensed to do business in Virginia and maintained for the life of the Contract by the Contractor. Other insurance requirements include the following:

- a. The Contractor shall furnish the City with the required certificates of insurance showing the insurer, type of insurance, policy number, policy term, deductible, and the amount insured for property coverage's and the limits for liability coverage's.
- b. The Contractor shall notify City Department of Public Works in writing within thirty (30) consecutive calendar days if any of the insurance coverage's or policies are cancelled or materially altered and Contractor shall immediately replace such policies and provide documentation of such to City Department of Public Works.
- c. The required insurance policies and coverages, excluding those for Workers Compensation and Professional Liability, shall name the City of Buena Vista, its officers, agents, volunteers and employees as additional insured's and the certificate of insurance shall show if the policies provide such coverage. Waiver of subrogation is required with respect to any policy of workers' compensation and employers' liability insurance required under this Section. The certificate of insurance shall show if the policies provide such waiver. Additional insured and waiver endorsements shall be received by the City's Risk Manager from the insurer with the certificate of insurance unless the City's Risk Manager agrees to another process. The City's Risk Manager may approve other documentation of such insurance coverages.
- d. Insurance coverage shall be in a form and with an insurance company approved by the City which approval shall not be unreasonably withheld. Any insurance company providing coverage under this Contract shall be authorized to do business in the Commonwealth of Virginia.

SECTION 5. EMPLOYMENT AND CONDUCT OF PERSONNEL

- 5.1 Employee Qualifications:** Only skilled and reliable workers shall be employed for the Work. Should any person employed on the Work by the Contractor appear to Engineer to be incompetent, unable to perform the Work, or disorderly, such person shall be removed from the Work immediately upon proper notice to the Contractor from Engineer and such person shall not again be used for this Contract.
- 5.2 Superintendence:** The Contractor shall have a competent foreman or superintendent, satisfactory to Engineer, on the jobsite at all times during the progress of the Work. The Contractor shall notify the City, in writing, of any proposed change in the foreman or superintendent including the reason therefore prior to making such change.
- 5.3 Drug-free Workplace:** During the performance of this Contract, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's employees; (ii) 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 the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. For the purpose 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 who 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.

The Contractor shall post a copy of the policy in a conspicuous place at the jobsite and assure that all Contractor, subcontractor, and supplier personnel entering the jobsite are informed of the policy.

SECTION 6. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED

Every Contract of over \$10,000 to which the City is a party shall contain the provisions in Sections 6.1 and 6.2 herein:

6.1 Nondiscrimination: During the performance of this Contract, the Contractor agrees as follows:

- a. The Contractor will not discriminate against any Subcontractor, 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 reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal employment opportunity employer.
- c. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

6.2 Nondiscrimination by Subcontractor or Vendor: The Contractor will include the provisions of the foregoing Subsections 6.1 (a), (b), and (c) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

SECTION 7. SUBCONTRACTORS

7.1 Licensure: The Contractor shall comply with Title 54.1, Chapter 11, of the Code of Virginia, with respect to licensure of itself and all subcontractors employed to work on the project. The Contractor represents that it has verified that all subcontractors hold all required state and local licenses, including State Contractor's license and City business license. The Contractor shall verify that any additional subcontractors employed to work on

the project, subsequent to the initial verification, hold all required state and local licenses, including State Contractor's license and City business license. The Contractor is required to submit the Contractor's Certification as to Licensure of Subcontractors Form to Engineer. This constitutes a material part of the Contractor's Contract with the City.

- 7.2 Change of Subcontractors:** Subcontractors shall not be changed without the written approval of Engineer.
- 7.3 Responsibility for Subcontractors:** The Contractor shall not employ for the project any subcontractor that the City may, within a reasonable time, object to as unsuitable. The Contractor further agrees that it is as fully responsible to the City for the acts and omissions of its subcontractors, suppliers, and invitees on the jobsite and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by it.

SECTION 8. CONDITIONS AT THE SITE

- 8.1 Existing Conditions:** The Contractor shall have visited the site prior to bidding and is responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the site, and the character and extent of existing improvements and work within or adjacent to the site. Claims as a result of failure to have done so will not be considered by the City and will be the sole responsibility of the Contractor.
- 8.2 Hidden Conditions:** During the progress of the Work, if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract, are encountered at the site the Contractor shall promptly notify the Engineer in writing of the specific differing conditions before the site is disturbed further and before the affected work is performed. Upon such notice, or upon his own observation of such conditions, Engineer will make such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or the time needed for completion must be requested pursuant to Section 19 of these General Conditions.

No adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

- 8.3 Suspected Hazardous Material:** If the Contractor, during the course of the project, observes the existence of any material which it suspects or knows to be hazardous to human health or the environment, the Contractor shall promptly notify Engineer. Engineer will provide the Contractor with instructions regarding the situation. The Contractor shall not perform any work involving the material or any work causing the material to be less accessible prior to receipt of special instructions from Engineer.

SECTION 9. SURVEYS AND LAYOUT

- 9.1 Surveying Services:** All necessary drawings showing the location of property lines, buildings, and other appropriate information shall be furnished to the Contractor through the drawings and specifications. The Contractor shall provide competent surveying and engineering services to verify the given information and to execute the Work in accordance with the Contract requirements and shall be responsible for the accuracy of Contractor's surveying and engineering services. The Contractor shall immediately notify Engineer of any discrepancies and confirm such notice in writing within five (5) calendar days.

- 9.2 Survey Control:** Such general reference points and bench marks on the building site as will enable the Contractor to proceed with the Work will be established in the drawings and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, Contractor shall promptly notify Engineer.
- 9.3 Damage to Survey Control:** The Contractor shall protect and preserve the established bench marks and monuments and shall make no changes in locations without written notice to and approval from Engineer. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior approval from Engineer, be replaced and accurately located by the Contractor.

SECTION 10. DRAWINGS AND SPECIFICATIONS

- 10.1 Drawings and Specifications:** The general character and scope of the Work are illustrated by the drawings and specifications. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other like portions of the Work. If the Contractor deems additional detail or information to be needed, Contractor may request the same in writing from Engineer. The Contractor shall carry out the Work in accordance with the drawings and specifications and any additional detail drawings and instructions as issued by Engineer. However, Contractor shall immediately notify Engineer of any discrepancies in such drawings and/or specifications and confirm such notice in writing within five (5) calendar days.
- 10.2 Discrepancies in Drawings:** In case of difference between small and large-scale drawings, the large-scale drawings shall govern, unless otherwise directed in writing by Engineer.
- 10.3 "Similar":** Where the word "similar" appears on the drawings, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- 10.4 Division of Specifications:** The specifications are divided into several parts for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the work among subcontractors or to limit the work performed by any trade. The Contractor shall be responsible for the coordination of the trades, subcontractors, and vendors engaged upon this Work.
- 10.5 Dimension Accuracy:** Measurements or dimensions shown on the drawings for site features, utilities, and structures shall be verified at the site by the Contractor. The location of underground utilities indicated on the plans is diagrammatic and were plotted from available records and field survey information and shall be considered approximate only, and the City makes no representations with regard to their accuracy. The Contractor shall not scale measurements or dimensions from the drawings. Where there are discrepancies, Engineer shall be consulted. Where new work is to connect to, match with, or be provided for existing work, the Contractor shall verify the actual existing conditions and related dimensions prior to ordering or fabrication, so that such new work will properly fit with existing work.

SECTION 11. SCHEDULE OF THE WORK

- 11.1 Scheduling:** The Contractor is responsible for the sequencing, scheduling, and coordinating of the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor is responsible for coordinating Contractor's work on the Project with any other work being carried on by the City or by other City consultants or contractors at the site or for the Project. The Contractor shall prepare and submit to Engineer a schedule for accomplishing the Work based upon the completion time stated in the Contract and submit such to Engineer at the pre-construction conference. No progress payments will be made to the Contractor until after Contractor has submitted a schedule which is acceptable to Engineer. All schedules under Section 11 shall be in both paper and electronic form unless otherwise directed by Engineer.
- 11.2 Progress:** The Contractor shall review the progress of the Work not less than each month, but as often as necessary to properly manage the project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the schedule monthly to finish within the contractually allowed time. The Contractor shall submit the updated schedule with each progress payment request. The scheduled completion date shall be within the period of time allowed by the Contract for completion of construction, except as amended by any Change Orders.
- 11.3 Delay and Recovery Schedule:** Should there be any delay; Engineer may require the Contractor to prepare, at no extra cost to the City, a plan of action and a recovery schedule for completing the Work by the contractual completion date. The plan of action and recovery schedule shall explain and display how the Contractor intends to regain compliance with the original schedule. The plan of action and recovery schedule, when required, shall be submitted and approved by Engineer prior to Contractor's submission of the next monthly construction estimate. The City may withhold progress payments until such schedule is submitted and approved.
- 11.4 Weekly Work Location Report:** Throughout the term of the Project the Contractor shall provide weekly work location reports to the Project Inspector or his designee. Reports shall be submitted before 12:00 p.m. each Thursday and shall specify Project work locations for the following week.
- 11.5 Phasing:** The Contractor shall begin paving operations on milled sections no later than 72 hours upon completion milling operations for that particular section.

SECTION 12. CONSTRUCTION SUPERVISION

The Contractor shall be solely responsible to supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor is solely responsible to the City that the finished Work complies with the Contract Documents. The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the City, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or responsibility for health and safety programs and precautions.

SECTION 13. STANDARDS FOR MATERIAL INSTALLATION AND WORKMANSHIP

- 13.1 Material and Equipment:** Unless otherwise specifically provided in this Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition. The Contractor shall furnish to Engineer for approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the Work. Machinery, equipment, material, and articles installed or used without required approval may be subject to subsequent rejection by the City.
- 13.2 Hazardous Substances:** Unless specifically approved by the City or required by the specifications, the Contractor shall not incorporate any material into the Work containing asbestos or any material known by the Contractor to contain a substance known to be hazardous to health when the building and/or site is occupied by the City. If the Contractor becomes aware that a material required by the specifications contains asbestos or other hazardous substances, it shall notify the City and Engineer immediately and shall take no further steps to acquire or install any such material without first obtaining City approval. (See also Sections 2.2 and 8.3 of these General Conditions.)
- 13.3 Workmanship:** The workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by workmen skilled in the particular task to which they are assigned. In the acceptance or rejection of work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by Engineer, the City, or other inspecting authorities) shall be removed and replaced to conform to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of Engineer, the City, or other inspecting authority all at the Contractor's sole expense.
- 13.4 Instructions for Installation:** Under the various sections of the specifications, where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions unless those instructions contradict the drawings or specifications, in which case Engineer will be notified by Contractor for an interpretation and decision.
- 13.5 Installation Procedures Without Instructions:** Where neither the manufacturer's printed instructions are available for installation of specific items, nor are specific code or standards given by reference to govern the installation of specific items; and where there is doubt concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult Engineer for approval of the installation procedures Contractor proposes to follow or the specific standards governing the quality of workmanship Contractor proposes to maintain during the installation of the items in question.
- 13.6 Codes and Standards:** Under the various sections of the specifications, where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where no reference is made to specific codes or standards, installation shall conform to the generally recognized applicable standards for first-class installation of the specific item to be installed. Contractors are expected to be proficient and skilled in their respective trades

and knowledgeable of the National Fire Protection Association (NFPA), the current edition of the Virginia Uniform Statewide Building Code (USBC) and its referenced technical codes and standards, Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by its trade and/or that are applicable to the Work.

SECTION 14. SUBMITTALS

- 14.1 General:** The Contractor shall submit for the approval of Engineer all submittals required by the specifications or requested by Engineer. All such submissions shall be made with such promptness as to cause no delay in this or any other part of the project, and to allow reasonable time for checking, correcting, resubmitting, and re-correcting. No part of the Work dealt with by a submittal shall be fabricated by the Contractor, save at Contractor's own risk, until such approval has been given. The Contractor shall maintain one (1) set of approved submittals at the jobsite at all times.
- 14.2 Format:** Submittals shall be made in such number of copies that two (2) approved copies may be retained by Engineer. Each submission shall be accompanied by a letter of transmittal listing the contents of the submission and identifying each item by reference to specification section or drawings. All submittals shall be clearly labeled with the name of the project and other necessary information. Catalog plates and other similar material that cannot be so labeled conveniently, shall be bound in suitable covers bearing the identifying data.
- 14.3 Supporting Material:** Submittals shall be accompanied by all required certifications and other such supporting material and documents, and shall be submitted in such sequence or in such groups that all related items may be checked together. When submittals cannot be checked because the submission is not complete, or because submittals on related items have not been received, then such submittals will be returned without action or will be held, not checked, until the material which was lacking is received.
- 14.4 Coordination:** Submittals shall have been reviewed by the Contractor and coordinated with all other related or affected work before they are submitted for approval, and shall bear the Contractor's certification that it has checked and approved them as complying with the information given in the Contract Documents. Submittals made without such certification and coordination will be returned to the Contractor without action, and will not be considered a formal submission. The Contractor shall be responsible for checking all dimensions and coordinating all material and trades to ensure that the material proposed will fit in the space available and be compatible with other material provided.
- 14.5 Variations:** If the submittals show variations from the Contract Documents because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in Contractor's letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the Work in accordance with the Contract Documents even though such submittals have been approved.
- 14.6 "Or Equal":** The drawings and/or specifications may indicate that Engineer designed or detailed a portion of the plans around a particular product (most commonly a piece of equipment). Should a different product be proposed by the Contractor and accepted, all modifications, rerouting, relocations, and variations required for proper installation and coordination to comply with the design concept and requirements of the Contract Documents

shall be the sole responsibility of the Contractor and shall be made at no extra cost to the City. This naming of a particular product, around which the plans were designed or detailed, is not intended to preclude the use of other products or favor the product named when a "brand name or equal" specification has been used. (See also Section 10 of Instructions to Bidders.) Rather it is only intended to acknowledge the reality that in many instances Engineer must design around the dimensions and characteristics of a particular product.

14.7 Review by Engineer: Engineer will review and respond to the submittals within fourteen (14) calendar days. Checking and/or approval of submittals will be for general conformance with the design concept of the project and compliance with the information given in the Contract Documents, and will not include verification of quantities, detailed dimensions, nor adjustments of dimensions to actual field conditions. Approval shall not be construed as permitting any departure from Contract requirements, authorizing any increase in price or time for completion or relieving the Contractor of the responsibility for any error in details, dimensions, or otherwise that may exist.

14.8 The Work shall be in accordance with approved submittals.

SECTION 15. INSPECTION AND INDEPENDENT TESTING

15.1 Inspection and Testing: All material and workmanship shall be subject to inspection, examination, and testing by Engineer at any and all times during manufacture and/or construction. Engineer shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the premises. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the City may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, and/or may terminate the right of the Contractor to proceed as provided in Sections 26 or 27 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided for in those Sections.

15.2 Payment for Inspection, Testing, and Certification:

- a. Jobsite inspections, tests conducted on site, or tests of material gathered on site which the Contract requires to be performed by independent testing entities shall be contracted and paid for by the City. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor, and material necessary for making such tests. Except as provided in Section 15.3 below, whenever such examination and testing finds defective material, equipment, or workmanship, the Contractor shall reimburse the City for the cost of reexamination and retesting.
- b. Although conducted by independent testing entities, the City will not contract and pay for tests or certifications of material, manufactured products or assemblies which the Contract, codes, standards, etc. require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If there are any fees to be paid for such tests and certifications, they shall be paid by the Contractor.
- c. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires it to perform or pay, together with any inspections

and tests which it chooses to perform for its own quality control purposes.

- 15.3 Examination of Completed Work:** Should it be considered necessary or advisable by City or Engineer at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary facilities, labor, and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or its Subcontractors, Contractor shall pay for all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing and Contractor's cost of material and labor necessary for replacement shall be paid to the Contractor and it shall, in addition, if completion of the Work has been delayed thereby, be granted a suitable extension of time.
- 15.4 Suspension of Work:** The City may suspend the Work when in its judgment the drawings and specifications are not being followed. Any such suspension shall be issued in writing and continued only until the matter in question is resolved to the satisfaction of the City. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that no fault existed in the Contractor's Work.
- 15.5 Project Inspector:** Failure of the Project Inspector to note or require correction of improper or defective work does not relieve the Contractor from its responsibility to correct such improper or defective work. The Project Inspector has no authority to and shall not:
- a. Enter into the area of responsibility of the Contractor's superintendent;
 - b. Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;
 - c. Authorize or suggest that the City occupy the project, in whole or in part; or
 - d. Issue a certificate for payment.

SECTION 16. USE OF PREMISES AND REMOVAL OF DEBRIS

- 16.1 Jobsite Coordination:** The Contractor shall perform the Contract in such a manner as not to interrupt or interfere with the operation of any existing activity on the premises or with the work of any other contractor.
- 16.2 Storage of Material:** The Contractor shall store apparatus, material, supplies, and equipment in such orderly fashion at the site of the Work as will not unduly interfere with the progress of its Work or the work of any other contractor.
- 16.3 Jobsite Appearance:** The Contractor expressly undertakes, either directly or through its Subcontractor(s), to clean up frequently all refuse, rubbish, scrap material, and debris caused by his operations, to the end that at all times the jobsite shall present a neat, orderly, and workmanlike appearance. No such refuse, rubbish, scrap material, and debris shall be left within the completed Work nor buried on the building site, but shall be

properly protected and removed from the site and properly disposed of in a licensed landfill or otherwise as required by law.

- 16.4 Final Cleaning:** The Contractor expressly undertakes, either directly or through its Subcontractor(s), before final payment, to remove all surplus material, false work, temporary structures, including foundations thereof, and debris of every nature resulting from its operations and to put the site in a neat, orderly condition, to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to thoroughly clean all glass installed under the Contract including the removal of all paint and mortar splatter and other defacements. If a Contractor fails to clean up at the completion of the Work, the City may do so and charge for costs thereof to the Contractor in accordance with these General Conditions.
- 16.5 Erosion Control:** During and at completion of the Work, the Contractor shall prevent site soil erosion, the runoff of silt and/or debris carried by water from the site, and the blowing of dust or debris off the site in accordance with the applicable requirements and standards of the Virginia Erosion and Sediment Control Handbook, latest edition, and of the Contract Documents.

SECTION 17. PROTECTING PERSONS AND PROPERTY

- 17.1 Protection on Site:** The Contractor expressly undertakes both directly and through its Subcontractor(s), to take every reasonable precaution at all times for the protection of all persons and property which may come on the jobsite or be affected by the Contractor's operation in connection with the Work.
- 17.2 Safety and Health Precautions:** The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety and health precautions and programs in connection with the Work, including but not limited to provision of appropriate sanitation facilities, if applicable.
- 17.3 Protecting the Public:** The Contractor shall in all cases protect the public and the Work, during its execution, by posting and maintaining, at its expense, appropriate signs, barricades, barriers, lights, flagmen, and other safety devices in accordance with the current edition of the "Virginia Work Area Protection Manual".
- 17.4 Protecting the Work and Adjacent Property:** The Contractor shall continuously maintain adequate protection of all the Work from damage and shall protect the City's property from injury or loss arising in connection with this Contract. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities for protection required by public authority, local conditions, any of the Contract Documents or erected for the fulfillment of its obligations for the protection of persons and property.
- 17.5 Emergencies:** In an emergency affecting the safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from Engineer, shall act, at Contractor's discretion, to prevent such threatened loss or injury. Also, should Contractor, to prevent threatened loss or injury, be instructed or authorized to act by Engineer, Contractor shall so act immediately, without appeal.

SECTION 18. DAMAGES TO THE WORK AREA

- 18.1 Damage to the Work:** The Contractor shall have charge of and be solely responsible for the entire Work and be liable for all damages to the Work including, but not limited to any of the damages hereafter mentioned, and to any property in the vicinity of the Work, until its completion and acceptance by Engineer.
- a. Where the work involves alterations, renovations, or modifications to any existing building, the Contractor shall familiarize itself with the structural condition of such building before proceeding with any work. It shall be the Contractor's responsibility to take all necessary safeguards to protect and maintain all parts of the building in a safe condition at all times during the process of construction and to protect from damage those portions of the building that are to remain.
 - b. Under no condition shall any load be placed on any part of a building, whether new or existing, in excess of the load the structure will safely support, and no structural member(s) shall be cut or altered without the written consent of Engineer.
 - c. The Contractor shall conduct all operations in such a manner as to avoid damage to existing work and surfaces within any existing building that are to remain. Any and all damaged work and surfaces shall be repaired, replaced, or restored to their original condition at the time when this work was started, and the expense of such work shall be borne by the Contractor.
- 18.2 Damage to Utilities:** The respective Utility Company shall be given a minimum of forty-eight (48) hours' notice prior to any adjustment of utilities, and the Contractor shall comply with the provisions of the Virginia Underground Utilities Damage Prevention Act, Section 56-265.14 et seq., of the Code of Virginia. Damages that may occur to the utilities during the Work shall be the sole responsibility of the Contractor.
- 18.3 Relocation of Utilities:** Should any utilities require adjustment during the Work, it shall be the Contractor's responsibility to have such utilities relocated as a part of the Work and to contact and cooperate with the respective Utility Company in performance of such operations.
- 18.4 Damage to Other Work and Existing Structures:** The Contractor shall take into account all other work which shall be done by other parties on the jobsite, either now known or which may become necessary during the progress of the Work, and shall be responsible for any damage done to the other work. Damage to concrete curbs, gutters, sidewalks, or any existing facility that may occur during the construction shall be repaired or replaced by the Contractor, at its sole expense, as directed by and to the satisfaction of Engineer.
- 18.5 Weather Damage:** Damage with respect to the Work caused by the weather shall be the responsibility of the Contractor.
- 18.6 Blasting:** Any damage that may occur due to blasting shall be the sole responsibility of the Contractor.

SECTION 19. CHANGES IN THE WORK

- 19.1 Changes in Drawings and Specifications:** The City reserves the right to make such

changes in the drawings and specifications and in the character of the Work as may be necessary or desirable to ensure completion in the most satisfactory manner, provided such changes do not materially alter the original plans and specifications or change the general nature of the Work as a whole. Such changes shall not be considered as waiving or invalidating any condition or provision of the Contract and Bonds. Such changes shall be issued by Engineer to Contractor.

19.2 Changes in Quantities: The City reserves the right to make changes in the quantities of the Work, as may be considered necessary or desirable and such changes shall not be considered as waiving or invalidating any conditions or provisions of the Contract or Bonds. The Contractor shall perform the Work as altered, whether increased or decreased, and no allowances shall be made for anticipated profits. Payment to the Contractor for the changes in the quantities of work shall be made only for the actual quantities of work performed and material furnished at the unit prices set forth in the Contract, except as provided below.

- a. When the quantity of work to be done or of material to be furnished under any item of the Contract is more than 125 percent of the quantity stated in the Contract, then either party to the Contract, upon demand, shall be entitled to negotiate for revised consideration on the portion of work above 125 percent of the quantity stated in the Contract.
- b. When the quantity of work to be done or of material to be furnished under any item of the Contract is less than 75 percent of the quantity stated in the Contract, then either party to the Contract, upon demand, shall be entitled to negotiate for revised consideration on the Work performed.
- c. Any consideration after that as set forth above shall be paid for as is hereinafter provided under Section 19.7. The foregoing notwithstanding, the quantity of work to be done or of material to be furnished under any item of the Contract, or the total original Contract shall not be increased more than 25 percent or reduced by more than 25 percent without the written consent of the Contractor and City.

19.3 Changes in the Work: No change with respect to the Work, except in an emergency situation threatening life or property, shall be made by the Contractor without the prior written approval of the City. The Contractor shall deliver any request for a change in the work, Contract price, and/or completion time in writing to Engineer within ten (10) calendar days of the occurrence requiring the change. The Contractor shall be required to certify the cause of the change order and, if appropriate, length of time involved. Payment for such changes approved by Engineer shall be as set forth in Section 19.7. This written request is a condition precedent to the consideration of any such request by the City.

19.4 Delays:

- a. In the event a delay is caused by the City, Engineer, any other separate contractor employed by the City, or any party for whom the Contractor deems the City responsible, or the agents and employees of any of them, the Contractor shall inform the City and Engineer immediately at the time of the occurrence by the fastest means available and shall give written notice within a reasonable time, not to exceed ten (10) calendar days. The Contractor's notice to Engineer shall specify the nature of the delay claimed by the Contractor, the cause of the delay, and the impact of the delay on the Contractor's work schedule to the fullest extent possible.

The City will, within a reasonable time, not to exceed ten (10) calendar days, respond to the Contractor's notice with a resolution, remedy, or direction to alleviate the delay or with a notice rejecting the claim for delay alleged to be caused by the City or parties for whom the City is responsible. If the delay is not then resolved, the Contractor may then submit a request for change order in accordance with Sections 19.3 and 19.5. In the event of other delays, the Contractor shall give the City and Engineer written notice within ten (10) calendar days of the occurrence causing the delay.

- b. No extension of time or compensation shall be allowed for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsection 19.4 (a). Furthermore, no extension of time shall be given or additional compensation allowed for any delay unless a claim therefore is made in writing to the City, with a copy to Engineer, within ten (10) calendar days of the occurrence causing the delay. The claim shall state the cause of the delay, the number of days of extension requested, and any compensation requested by the Contractor. The Contractor shall report the termination of the delay to the City and Engineer not less than ten (10) calendar days after such termination. Failure to give notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed are conditions precedent to the assertion of any such claims by Contractor and shall constitute a waiver by Contractor of any such claims for compensation or extension based upon that cause.
- c. Requests for compensation for delays must be substantiated by itemized data and records clearly showing that the work delayed were progressing according to the approved schedule and that the costs are directly attributable to the delay in the Work claimed. The Contractor shall provide written schedules demonstrating how the Work being delayed affects the approved schedule.
- d. No extension of time, additional compensation, or change in the Contract price shall be allowed for any delays caused in whole or in part by the Contractor, any subcontractors, or any supplier. (For unavoidable justified delays, see Section 19.9 of these General Conditions.)

19.5 Change Orders: All change orders must indicate that the Contract Time for Completion is not changed or is either increased or decreased by a specific number of days. Any change or requested change in the Contract price shall also be included in the change order. The Contractor must provide written justification for an extension of the Time for Completion to Engineer and to the City. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a Critical Path Method (CPM) schedule is required by the Contract, or is used for the convenience of the Contractor, no increase to the Time for Completion shall be allowed unless, and then only to the extent that, the additional or changed Work increases the length of the critical path. Approved increases in time required to complete the Work shall be added to the Time for Completion. Decreases in time as a result of the change order shall be demonstrated by a decrease in the critical path of the work if CPM scheduling is properly used and updated by the Contractor. If not, the City shall determine the appropriate decrease by the best means possible. Approved decreases in the time needed to complete the Work shall be deducted from the Contract completion date. The change to time or Contract price allowed

by each change order shall include all time and monetary impacts of the change, whether the change order is considered alone or with all other changes during the course of the project. Failure to include a change to time and/or Contract price in a change order shall waive any claims the Contractor may have for any change to the time and/or Contract price unless the parties mutually agree in writing to postpone a determination of the change to time and price resulting from the change order. Such a determination may be postponed not more than forty-five (45) calendar days to give the Contractor an opportunity to demonstrate a change in the time and/or price needed to complete the Work. However, the Contractor shall continue with the Work as may be directed by Engineer and shall not stop work on the Project unless directed to do so by Engineer.

19.6 Extra Work: The City reserves the right to make alterations or changes in the Work as the Work progresses. When any work is necessary to the proper completion of the project which was not provided for in the Contract, the Contractor shall do such work, but only when and as ordered in writing by the Engineer. Payment for such extra work shall be made as hereinafter provided in Section 19.7.

19.7 Payment Methods for Extra Work: The extra work done by the Contractor as authorized and approved by Engineer shall be paid for in the manner hereinafter described; and the compensation thus provided shall be accepted by the Contractor as payment in full for all labor, material, tools, equipment, incidentals, all superintendents' and timekeepers' services, all insurance, bonds, and all other reasonable overhead expenses incurred in the performance of the extra work. Payment for extra work may be made by one of the following methods, as agreed on in writing by Engineer and the Contractor before said extra work is commenced, subject to all other conditions of the Contract:

- a. Unit prices; or
- b. Lump sum price; or
- c. The cost of change in work plus ten percent (10%) of allowable costs. Allowable costs for purposes of this paragraph shall only include labor, material, sales tax, the rental of power tools and equipment actually used, or a reasonable price for the use of power tools and equipment owned by the Contractor based upon their life expectancy and purchase price, utilities, pro rata charges for foremen, and all payroll charges such as employer's FICA contribution, Public Liability and Workers' Compensation Insurance, but only if all such costs are incurred as the direct result of the changes in the Work. The change in cost for labor and material bonds and for performance bonds relative to the value of the extra work shall be allowable cost but shall not be marked up. If any subcontractor at any tier does all or part of the Work, the subcontractor's markup on that Work shall be fixed at fifteen percent (15%) of the allowable cost as defined herein.

19.8 Disputed Claims for Extra Work: If one of the payment methods set forth in Section 19.7 is not agreed on by Engineer, the City may retain either an independent contractor to perform such extra work or use its own forces to perform such extra work and the Contractor shall cooperate fully with the independent contractor or City in its performance of the extra work. However, Engineer may also direct Contractor to perform such extra work and any dispute will be handled as set forth in Section 31 of these General Conditions.

19.9 Change in Contract Time or Contract Price: The Contractor may request an extension of time or change in the Contract price should the Work be obstructed or delayed by any

justified unavoidable delays not caused in whole or in part by the Contractor, any subcontractor, or suppliers. However, delays caused by weather conditions will not be considered justified unavoidable delays unless they are caused by unusual weather as set forth in Section 4.2 of the Instructions to Bidders, in which case only an extension of time may be considered by City, but no additional compensation will be allowed for unusual weather. Furthermore, Contractor agrees that for any delays not caused by the City or any delays beyond the control of the City, no additional compensation will be due the Contractor and no change in the Contract price will be allowed by the City, only an extension of the Contract time will be considered by the City. The Contractor shall deliver requests for changes in the Contract price and/or completion time in writing to Engineer within ten (10) calendar days of the occurrence requiring the change. Approved changes that alter the time of the Contract shall extend the completion time by a period equivalent to the certified time lost by such occurrence. No change in Contract price and/or completion time shall be allowed if the above notice has not been properly given, such notice being a condition precedent to any such request by the Contractor. However, the Contractor shall continue with the Work as may be directed by Engineer and shall not stop work on the Project unless directed to do so by Engineer.

SECTION 20. PAYMENT FOR WORK

- 20.1 Monthly Construction Estimates:** Monthly construction estimates shall be submitted to the Owner and Engineer via email at TCole@bvcity.org and jhoward@amtengineering.com, respectively, no more than once every thirty (30) calendar days.
- 20.2 Preparing Progress Payment Requests:** In preparing construction estimates, the Contractor may request a progress payment based on the actual percentage of work completed during the preceding month. The estimate shall contain a breakdown of the total Contract amount; to include a separate breakdown of all approved change orders, into principal items of construction, showing the estimated quantity, unit price, and total for each item. In preparing progress payment requests, the material delivered on the site and preparatory work done may be taken into consideration, if properly documented, or as may be required by Engineer so that quantities can be verified. In addition to material delivered on the site, material such as large pieces of equipment and items purchased specifically for the project, but stored off the site, may be considered for payment, provided prior written approval is given by Engineer.
- 20.3 Progress Payments:** The City will make a progress payment to the Contractor on the basis of a duly certified and approved progress payment request for the work performed under the Contract. In the event that the City disagrees with the monthly construction progress payment request submitted by the Contractor, the City may withhold all or a portion of the progress payment until such dispute is resolved to the satisfaction of the City. If there are any objections or problems with the progress payment request, the City will notify the Contractor of such matters. If the progress payment request is approved by the City, payment will be made by the City to the Contractor not more than thirty (30) calendar days after such request has been approved. However, if there is an objection or problem with a progress payment request, the Contractor shall continue with the Work as may be directed by Engineer and shall not stop work on the Project unless directed to do so by Engineer. Any such disputes shall be handled as set forth in Section 31 of these General Conditions.
- 20.4 Retainage:** To ensure proper performance of the Contract, the City shall retain, unless stipulated otherwise, five percent (5%) of each progress payment until Final Acceptance of

all work covered by the Contract. The Contractor may request that such retainage be paid into an escrow account on certain Contracts, pursuant to Section 2.2-4334 of the Code of Virginia. (See also Sections 6.2 and 14.6 of Instructions to Bidders.)

- 20.5 Ownership of Material and Work:** All material and work covered by progress payments shall become the property of the City. This provision shall not relieve the Contractor from the responsibility for all material and to maintain all completed work and to repair all damaged work. The Contractor shall not deem a progress payment as a waiver to complete the terms of the Contract or shift the risk of loss from the Contractor to the City. The Contractor warrants that Contractor has good title to all material, equipment, and supplies which Contractor uses in the Work or for which Contractor accepts payment in whole or in part.
- 20.6 Payments to Others by Contractor:** The Contractor agrees that Contractor will comply with the requirements of Section 2.2-4354 of the Code of Virginia regarding Contractor's payment to other entities and that Contractor will take one of the two actions permitted therein within seven (7) calendar days after receipt of amounts paid to Contractor by the City. The Contractor agrees that Contractor shall indemnify and hold the City harmless for any lawful claims resulting from failure of the Contractor to make prompt payments to all persons supplying him equipment, labor, tools, or material in prosecution and completion of the Work provided for in the Contract. In the event of such claims, the City may, after providing written notice to the Contractor, withhold from any progress and/or final payment the unpaid sum of money deemed sufficient to pay all lawful claims and associated costs in connection with the Contract.
- 20.7 Final Payment:** Within thirty (30) calendar days after the Final Acceptance of the Work, the City shall pay the Contractor the Final Payment, less all prior payments, damages, setoffs, liquidated damages, any amounts withheld from retainage, or any other amounts Contractor may owe the City for any reason whatever.
- 20.8 Payment and Acceptance:** No payment, final or otherwise, nor partial or entire use, occupancy, or acceptances of the Work by the City shall be an acceptance of any work or material not in accordance with the Contract, nor shall the same relieve the Contractor of any responsibility for any faulty material or workmanship or operate to release the Contractor or its surety from any obligation under the Contract or the Performance Bond or the Labor and Material Payment Bond.
- 20.9 Right to Audit:** The Contractor agrees that the City, and any approving Federal or State Agency or any of their duly authorized representatives, shall have access to any books, documents, papers, records, schedules and electronic data of the Contractor which are pertinent to this Project for the purpose of making an audit, examinations, excerpts, copies or transcriptions and that Contractor will provide copies of such items to City upon City's request, at no cost to City.

SECTION 21. LIQUIDATED DAMAGES

If liquidated damages are provided by the Contract, the following provisions shall apply:

- a. Subject to the provisions of the General Conditions granted for extension of time allowed for completion of the Work, if the Work is not substantially completed by the date required in the Contract, the Contractor shall owe to the City, not as a penalty but as liquidated damages, the sum stated in the Contract for liquidated

damages for each and every calendar day of delay in completion.

SECTION 22. INSPECTION FOR FINAL ACCEPTANCE

- 22.1 Request for Final Acceptance:** The Contractor shall notify Engineer, in writing, that the Work will be ready for final inspection and testing on or after a certain date, which date shall be stated in the notice. When the Work is finally and totally complete, including the elimination of all known deficiencies, the Work shall be finally accepted by the City and final payment shall be made in accordance with Section 20.7 of these General Conditions.
- 22.2 Final Inspection:** Engineer will conduct the final inspection, and may elect to have other persons of its choosing also participate in the inspection. If one or more re-inspection is required, the Contractor shall reimburse the City for all costs of re-inspection or, at the City's option, the costs may be deducted from payments due to the Contractor.
- 22.3 Final Acceptance:** Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of the Affidavit of Payment of Claims, the Engineer will furnish a written Certificate of Final Acceptance of the Work to the Contractor. Engineer may accept the Work for occupancy or use while asserting claims against the Contractor, disputing the amount of compensation due to the Contractor, disputing the quality of the Work, its completion, or its compliance with the Contract Documents, and the like.
- 22.4 Release By Contractor:** The acceptance by the Contractor of the final payment or a payment designated as such shall be and does operate as a release by the Contractor of all claims by the Contractor against City and of all other liability of the City to the Contractor whatever, including liability for all things done or furnished in connection with the Work or the Contract.

SECTION 23. WARRANTY OF MATERIAL AND WORKMANSHIP

- 23.1** The Contractor warrants that, unless otherwise specified, all material and equipment incorporated in the Work under the Contract shall be new, in first class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.
- 23.2** Work not conforming to these warranties shall be considered defective.
- 23.3** These warranties of material and workmanship are separate and independent from and in addition to any of the Contractor's other guarantees or obligations in this Contract or that may arise by law.

SECTION 24. GUARANTEE OF WORK

- 24.1 Two Year Warranty:** The Contractor does warrant and guarantee the Work against defects or deficiencies in the Work and in all material, equipment, and workmanship for a period of two (2) years from the date of Final Acceptance.
- 24.2 Defective Work:** The Contractor agrees it shall repair or replace, at Contractor's sole expense, and to the satisfaction of Engineer, any work, material, equipment, or part that is found, by Engineer, to be defective.

24.3 Repairs: If, within any guarantee period, defects are noticed by Engineer which require repairs or changes in connection with the guaranteed work, those repairs or changes being in the determination of Engineer rendered necessary as the result of the use of material, equipment, or workmanship which is defective, inferior, or not in accordance with the terms of the Contract, then the Contractor shall, promptly upon receipt of notice from Engineer, such notice being given not more than four weeks after the expiration of any such guarantee period, and without any expense to the City:

- a. Place in satisfactory condition all guaranteed work and correct all defects therein; and
- b. Make good all damage to the structure, site, equipment, or contents thereof, which in the determination of Engineer is the result of the use of material, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract; and
- c. Make good any work or material or the equipment and contents of structures or the site disturbed in fulfilling any such guarantee.

24.4 Warranty Extension: In any case, where in fulfilling the requirements of the Contract or any guarantee embraced in or required thereby, the Contractor disturbs, damages or repairs any work guaranteed under the Contract, Contractor shall restore such work to a condition satisfactory to Engineer and guarantee such restored work to the same extent and for a like additional period of time as it was originally guaranteed under this Contract.

24.5 Correction of Defects: If the Contractor, after notice, fails to proceed promptly, but in no event longer than thirty (30) calendar days after such notice, unless otherwise agreed to by Engineer, to comply with the terms of the guarantee and/or correct the Work, the City may have the defects corrected by its own forces or another contractor and the Contractor and its surety shall be liable for all costs and expenses incurred in doing so.

24.6 Nothing contained in this section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents or the law of Virginia, including liability for defective work.

SECTION 25. STOP WORK ORDER

In the event that conditions exist such that no work can or should continue, other than the routine closing of the site, the Contractor may submit to Engineer a request to stop work or Engineer on his/her own may issue a Stop Work Order. Engineer will, if he/she approves the request or issues the order himself/herself, deliver a written "Stop Work Order" to the Contractor stipulating the effective date and the Contract time remaining. The Work, other than the routine closing of the site, and Contract time shall not again be started until a written "Resume Work Order" is received by the Contractor from Engineer. When the Work is stopped at the request of the Contractor and through no fault of the Contractor, the Contractor may only recover from the City payment for the cost of the Work actually performed, together with reasonable overhead and profit thereon up to that time, but profit shall be recovered only to the extent that the Contractor can demonstrate that it would have had profit on the entire Contract if it had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed, including, but not limited to, home office overhead or any other such costs. The Contractor may also recover the actual cost of physically closing down the jobsite, but no other costs of the Stop Work Order.

The City may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall the Stop Work Order to the Contractor relieve in any way the obligations of the Contractor's surety on its payment and performance bonds. When work is stopped by Engineer due to any fault of the Contractor, the Contractor may not recover any of the above costs or items or any other costs, profits, expenses, or damages of any type.

SECTION 26. TERMINATION OF CONTRACT FOR CAUSE

- 26.1 Termination for Cause:** If the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the City may terminate the Contract. If the Contractor should refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper material, or if it should fail to make prompt payment to subcontractors or suppliers of material or labor, or disregard laws, ordinances, or the written instructions of Engineer, or otherwise fails to comply with any of the terms or provisions of this Contract including, but not limited to, poor services, work or material, then the City may terminate this Contract. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.
- 26.2 Possession of Work:** Upon termination of the Contract, the City may take possession of the premises and of all material, tools, and appliances thereon and finish the Work by whatever method the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment of any type. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract price, the Contractor shall pay the difference to the City, together with any other cost or expenses of terminating the Contract and having it completed by others, together with any and all other damages City may be entitled to from the Contractor.
- 26.3 Alternative Termination:** If it should be judicially determined that the City improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the City.
- 26.4 Termination Rights:** Termination of this Contract under Section 26 or Section 27 is without prejudice and in addition to any other rights or remedies of the City against the Contractor.

SECTION 27. TERMINATION FOR CONVENIENCE OF CITY

- 27.1 Termination for Convenience:** The City, at its discretion, may terminate this Contract at any time without cause, in whole or in part, upon giving the Contractor written notice of such termination. Upon such termination, the Contractor shall immediately cease work and remove from the jobsite all of its labor forces, equipment, and material as City elect not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as City may require assigning to the City the Contractor's interest in all subcontracts and purchase orders designated by City. After all such steps have been taken to City's satisfaction; the Contractor shall receive as full compensation for termination and assignment only the following:
- a. All amounts then otherwise due under the terms of this Contract for actual work performed and approved by City; and
 - b. Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled

to any compensation for lost profits or for any other type of contractual compensation or damage, other than those provided by the preceding sentence, including any on site or home office overhead. Upon payment of the foregoing, City shall have no further liabilities or obligations to Contractor of any nature.

27.2 Termination Effect on Surety: In no event shall termination for the convenience of the City terminate the obligation of the Contractor's surety on its payment and performance bonds.

SECTION 28. PRECONSTRUCTION CONFERENCE

Engineer shall notify the Contractor as to the location, date, and time of a preconstruction conference to confirm procedures for processing construction estimates for payment and related submissions and to discuss other matters pertaining to scheduling and execution of the Work.

SECTION 29. PROJECT SIGN(S)

The Contractor may supply, erect, and maintain Project Sign(s) in accordance with the City of Buena Vista regulations and the Virginia Work Area Protection Manual, Latest Edition. The sign(s) shall be located as directed by Engineer. The Contractor shall not display any other signs or advertisements.

SECTION 30. ASSIGNMENTS

The Contractor shall not assign, in whole or in part, any of its rights, duties, or obligations under this Contract with the City without the prior written consent of the City.

SECTION 31. CONTRACTUAL DISPUTES

Contractual claims, whether for money or for other relief, including any disputes as to change orders or extra work, shall be submitted, in writing, no later than sixty (60) calendar days after final payment or payment designated as a final payment; however, written notice of the Contractor's intention to file such claim must be given at the time of the occurrence or beginning of the work upon which the claim is based. Such notice is a condition precedent to the assertion of any such claim by the Contractor. A written decision upon any such claims will be made by the City Department of Public Works or his/her designee (hereafter City Department of Public Works) within thirty (30) calendar days after submittal of the claim and any practically available additional supporting evidence required by the City Department of Public Works. The Contractor may not institute legal action prior to receipt of the City's decision on the claim unless the City Department of Public Works fails to render such decision within one hundred twenty (120) calendar days from submittal of its claim. The decision of the City Department of Public Works shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim or from expiration of the 120-day time limit, whichever occurs first, initiates legal action as provided in Section 2.2 - 4364, of the Code of Virginia. Failure of the City to render a decision within said one hundred twenty (120) calendar days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the City's failure to render a decision within said one hundred twenty (120) calendar days shall be Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to Section 2.2 - 4365, of the Code of Virginia, has been established for contractual claims under this Contract.

SECTION 32. MAINTENANCE DURING CONSTRUCTION

32.1 Traffic Control: will not be paid for directly, but will be considered incidental to the work and will not be measured for payment.

- a. The Contractor shall have at least one person on the project site during all work operations who is currently verified either by the Department's Intermediate Work Zone Traffic Control training or by the American Traffic Safety Services Association (ATSSA) Virginia Intermediate Traffic Control Supervisor (TCS) training by a Department approved training provider. This person must have their 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, 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 work zone traffic control devices on the project.

If none of the Contractor's on-site personnel responsible for the supervision of such work have the required verification with them or if they have an outdated verification card showing they are not currently verified as a Traffic Control Supervisor (TCS) either by the Department in Intermediate Work Zone Traffic Control, or by the ATSSA, the Engineer will suspend all work on the project until the Work is appropriately supervised in accordance with the requirements herein.

- b. The Contractor shall have at least one person on site who is, at a minimum, verified in Basic Work Zone Traffic Control by the Department 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 for any construction and/or maintenance operation have, at a minimum, the required verification in Basic Work Zone Traffic Control, the Engineer will suspend that construction/maintenance operation until that operation is appropriately staffed in accordance with the requirements herein.

- c. Flagging Traffic: Certified flaggers shall be provided in sufficient number and locations as necessary for control and protection of vehicular and pedestrian traffic in accordance with the VWAPM. Flaggers shall be able to communicate to the traveling public in English while performing the job duty as a flagger at the flagger station. Flaggers shall use sign paddles to regulate traffic in accordance with the VWAPM.

Certification for flaggers will be awarded upon a candidate's satisfactory completion of an examination. Certification cards shall be carried by flaggers while performing flagging duties. Flaggers found not to be in possession of their certification card shall be removed from the flagging site and operations requiring flagging will be suspended by the Engineer until a certified flagger is on-site to perform flagging duties in accordance with the requirements herein. Further, flaggers performing duties improperly will have their certifications revoked.

32.2 Maintenance of Traffic:

- a. The Contractor shall prosecute the Work so as to avoid obstructions to traffic to the greatest extent practicable. The Contractor shall provide for the safety and convenience of the general public and residents along the roadway, and for the protection of persons and property.

Highways closed to traffic shall be protected by barricades and other warning devices as required by the Contract, the VWAPM, and the MUTCD. Barricades and warning devices shall be illuminated where required during periods of darkness and low visibility. The Contractor shall erect warning devices in advance of a location on the project where operations or obstructions may interfere with the use of the road by traffic and at all intermediate points where the new work crosses or coincides with an existing roadway. The Contractor shall maintain sign faces and reflective surfaces of warning devices in a clean and visible condition. The Contractor shall cover or remove signs when the messages thereon are not applicable.

- b. The road shall be kept open to all traffic while undergoing improvements, unless otherwise permitted in the Contract. The Contractor shall keep the portion of the project being used by public, pedestrian, and vehicular traffic in such condition that all such traffic will be safely and adequately accommodated.

The Contractor shall keep the portions of the road being used by the public free from irregularities and obstructions that could present a hazard or annoyance to traffic. Holes in hard surface pavements shall be filled with approved asphalt patching material.

If any damage is sustained by an accepted unit or portion of the project attributable to causes beyond the control of the Contractor, the Engineer may authorize the Contractor to make the necessary repairs. These repairs will be paid for at the Contract price for the items requiring repair.

32.3 Maintenance of Traffic During Suspension of Work: During any suspension of work, the Contractor shall temporarily open to traffic such portions of the project and temporary roadways as may be agreed upon by the Contractor and Engineer.

32.4 Minimizing Traffic Delays: Two-way traffic shall be maintained at all times unless the Contract or the Engineer permits one-way traffic. The Contractor shall not stop traffic without the Engineer's permission.

If one-way traffic is permitted, the Contractor shall provide certified flaggers to direct the traffic.

32.5 Connections and Entrances: Connections with other roads and public and private entrances shall be kept in a reasonably smooth condition at all times.

Stabilization or surfacing material shall be applied to connections and entrances.

The Contractor shall schedule construction operations so that approved continuous access is provided for all property adjacent to the construction.

The Contractor shall not disturb connections or entrances until necessary. Once disturbed, the Contractor shall maintain and complete connections or entrances as follows:

- a. **Connections:** Connections that had an original paved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using temporary pavement as soon as practicable after connections are disturbed. Connections that had an original unpaved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using either the required material or a temporary aggregate stabilization

course that shall be placed as soon as practicable after connections are disturbed.

If there are delays in prosecution of work for connections, connections that were originally paved shall have at least two lanes maintained with a temporary paved surface. Those that were not originally paved shall be maintained with a temporary aggregate stabilization course.

32.6 Opening Sections of Projects to Traffic:

Certain sections of the Work may be opened to traffic when specified in the Contract or when directed by the Engineer. Such opening shall not constitute acceptance of the Work or any part thereof or a waiver of any provision of the Contract.

If the Contractor is not continuously prosecuting the Work to the Engineer's satisfaction as determined by the Schedule of Record, the Contractor shall not be relieved of the responsibility for maintenance of the completed work during the period that the section of the Work is opened to traffic prior to final acceptance. The Contractor shall be responsible for any expense resulting from the opening of such portions of the Work under these circumstances, except for slides. The Contractor shall conduct the remainder of the construction operations so as to cause the least obstruction to traffic.

32.7 Maintenance of Work:

- a. The Contractor shall maintain the Work, the project site, construction area and roadway from the beginning of construction operations until final acceptance with adequate equipment and forces to keep the roadway and structures in a safe and satisfactory condition at all times and to ensure the continuous and effective day by day prosecution of the Work.
- b. Where the Contract specifies placing a course on another course or subgrade of embankment, base, subgrade, concrete, asphalt pavement, or other courses previously constructed, the Contractor shall maintain the courses or subgrades previously constructed in accordance with the Contract requirements when placing such course. This maintenance includes, but is not limited to draining, re-compacting, re-grading, or, if unacceptable or destroyed, the removal of work the Owner previously accepted.

32.8 Maintenance Cost:

The Contractor shall bear all costs of performing maintenance work before final acceptance, and of constructing and maintaining necessary approaches, crossings, intersections, and other features without direct compensation except as provided for herein. When the Contractor confines his operation to the surface of the roadway and reasonable width of the shoulder and the surface is disturbed or damaged by his operations or equipment, he shall be responsible for the restoration and maintenance of the surface that is disturbed or damaged.

32.9 Failure to Maintain Roadway: If the Contractor fails to remedy unsatisfactory maintenance immediately after receipt of a notice by the Engineer, the Engineer may proceed with adequate forces, equipment, and material to maintain the project. The cost of the maintenance, plus 25 percent for supervisory and administrative personnel, will be deducted from monies due the Contractor for the project.

SECTION 33. MOBILIZATION

33.1 Mobilization: will not be paid for directly, but will be considered incidental to the work and will not be measured for payment.

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CITY OF BUENA VISTA, VIRGINIA

SUPPLEMENTAL GENERAL CONDITIONS

Supplemental General Conditions are as follows:

- A. Regardless of the amount of the Contract awarded for this Work, Contractor shall provide a Performance Security and a Labor and Material Payment Security as referred to in Section 14.5 of the Instructions to Bidders.
- B. This Contract is subject to the following price adjustment terms for the Liquid Asphalt used in bituminous concrete (asphalt) actually used for this Project. Such price adjustment will be used to increase or decrease the Contractor's approved invoices as set forth herein.
 - i. P-means Price Adjustment in dollars.
T-means tons of bituminous concrete (asphalt) actually placed as set forth in Contractor's invoice as approved by the City.
A-means Liquid Asphalt percentage content of T as it is defined by the Virginia Department of Transportation (VDOT) mix design.

Using the VDOT monthly Price Adjustment Index for Asphalt:

D1 – means the Base Price Index for the month in which the bids for the Project were received by the City.

D2 – means the Current Price Index for the month in which the bituminous concrete (asphalt) was actually placed on the roadway.

- ii. The formula to be used for such price adjustment shall be: $P = T \times A \times (\text{the price variance between D1 and D2})$.
- iii. Notwithstanding anything set forth herein, this price adjustment clause shall only be used if the price variance between D1 and D2 is equal to or greater than 1% of D1.
- iv. If D2 is greater than D1 then the resultant price adjustment amount using the above formula (subject to iii above) will be added to the Contractor's approved invoice. However, if D1 is greater than D2 then the resultant price adjustment amount using the above formula (subject to iii above) will be deducted from the Contractor's approved invoice.
- v. The following are by way of example only to show how the above formula works:
 - 1. Example 1 - Price adjustment goes up: $T = 4,500$ tons, $A = 5.5\%$, $D2 = \$140$, $D1 = \$135$. $P = 4500 \times .055 \times (140-135) = \$1,237.50$ adjusted amount.
 - 2. Example 2 - Price adjustment goes down: $T = 4,500$ tons, $A = 5.5\%$, $D2 = \$130$, $D1 = \$135$. $P = 4500 \times .055 \times (135-130) = -\$1,237.50$ adjusted amount.

3. Example 3 – No Price adjustment because the price variance between D1 and D2 is not equal to or greater than 1% of D1: $T = 4,500$ tons, $A = 5.5\%$, $D2 = \$134$, $D1 = \$135$ $(135-134) = 1$ divided by $135 = .007\%$.
- vi. When bituminous concrete (asphalt) mixtures for the Project require the use of Performance Grade bituminous concrete (PG 70-22) the F.O.B. price per ton upon which Contractor's bid was based as shown on the Bid Form will be used for D1. Contractor shall list this price on the Bid Form. The average monthly price for PG 70-22 for the month in which such PG 70-22 was actually placed on the roadway will be the figure used for D2. The Contractor shall provide the City documents, including invoice(s) signed by the supplier of PG 70-22, with each of Contractor's pay requests to establish such amounts. Adjustments, upward or downward, for bituminous concrete containing PG 70-22 will then be made in accordance with the above formula and examples.

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NO PLAN PROJECT

**TIER 1 PROJECT
"NO PLAN" RAAP (CONSTRUCTION & MAINTENANCE) PROJECTS
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION: _____ **MAINTENANCE:** X

DISTRICT: Staunton CITY/COUNTY: Buena Vista UPC NO.: 115105

FUNCTIONAL CLASS Various FHWA 534 DATA _____ TYPE CODE Maint.

ROUTE: Route 60 PROJ. U000-103-242 (Task A) FEDERAL NO.: N/A

FROM: East intersection Orchard Avenue TO: Intersection Beech Avenue

LENGTH (FEET): _____ MILES 0.50

TOPO: _____ DESIGN SPEED (MPH): _____ VPD (YEAR) _____

PROJECT MGR: John Cole R/W DONATION: _____

Utilities _____ and/or Railroads _____ are involved in the construction of this project.

This project is to be constructed in accordance with the Department's 2016 Road and Bridge Specifications, 2016 Road and Bridge Standards, 2015 Work Area Protection Manual and as amended by contract provisions and the complete plan assembly.

Design features relating to construction or to regulation and control of traffic may be subject to change as deemed necessary by the department.

TIER 1 PROJECT
"NO PLAN" RAAP (CONSTRUCTION & MAINTENANCE) PROJECTS
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION: _____ **MAINTENANCE:** X

DISTRICT: Staunton CITY/COUNTY: Buena Vista UPC NO.: 115104

FUNCTIONAL CLASS Various FHWA 534 DATA _____ TYPE CODE Maint.

ROUTE: Route 501 PROJ. U000-103-241 (Task B) FEDERAL NO.: N/A

FROM: 0.03 miles south intersection West 3rd Street TO: 0.04 miles north intersection Beverly Hollow Lane

LENGTH (FEET): _____ MILES 0.80

TOPO: _____ DESIGN SPEED (MPH): _____ VPD (YEAR) _____

PROJECT MGR: John Cole R/W DONATION: _____

Utilities _____ and/or Railroads _____ are involved in the construction of this project.

This project is to be constructed in accordance with the Department's 2016 Road and Bridge Specifications, 2016 Road and Bridge Standards, 2015 Work Area Protection Manual and as amended by contract provisions and the complete plan assembly.

Design features relating to construction or to regulation and control of traffic may be subject to change as deemed necessary by the department.

TIER 1 PROJECT
"NO PLAN" RAAP (CONSTRUCTION & MAINTENANCE)
PROJECTS CITY OF BUENA VISTA, VIRGINIA

CONSTRUCTION: _____ **MAINTENANCE:** X

DISTRICT: Staunton CITY/COUNTY: Buena Vista UPC NO.: N/A

FUNCTIONAL CLASS Various FHWA 534 DATA _____ TYPE CODE Maint.

ROUTE: Route 501 PROJ. 2020-02 (Task C) FEDERAL NO.: N/A

FROM: 0.04 miles north intersection Beverly Hollow Lane TO: 0.25 Miles Intersection Beverly Hollow Lane (S. City Limits)

LENGTH (FEET): _____ MILES 0.25

TOPO: _____ DESIGN SPEED (MPH): _____ VPD (YEAR) _____

PROJECT MGR: John Cole R/W DONATION: _____

Utilities _____ and/or Railroads _____ are involved in the construction of this project.

This project is to be constructed in accordance with the Department's 2016 Road and Bridge Specifications, 2016 Road and Bridge Standards, 2015 Work Area Protection Manual and as amended by contract provisions and the complete plan assembly.

Design features relating to construction or to regulation and control of traffic may be subject to change as deemed necessary by the department.

TRANSPORTATION MANAGEMENT PLAN

INTRODUCTION

This project consists of resurfacing of primary routes within the City of Buena Vista. Types of traffic include trucks, commuters, travelers and residents.

TEMPORARY TRAFFIC CONTROL PLAN

The Contractor shall set up (establish) work zones and manage (control) traffic in accordance with the VDOT 2016 Road and Bridge Specifications, the latest edition of the Virginia Work Area Protection Manual, the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). The contractor shall submit a Maintenance of Traffic plan and/or proposed VWAPM Temporary Traffic Control (TTC) layout sheets for approval by the Engineer **prior** to beginning work. The Department may require specific MOT plans to be submitted for approval to address situations where it is necessary for TTC's to be combined and/or field conditions that are not specifically addressed by specific TTC.

General Notes

1. This project is identified as a TMP Type A project.
2. Work zone location, length, width and number of lanes affected will vary depending on the work location and which typical traffic control standard is used.
3. The Contractor is advised that lane and shoulder closure time restrictions are noted per location segment in contract.
4. No known locations exist within the right of way for construction equipment and material storage. Coordinate with City and Engineer.
5. Various entrances, intersections and pedestrian access points are affected by the work zone and traffic control devices.
6. Types of traffic: local, commuter, and trucks.
7. At the end of each workday the roadway shall be opened to normal traffic patterns.
8. The Contractor shall limit the work zone length to only the amount of work that can be reasonably completed in a single work day. The Contractor shall not perform work on both sides of the road in the same area.
9. The Contractor shall submit a detailed maintenance of traffic plan to the City and Engineer for approval at least two weeks prior to beginning the work.
10. The City Inspector is the designated safety officer for the project.

Special Details

There are no special details for this project that are not addressed in the contract by the General Notes, "Limitations of Operation and Maintenance of Traffic" documents, special provisions within, and the latest revision of the Virginia Work Area Protection Manual.

City Inspector (Project Maintenance of Traffic Coordinator) - To Be Determined by City

City Inspector (Safety Officer) - To Be Determined by City

PUBLIC COMMUNICATIONS PLAN

Notification

Lane closure information shall be submitted with the Contractors two week look ahead (TWLA) schedule updates submitted to the ACE. Lane closure information may be presented in a narrative format. The ACE will notify the Public Communications Manager and the Residency Administrator of scheduled work plans and traffic delays.

Ensuring proper, timely and accurate communication to the media and general public is critical in providing en-route traveler information. The Contractor will advise the Staunton Traffic Operations Center of delays exceeding two miles.

TRANSPORTATION OPERATIONS PLAN

The process to notify the Regional Traffic Operations Center (TOC) to place lane closure Information on the Virginia Traffic 511 system and VA-Traffic is:

- a. All proposed lane closures and contact information shall be logged into LCAMS in accordance with the Special Provision for Lane Closure Coordination (LCC)/Lane Closure Implementation (LCI) in the contract and **prior** to any planned work.
- b. Contractor representative and/or City Inspector shall notify the TOC of lane closure implementation when first sign is placed and of lane closure removal once last sign is picked up.

The following is a list of local emergency contact agencies:

Virginia State Police – 911
County Sheriff – 911
Haz-Mat Center (if spill involved) -911

Procedures to respond to traffic incidents that may occur in the work Zone:

- a. Contractor to notify State Police and City Inspector (Project Maintenance of Traffic Coordinator).
- b. Depending upon the severity of the incident, the contractor may have to shut down work.

- c. Upon arrival on the scene, State Police will determine response necessary to allow traveling public around incident.
- d. City Inspector (Project Maintenance of Traffic Coordinator) will notify the Traffic Operations Center, Construction Manager and District Safety Manager of incident and take pictures as necessary, especially pictures of contractor's Work zone to verify the proper setup.

Process of notification of incident to be followed for the City Inspector (Project Maintenance of Traffic Coordinator) is to notify:

- a. Construction Manager: Joe Howard - 804-387-8264
- b. Area Construction Engineer: Mitch Ball - 571-238-4673
- c. District Safety Manager: Forester Wright - 540-480-8900
- d. Residency Administrator: Susan Hammond - 540-462-6990
- e. District Traffic Engineer: Keith Rider - 540-332-9220
- f. District Public Affairs Manager: Sandy Myers - 540-292-2500

The State Police will take control of the incident and direct its clearing and restoration to normal traffic conditions.

The State Police report of the incident will be reviewed by the City to determine if any modification of the Temporary Traffic Control Plan is necessary. If it is determined that it is necessary to alter the plan, then a meeting will be called with the Contractor, Area Construction Engineer, District Safety Manager, District Traffic Engineering representatives and the State Police (if necessary) to discuss modification and implementation of an improved traffic control plan.

TECHNICAL SPECIFICATIONS

All work shall conform to the 2016 Virginia Department of Transportation (VDOT) Road and Bridge Specifications Divisions 2, 3, 5, and 7, VDOT Special Provision Copied Notes (SPCNs), VDOT Special Provision (SPs), and the VDOT Supplemental Specifications (SSs). The 2016 VDOT Road and Bridge Specifications are available on the web at http://www.virginiadot.org/business/resources/const/VDOT_2016_RB_Specs.pdf.

VDOT SPECIAL PROVISION COPIED NOTES (SPCNs)

GUIDELINES - Applies only to those projects developed through the "Local Assistance Division" for county or city administration and use 2016 VDOT Specifications and 2016 VDOT Standards.

[cn100-000051-02](#)

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 2016 and the Supplement thereto, dated 2019. References to the "Road and Bridge Standard(s)" shall refer to the *Virginia Department of Transportation Road and Bridge Standards*, dated 2016 with revisions issued online as of the advertisement date for this project incorporated. References to the "Virginia Work Area Protection Manual" shall refer to the 2011 edition of the *Virginia Work Area Protection Manual with Revision Number 2* incorporated, dated September 1, 2019. References to the "MUTCD" shall refer to the 2009 edition of the *MUTCD with Revision Numbers 1 and 2* incorporated, dated May 2012; and the 2011 edition of the *Virginia Supplement to the MUTCD with Revision Number 1* dated September 30, 2013.

Where the terms "Department", "Engineer", "Contract Engineer", "Construction Engineer", Materials "Engineer", and "Operations 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 according to the definitions in Section 101.02 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2016. 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 2016 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 at the top and 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.

12-2-19 (SPCN)

GUIDELINES – Use with asphalt plant mix in Bristol, Salem, and Staunton districts. {2007-c211hg0}

[cn211-000100-00](#)

POLISHING AGGREGATE IN ASPHALT CONCRETE - Section 211—Asphalt Concrete of the Specifications is amended as follows:

Section 211.02—Materials is amended by replacing (e) with the following:

Fine or coarse aggregate that tend to polish under traffic will not be permitted in any final surface exposed to traffic except as permitted within the limits of Section 211.04(a) and (b) of the Specifications and as designated by the Engineer or as permitted elsewhere in these Specifications.

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

Asphalt concrete mixtures shall conform to Table II-14 and the following:

- (a) **Types SM-9.0A, SM-9.0D, SM-9.0E, SM-9.5A, SM-9.5D and SM-9.5E 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: For all surface mixes, except where otherwise noted, no more than 5 percent of all aggregate retained on the No. 4 sieve and no more than 20 percent of the total aggregate may be polish susceptible. At the discretion of the Engineer, a SM-9.5AL may be specified and polish susceptible aggregates may be used (without percentage limits).

- (b) **Types SM-12.5A, SM-12.5D, SM-12.5E, 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 a SM-19.0A or SM-19.0D. For SM-12.5 and SM-19.0 surface mixes, 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. No more than 35 percent of the total aggregate composition (polish and non-polish susceptible) shall be passing the No. 8 sieve. At the discretion of the Engineer, a SM-12.5AL may be specified and polish susceptible aggregates may be used (without percentage limits).

10-7-09; Reissued 7-12-16 (SPCN)

[cq211-000310-00](#) [formerly [cq211-030100-00](#)]

GUIDELINES – For asphalt maintenance projects in Bristol district coal counties only when called for by the District Maintenance Engineer. {2007-[cu211000a](#)}

SM-22.5 ASPHALT CONCRETE MIXTURES (Bristol District Coal Counties Only — When asphalt concrete mix types SM-22.5 A, D, or E are specified in the Schedules, **TABLE II-13—Asphalt Concrete Mixtures: Design Range** of the Specifications shall be amended to add the following to the table:

TABLE II-13
Asphalt Concrete Mixtures: Design Range¹

Mix Type	Percentage by Weight Passing Square Mesh Sieves										
	2 in	1 ½ in	1 in	¾ in	½ in	3/8 in	No. 4	No. 8	No. 30	No. 50	No. 200
SM-22.5 A,D,E			95-100	Max. 90	60-84			19-38			2-8

10-21-08; Reissued 7-12-16_(SPCN)

GUIDELINES — All projects requiring asphalt concrete pavement. {2007-c315i00}

[cn315-000100-00](#)

SECTION 315.05(c) PLACING AND FINISHING is modified by replacing the third paragraph with the following:

The longitudinal joint in one layer shall offset that in the layer immediately below by approximately 6 inches or more. The joint in the wearing surface shall be offset 6 inches to 12 inches from the centerline of the pavement if the roadway comprises two traffic lanes. The joint shall be offset approximately 6 inches from the lane lines if the roadway is more than two lanes in width. The longitudinal joint shall be uniform in appearance. On all roads except secondary routes, if the offset for the longitudinal joint varies from a straight line more than 2 inches in 50 feet on tangent alignment, or from a true arc more than 2 inches in 50 feet on curved alignment, the Contractor shall seal the joint using a water-proof sealer at no cost to the Department. The Contractor shall recommend a sealant and installation procedure to the Engineer for approval before proceeding. On all roads except secondary routes, if the offset for the longitudinal joint varies from a straight line more than 3 inches in 50 feet on tangent alignment, or from a true arc more than 3 inches in 50 feet on curved alignment, the Engineer may reject the paving. The Engineer will not require offsetting layers when adjoining lanes are paved in echelon and the rolling of both lanes occurs within 15 minutes after laydown.

1-18-17 (SPCN)

GUIDELINES — Plant mix schedule projects only. {2007-c515c00}

[cn515-000100-02](#)

DISINCENTIVE FOR PLANING IN MULTIPLE LANES

The Special Provision for **COLD PLANING (MILLING) ASPHALT CONCRETE OPERATIONS** "[SP515-000100-00](#)" dated July 12, 2016 is amended as follows:

Section III.A.1. Regular planing and performance planing in multiple lanes is amended to replace the first bulleted subparagraph of the fourth paragraph with the following:

- The Contractor will be limited in the case of **regular pavement planing**, whether in a single lane or multiple lane operation, to only that amount of pavement that can be paved back within 24 hours of completion of planing that roadway or portion of roadway. Single-lift operations must be restored to final elevation to satisfy this requirement. If the Contractor elects not to pave back the planed travel lanes within 24 hours from the end of the regular planing operation, or is prevented from doing so by predictable weather, the Department will assess a disincentive in the amount of **\$5,000** for each calendar day the planed travel lane surface is not paved back, including Sundays and Holidays.

Section III.A.1. Regular planing and performance planing in multiple lanes is amended to replace the first bulleted subparagraph of the fifth paragraph with the following:

- **Performance pavement planing** may be performed in multiple lanes across the entire widths of the lanes up 4 miles of travel lane unless otherwise stated in the Contract. Performance planed travel lane surfaces must be paved back within 96 hours from the end of the performance planing operation. Single-lift operations must be restored to final elevation to satisfy this requirement. If the Contractor elects not to pave back the planed travel lanes within 96 hours from the end of the performance planing operation, or is prevented from doing so by predictable weather, the Department will assess a disincentive in the amount of **\$5,000** for each calendar day the planed travel lane surface is not paved back, including Sundays and Holidays.

11-23-16 (SPCN)

VDOT SPECIAL PROVISION (SPs)

GUIDELINES — Applies only to those projects developed through the "Local Assistance Division" for county or city administration and use 2016 VDOT Specifications and 2016 VDOT Standards.[\[Source\]](#)

[SP100-000051-00](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
CHANGED CONDITIONS FOR LOCAL ASSISTANCE PROJECTS

April 29, 2019

I. GENERAL

This special provision specifies the process to be followed when conditions specified in the Contract differ from what is encountered during the prosecution of work except as provided elsewhere in the Contract.

II. DIFFERING SITE CONDITIONS

1. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the Contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.
2. Upon written notification, the Engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment, excluding anticipated profits, will be made and the Contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the Contract is warranted.
3. No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.
4. No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the Department at its option.)

III. SUSPENSION OF WORK ORDERED BY THE ENGINEER

1. If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.
2. Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the Contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by

weather, the Engineer will make an adjustment (excluding profit) and modify the Contract in writing accordingly. The Contractor will be notified of the Engineer's determination whether or not an adjustment of the Contract is warranted.

3. No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.
4. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

IV. SIGNIFICANT CHANGES IN THE CHARACTER OF WORK

1. The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the Contract nor release the surety, and the Contractor agrees to perform the work as altered.
2. If the alterations or changes in quantities significantly change the character of the work under the Contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the Contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.
3. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the Contract, the altered work will be paid for as provided elsewhere in the Contract.
4. The term "significant change" shall be construed to apply only to the following circumstances:
 - A. When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
 - B. When a major item of work, as defined elsewhere in the Contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

GUIDELINES — For all projects containing eligible asphalt materials on the attached master list.

SP109-000100-03

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
ASPHALT MATERIAL PRICE ADJUSTMENT

September 6, 2019

All asphalt material contained in the attached master listing of eligible bid items and designated by pay items in the contract will be price adjusted according to the provisions as set forth herein. Other items will not be adjusted, except as otherwise specified in the Contract. If new pay items which contain asphalt material are established by Change Order, they will not be subject to Price Adjustment unless specifically designated in the Change Order to be subject to Price Adjustment.

Each month, the Department will publish an average state-wide PG 64S-22 f.o.b. price per ton and an average PG 64E-22 f.o.b. price per ton developed from the average terminal prices provided to the Department from suppliers of asphalt cement to contractors doing work in Virginia. The Department will collect terminal prices from approximately 12 terminals each month. These prices will be received once each month from suppliers on or about the last weekday of the month. The high and low prices will be eliminated and the remaining values averaged to establish the average statewide price for the following month. The monthly state-wide average price will be posted on the Construction Division website on or about the first weekday of the following month. In the event the average prices were to change by 10 percent or more of the Base Index during the middle of the month the Contractor can submit a letter to the Department and supplier that provides evidence of the difference in price. Upon receipt of the letter consideration will be given to extend additional adjustments as deemed necessary.

This monthly statewide average price will be the Base Index for all contracts on which bids are received during the calendar month of its posting and will be the Current Index for all asphalt placed during the calendar month of its posting. In the event an index changes radically from the apparent trend, as determined by the Engineer, the Department may establish an index which it determines to best reflect the trend.

The amount of adjustment applied will be based on the difference between the contract Base Index and the Current Index for the applicable calendar month during which the work is performed. The quantity of asphalt cement for asphalt concrete pavement to which adjustment will be applied will be the quantity based on the percent of asphalt cement shown on the appropriate approved job mix formula.

Adjustment of any asphalt material other than PG 64S-22 and PG 64E-22 will be based on the indexes for PG 64S-22.

The quantity of asphalt emulsions to which adjustment will be applied will be the quantity based on 65 percent residual asphalt.

Price adjustment will be shown as a separate entry on the monthly progress estimate; however, such adjustment will not be included in the total cost of the work for progress determination or for extension of contract time. Price adjustment will be calculated using the same units as the corresponding Pay Items in the Contract.

Any apparent attempt to unbalance bids in favor of items subject to price adjustment or failure to submit required cost and price data as noted hereinbefore may result in rejection of the bid proposal.

VIRGINIA DEPARTMENT OF TRANSPORTATION
**MASTER LISTING OF
 ASPHALT MATERIAL ITEMS ELIGIBLE FOR PRICE ADJUSTMENT**

ITEM	DESCRIPTION	UNITS	SPECIFICATION
10062	Asphalt-Stab. Open-Graded Material	Ton	313
10415	Prime Coat	Gal	311
10416	Liquid Asphalt	Gal	311 312
10417	Tack Coat	Gal	310
10418	Liquid Asphalt	Gal	314
10420	Blotted Seal Coat Ty. B	SY	ATTD
10422	Blotted Seal Coat Ty. C	SY	ATTD
10423	Blotted Seal Coat Ty. C-1	SY	ATTD
10424	Blotted Seal Coat Ty. D	SY	ATTD
10426	NS Blotted Seal Coat	SY	ATTD
10598	NS Asphalt Concrete	Ton	315
10603	Asphalt Concrete Ty. SM-19.0A	Ton	315
10604	Asphalt Concrete Ty. SM-19.0D	Ton	315
10605	Asphalt Concrete Ty. SM-19.0E (76-22 or 64E)	Ton	315
10606	Asphalt Concrete Ty. SM-9.5	Ton	315
10607	Asphalt Concrete Ty. SM-12.5A	Ton	315
10608	Asphalt Concrete Ty. SM-12.5D	Ton	315
10609	Asphalt Concrete Ty. SM-12.5E (64E-22)	Ton	315
10610	Asphalt Concrete Ty. IM-19.0A	Ton	315
10611	Asphalt Concrete Ty. IM-19.0D	Ton	315
10612	Asphalt Conc. Base Cr. Ty. BM-25.0	Ton	315
10613	Asphalt Concrete Ty. BM-37.5	Ton	315
10614	Asphalt Concrete Ty. IM-19.0E (76-22 or 64E)	Ton	315
10635	Asphalt Concrete Ty. SM-9.5A	Ton	315
10636	Asphalt Concrete Ty. SM-9.5D	Ton	315
10637	Asphalt Concrete Ty. SM-9.5E (64E-22)	Ton	315
10638	Asphalt Conc. Ty. BM-25.0D+0.8	Ton	ATTD
10639	Asphalt Concrete Ty. SM-19.0	Ton	315
10642	Asphalt Concrete Ty. BM-25.0A	Ton	315
10643	Asphalt Concrete Ty. BM-25.0D	Ton	315
10644	Asphalt Concrete Ty. SM-9.0A	Ton	315
10645	Asphalt Concrete Ty. SM-9.0D	Ton	315
10646	Asphalt Concrete Ty. SM-9.0E	Ton	315
10647	Asphalt Concrete Ty. SM-4.75A	Ton	315
10648	Asphalt Concrete Ty. SM-4.75D	Ton	315
10649	Asphalt Concrete Ty. SM-4.75E	Ton	315
10650	Stone Matrix Asphalt SMA-9.5(64H-22)	Ton	317
10651	Stone Matrix Asphalt SMA-9.5(64E-22)	Ton	317
10652	Stone Matrix Asphalt SMA-12.5(64H-22)	Ton	317
10653	Stone Matrix Asphalt SMA-12.5(64E-22)	Ton	317
10654	Stone Matrix Asphalt SMA-19.0(64H-22)	Ton	317
10655	Stone Matrix Asphalt SMA-19.0(64E-22)	Ton	317
10701	Liquid Asphalt Coating	SY	ATTD

ITEM	DESCRIPTION	UNITS	SPECIFICATION
12505	Asphalt Concrete Curb Backup Material	Ton	315
13240	Asphalt Concrete Sidewalk	Ton	504
16110	Emul. Asph. Slurry Seal Type A	SY	ATTD
16120	Emul. Asph. Slurry Seal Type B	SY	ATTD
16130	Emul. Asph. Slurry Seal Type C	SY	ATTD
16144	Latex Mod. Emul. Treat. Type B	Ton	ATTD
16145	Latex Mod. Emul. Treat. Type C	Ton	ATTD
16146	Latex Mod. Emul. Treat. Rutfilling	Ton	ATTD
16161	Modified Single Seal	SY	ATTD
16162	Modified Double Seal	SY	ATTD
16249	Nontracking Tack Coat	Gal.	ATTD
16250	Liquid Asphalt Matl. CMS-2 (Mod)	Gal	ATTD
16251	Liquid Asphalt Matl. CMS-2	Gal	ATTD
16252	Liquid Asphalt Matl. CRS-2	Gal	ATTD
16253	Liquid Asphalt Matl. CRS-2H	Gal.	ATTD.
16254	Liquid Asphalt Matl. RC-250	Gal	ATTD
16256	Liquid Asphalt Matl. RC-800	Gal	ATTD
16257	NS Liquid Asphalt Matl.	Gal	ATTD
16260	Liquid Asphalt Matl. CRS-2L	Gal	ATTD
16301	Liq.Asph. Rumble Strip Coating	SY	315
16325	NS Asphalt Concrete	Ton	N/A
16326	Asphalt Concrete Ty. SM-4.75A	Ton	315
16327	Asphalt Concrete Ty. SM-4.75D	Ton	315
16328	Asphalt Concrete Ty. SM-4.75E	Ton	315
16330	Asphalt Concrete Ty. SM-9.0A	Ton	315
16331	Asph. Conc. Ty. SM-9.0D	Ton	315
16332	Asph. Conc. Ty. SM-9.0E	Ton	315
16335	Asphalt Concrete Ty. SM-9.5A	Ton	315
16337	Asph. Conc. Ty. SM-9.5ASL (Spot Level)	Ton	315
16340	Asphalt Concrete Ty. SM-9.5D	Ton	315
16342	Asph. Conc. Ty. SM-9.5DSL (Spot Level)	Ton	315
16345	Asphalt Concrete Ty. SM-9.5E (64E-22)	Ton	315
16350	Asphalt Concrete Ty. SM-12.5A	Ton	315
16352	Asph. Con. Ty. SM-12.5ASL (Spot Level)	Ton	315
16355	Asphalt Concrete Ty. SM-12.5D	Ton	315
16357	Asph. Con. Ty. SM-12.5DSL (Spot Level)	Ton	315
16360	Asphalt Concrete Ty. SM-12.5E (64E-22)	Ton	315
16362	Asphalt Concrete Ty. SM-19.0A	Ton	315
16363	Asphalt Concrete Ty. SM-19.0D	Ton	315
16364	Asphalt Concrete Ty. SM-19.0E (76-22 or 64E)	Ton	315
16365	Asphalt Concrete Ty. IM-19.0A	Ton	315
16366	Asph. Conc. Ty. BM-25.0D+0.4	Ton	ATTD
16367	Asph. Conc. TY. BM-25.0D+0.8	Ton	ATTD
16370	Asphalt Concrete Ty. IM-19.0D	Ton	315
16371	Asphalt Concrete Ty. IM-19.0E (76-22 or 64E)	Ton	315
16373	Asphalt Concrete Ty. IM-19.0A (T)	Ton	315

ITEM	DESCRIPTION	UNITS	SPECIFICATION
16374	Asphalt Concrete Ty. IM-19.0D (T)	Ton	315
16377	Asphalt Concrete Ty. BM-37.5	Ton	315
16378	Thin Hot Mix Asphalt Concrete	Ton	ATTD
16379	Asphalt Concrete Ty. IM-19.0T	Ton	315
16383	Scratch/Level Type I	Ton	ATTD
16384	Scratch/Level Type II	Ton	ATTD
16390	Asphalt Concrete Ty. BM-25.0A	Ton	315
16392	Asphalt Concrete Ty. BM-25.0D	Ton	315
16393	Asph. Conc. Patch Ty. IM-19.0A	Ton	ATTD
16394	Asph. Conc. Patch Ty. IM-19.0D	Ton	ATTD
16395	Asphalt Concrete Ty. BM-25.0A (T)	Ton	315
16396	Asph. Conc. Ty. BM-25.0D+0.4 T	Ton	315
16397	Asphalt Concrete Ty. BM-25.0D (T)	Ton	315
16400	Stone Matrix Asphalt SMA-9.5(64H-22)	Ton	ATTD
16401	Stone Matrix Asphalt SMA-9.5(64E-22)	Ton	ATTD
16402	Stone Matrix Asphalt SMA-12.5(64H-22)	Ton	ATTD
16403	Stone Matrix Asphalt SMA-12.5(64E-22)	Ton	ATTD
16404	Stone Matrix Asphalt SMA-19.0(64H-22)	Ton	ATTD
16405	Stone Matrix Asphalt SMA-19.0(64E-22)	Ton	ATTD
16410	NS Asph. Conc. Ty. SM-	Ton	ATTD
16412	NS Asph. Conc. Ty. IM-	Ton	ATTD
16414	NS Asph. Conc. Ty. BM-	Ton	ATTD
16416	NS Asph. Conc. HP Ty.	Ton	ATTD
16420	Asph. Conc. Patch Ty. SM-12.5A	Ton	ATTD
16421	NS Asph. Conc. Patch Ty. SM-	Ton	ATTD
16422	NS Asph. Conc. Patch Ty. IM-	Ton	ATTD
16423	NS Asph. Conc. Patch Ty. BM-	Ton	ATTD
16490	Hot Mix Asphalt Treatment	Ton	ATTD
16500	Surf.Preparation & Restoration Type I	Ton	ATTD
16502	Surf.Preparation & Restoration Type II	Ton	ATTD
16504	Surf.Preparation & Restoration Type III	Ton	ATTD
16543	Cold Central Plant Recycling Material	Ton	ATTD
62195	NS Asphalt Concrete Overlay	Ton	315
62196	NS Asphalt Concrete	Ton	315
63000	NS Asphalt Concrete Overlay	Ton	315
63001	NS Asphalt Concrete	Ton	315
67201	NS Asphalt Concrete Overlay	Ton	315
67210	NS Asphalt Concrete	Ton	315
68240	NS Asphalt Concrete	Ton	315

GUIDELINES — For projects requiring fuel adjustment as an option. {2007-S109F01}

SP109-000110-00

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
OPTIONAL ADJUSTMENT FOR FUEL

July 1, 2015; Reissued July 12, 2016

The Department will adjust monthly progress payments up or down as appropriate for cost changes in fuel used on specific items of work identified in this provision. The Department will provide a master listing of standard bid items eligible for fuel adjustment on its website.

Included with this proposal is a listing of standard bid items the Department has identified as eligible for fuel adjustment on this project(s) as well as the respective fuel factors per pay unit for those items. Only items on this listing will be eligible for adjustment. The fuel usage factor for each item is considered inclusive of all fuel usage. Generally, non-standard pay items are not eligible for fuel adjustment.

The listing of eligible items applicable to this particular project is shown on Form C-21B "Bid Items Eligible for Fuel Adjustment" included with the bidding documents. The Bidder may choose to have fuel adjustment applied to any or all eligible items on this project's listing by designating the items for which the fuel adjustment will apply. The Bidder's selection of items for fuel adjustment may not be changed once he has submitted Form C-21B to the Department.

In order to be eligible for fuel adjustment under this provision, the apparent lowest responsive and responsible Bidder shall clearly identify on Form C-21B those pay items he chooses to have fuel adjustment applied on. Within 21 days after the receipt of bids the apparent successful Bidder shall submit his designated items on Form C-21B to the Contract Engineer. Items the successful Bidder chooses for fuel adjustment must be designated by writing the word "Yes" in the column titled "Option" by each bid item chosen for fuel adjustment. The successful Bidder's designations on Form C-21B must be written in ink or typed, and signed by this Bidder to be considered complete. Items not properly designated or left blank on the Bidder's C-21B "Bid Items Eligible for Fuel Adjustment" form may be not considered for adjustment. If the apparent successful Bidder fails to return his Form C-21B within the timeframe specified, items will not be eligible for fuel adjustment on this project.

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

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

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

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

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

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

B = Base index price

E = Current index price

Q = Quantity of individual units of work

F = Appropriate fuel factor

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

If new pay items are added to this contract by Work Order and they are listed on Department's master listing of eligible items, the Work Order must indicate which of these individual items will be fuel adjusted; otherwise, those items will not be fuel adjusted. If applicable, designating which new pay items will be added for fuel adjustment must be determined during development of the Work Order and clearly shown on Form C-10 Work Order. The Base Index price on any new eligible pay items added by Work Order will be the Base Index price posted for the month in which bids were received for that particular project. The Current Index price for any new eligible pay items added by Work Order will be the Index price posted for the month preceding the estimate on which the Work Order is paid.

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

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

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

GUIDELINES — For use on Asphalt Schedule Work - Plant Mix projects. Include [SP315-000100-02](#). {2007-S211HP0}

[SP211-000100-02](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 211—ASPHALT CONCRETE

September 13, 2018

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

Section 211.03(a) SUPERPAVE mixes is amended by inserting the following:

For SM-9.5 and SM-12.5 mixes, the minimum asphalt contents shall be based on the following unless otherwise approved by the Engineer:

Bulk Specific Gravity of the Total Aggregate	Minimum Design AC Content Mix Type (%)	
	SM-9.5	SM-12.5
Less Than 2.65	5.5	5.3
2.65 - 2.74	5.4	5.2
2.74 - 2.85	5.3	5.1
Greater Than 2.85	5.2	5.0

Section 211.03—Job-Mix Formula is amended to replace **TABLE II-14** with the following:

TABLE II-14
Mix Design Criteria

Mix Type	VTM (%) Production	VFA (%) Design	VFA (%) Production	Min. VMA (%)	Fines/Asphalt Ratio	No. of Gyration N Design
SM-9.0A ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.0D ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.0E ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.5A ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-9.5D ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-9.5E ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-12.5A ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
SM-12.5D ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
SM-12.5E ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
IM-19.0A ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
IM-19.0D ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
IM-19.0E ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
BM-25.0A ^{2,3}	1.0-4.0	67-87	67-92	13.0	0.6-1.3	50
BM-25.0D ^{2,3}	1.0-4.0	67-87	67-92	13.0	0.6-1.3	50

¹Asphalt content should be selected at 4.0% air voids for A & D mixes, 3.5% air voids for E mix.

²Fines-asphalt ratio is based on effective asphalt content.

³Base mix shall be designed at 2.5% air voids. BM-25A shall have a minimum asphalt content of 4.4% unless otherwise approved by the Engineer. BM-25D shall have a minimum asphalt content of 4.6% unless otherwise approved by the Engineer.

Section 211.08 – Acceptance is amended to replace the sixth paragraph with the following:

Asphalt content will be measured as extractable asphalt or weight after ignition. The Contractor shall submit a copy of burn tickets from an ignition oven to the Engineer and all the original tickets shall be available upon Engineer's request. Original tickets shall be maintained on file by the contractor for a period of 5 years or until final acceptance of the applicable contract, whichever is greater.

Section 211.09—Adjustment System is amended to replace the third paragraph with the following:

If the total adjustment for a lot is greater than 25 points, the Contractor shall remove the failing material from the road. If the total adjustment is 25 points or less and the Contractor does not elect to remove and replace the material, the unit price for the material will be reduced 3% of the unit price bid for each adjustment point the material is outside of the process tolerance. The Engineer will apply this adjustment to the tonnage represented by the samples. If the Engineer applies adjustment points against two successive lots, the Contractor shall ensure plant adjustment is made prior to continuing production.

Section 211.09—Adjustment System is amended to replace the last paragraph with the following:

The Engineer will reduce the unit bid price by 1.0 percent for each adjustment point applied for standard deviation.

The Engineer will increase the unit bid price for SM, IM, and BM mixes by 5% if the following criteria are met: 1) the standard deviation of the AC content is within the ranges of 0.0 – 0.15; 2) there are no adjustment points assigned for any sieve sizes as noted in Table II-16; and 3) the average AC content is no less than 0.10% below and no more than 0.20% above the approved mix design AC content.

GUIDELINES — For use with Asphalt Schedule Work - Plant Mix projects. Include [SP211-000100-02](#). {2007-S315HP1}

[SP315-000100-02](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
DENSITY DETERMINATION

September 21, 2018

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

Section 315.04—Placement Limitations is amended to add the following:

Density: Methods for acceptance and payment of in-place density will be determined according to Table III-2A, and performed as described herein.

TABLE III-2A
Density Acceptance Methods

Density Acceptance Method to be used	Route type	Traffic Group	Minimum roadway pavement width
Method 'A' (plugs or cores)	<ul style="list-style-type: none"> All interstate & limited access primary Primary & secondary with minimum traffic & width 	X and higher ($\geq 2,000$ ADT)	20'
Method 'B' (nuclear gauge)	<ul style="list-style-type: none"> Primary & secondary not meeting minimum traffic & width 	IX and lower ($< 2,000$ ADT)	n/a

Section 315.05(e)1 is amended to replace the first and second paragraphs with the following:

Contractor Quality Control – roller patterns, control strips, and test sections

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 II perform all density testing.

Density shall be determined with a thin-lift nuclear gauge conforming to 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 according to 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 an 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 when tested with a nuclear gauge shall not be less than 98.0 percent and not more than 102.0 percent of the target control strip density.

Table III-3 – Density Requirements is replaced with the following:

TABLE III-3	
Minimum Control Strip Density Requirements	
Mixture Type	Min. Control Strip Density (%)¹
SM-9.5A, 12.5A	92.5
SM-9.5D, 12.5D	92.5
SM-9.5E, 12.5E	92.5
IM-19.0A, IM-19.0D, IM-19.0E	92.2
BM-25.0A, BM-25.0D	92.2

¹The 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.

Table III-4 – Payment Schedule for Lot Densities is replaced with the following:

TABLE III-4	
Payment Schedule for Failing Control Strips	
% TMD	% of Payment
Greater than 96.5	95
92.2/92.5 ¹ – 96.5	100
90.0-92.1/92.4 ¹	90
88.0-89.9	80
Less than 88.0	75

¹For SM-9.5 and SM-12.5 mixes, the minimum density value is 92.5% per Table III-3.
For IM-19.0 and BM-25.0 mixes, the minimum density value is 92.2 per Table III-3.

Section 315.05(e)1a Control Strip is amended to replace the last paragraph with the following:

The control strip shall be considered a lot. If the control strip density conforms to the requirements specified in Table III-3, the Engineer will consider the control strip to be acceptable and the control strip density shall become the target control strip density.

If the Engineer determines that the control strip requirements in Table III-3 cannot be met due to in-situ pavement conditions, Method 'B' will be used for acceptance and payment and density adjustments will be waived.

Otherwise, 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. The Contractor shall take corrective action to comply with the density requirement specified in Table III-3.

Section 315.05(e)1b Test section (lot) is replaced with the following:

Test section (lot): For the purposes of both contractor quality control and for determining acceptance, the Engineer will consider each day's production as a lot unless the paving length is less than 3,000 linear feet or greater than 7,500 linear feet, irrespective of the method of acceptance (Method 'A' (cores/plugs) or Method 'B' (nuclear gauge)). When paving is less than 3,000 feet, that day's production will be combined with the previous day's production or added to the next day's production to create a lot as described below.

The standard size of a lot will be 5,000 linear feet (five 1,000 foot sublots) of any pass 6 feet or greater made by the paving train for the thickness of the course. If the Engineer approves, the lot size may be increased to 7,500 linear foot lots with five 1,500 foot sublots when the Contractor's

normal daily production exceeds 7,000 feet. Pavers traveling in echelon will be considered as two passes. When a partial lot occurs at the end of a day's production or upon completion of the project, the lot size will 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.

The Contractor shall test each lot for density by taking a nuclear density gauge reading from two random test sites selected by the Engineer within each subplot. When saw plugs or cores are used to determine acceptance, a single test site per subplot will be selected by the Engineer. Test sites will not be located 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 Engineer will compare the average of the subplot density measurements to the target nuclear density, or for plugs and cores, to the target percent of theoretical maximum density achieved on the control strip to determine the acceptability of the lot. The Contractor shall immediately institute corrective action if two consecutive sublots produce density results less than 98% or more than 102% of the target control strip density.

Longitudinal joints shall also be tested for density using a nuclear density gauge at each test site in the subplot. For surface and intermediate mixes, the edge of the gauge shall be placed within 4 inches of the joint. For base mixes, the edge of the gauge shall be placed within 6 inches of the joint. The Contractor shall not place the gauge over top of the joint. The joint density value shall be recorded. The Contractor shall report to the Engineer and institute corrective action if a single longitudinal joint density reading is less than 95 percent of the target control strip density.. The Engineer will not use the values obtained from the joint readings in payment calculation. The Contractor shall furnish the test data developed during the day's paving to the Engineer by the end of the day's operations.

Table III-4A – Payment Schedule for Surface, Intermediate and Base Courses is inserted as follows:

TABLE III-4A	
Payment Schedule for Method A Lot Densities	
% TMD	% of Payment
Greater than 96.5	95
92.2 ¹ /92.5 ² – 96.5	100
90.0 – 92.1 ¹ /92.4 ²	90
88.0 – 89.9	80
Less than 88.0	75

¹For Intermediate and Base Mixes, the minimum TMD percentage is 92.2 per Table III-3

²For Surface Mixes, the minimum TMD percentage is 92.5% per Table III-3

Table III-4B – Payment Schedule for Lot Densities is inserted as follows:

TABLE III-4B	
Payment Schedule for Method B 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

Section 315.05(e)3 Density Acceptance & Payment is inserted as follows:

Density Acceptance & Payment

a. Method 'A' (plugs or cores)

For all interstate and limited access routes, and for primary and secondary routes in Traffic Group X or greater (ADT 2,000) and a minimum of 20' in width, field density will be determined for acceptance and payment using plugs or cores.

The Contractor shall perform acceptance testing for density for each subplot by obtaining one plug, defined as a sawed 4 inch by 4 inch specimen, or one 4-inch-diameter core, at a single random test site selected by the Engineer. (note: more than one plug or core can be taken in the event the original sample is damaged)

The sub-lot site shall be marked as described in VTM-76. The bulk specific gravity of the plugs or cores shall be determined in accordance with VTM-6. The density of the plugs or cores shall be determined in accordance with VTM-22, excepting that the daily Rice values obtained by the contractor for the mix will be used for calculating percent density (instead of using the 5-day running average as noted in VTM-22).

Plugs or cores shall be taken from the pavement and bulked in the presence of the Engineer unless otherwise approved. The Department reserves the right to have the plugs or cores bulked on the project site. In the event of any uncertainty around the bulking procedures or results, the Department further reserves the right to re-bulk the samples. The Contractor will have the right to witness the re-bulking. The Contractor will be responsible for maintaining the cores until approved for disposal by the Department.

The Contractor shall number subplot test sites sequentially per lot, mark these on the pavement, fill them with the paving mixture, and compact them prior to the completion of each day of production.

The Contractor shall clean and straighten any irregular edges prior to filling and compacting. Liquid tack material shall be applied so it visibly covers all plug or core hole surfaces (sides, bottom, etc.). Hot mix asphalt paving mixture available on the same day of paving, or other permanent patching material as approved by the Engineer, shall be placed into the plug or core hole and compacted with a minimum of a 10-lb weighted hand tool or greater compactive effort with rollers or other equipment available on-site and approved by 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-4A.

If a minimum of 80% of each lot's core/plug samples is no lower than 92.5% of TMD for Surface Mixes and 92.2% of TMD for Intermediate and Base Mixes and the lot average results in 100% payment, then the Engineer will increase the unit bid price for AC mixture by five (5) percent.

The Engineer at any time on any project may perform lot density verification testing. Lot density verification is performed by testing plugs or cores. The Contractor shall be responsible for taking plugs or cores for testing. The Engineer will perform verification testing of the plugs or cores per the VDOT Manual of Instructions Section 503.03 – Verification

Density Testing. If the Contractor disputes either the density of the plugs or cores determined or the resulting pay factor does not provide for at least 100% payment of the unit bid price, then the Contractor may request additional sampling to be invoked as outlined in Section 503.03(a)(1) of the Manual of Instructions. Payment for that lot will be in accordance with Table III-4A.

Longitudinal joints shall also be tested for density using a nuclear density gauge at each test site in the subplot. For surface and intermediate mixes, the edge of the gauge shall be placed within 4 inches of the joint. For base mixes, the edge of the gauge shall be placed within 6 inches of the joint. The Contractor shall not place the gauge over top of the joint. The joint density value shall be recorded. The Contractor shall report to the Engineer and institute corrective action if a single longitudinal joint density reading is less than 95 percent of the target control strip density. The Engineer will not use the values obtained from the joint readings in payment calculation. The Contractor shall furnish the test data developed during the day's paving to the Engineer by the end of the day's operations.

b. Method 'B' (nuclear gauge)

For all primary and secondary routes in Traffic Group IX and below (ADT less than 2,000) or width less than 20', field density will be determined for acceptance and payment using a nuclear gauge.

The Contractor shall test each lot for density by taking a nuclear density gauge reading from two random test sites selected by the Engineer within each subplot. Test sites will not be located 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 Engineer will compare the average of the subplot density measurements to the target nuclear density, or for cores, to the target percent of theoretical maximum density achieved on the control strip to determine the acceptability of the lot. Once the average density of the lot has been determined, the Engineer will not allow the Contractor to provide additional compaction to raise the average. The Contractor shall immediately institute corrective action if two consecutive sublots produce density results less than 98% or more than 102% of the target control strip density.

Longitudinal joints shall also be tested for density using a nuclear density gauge at each test site in the subplot. For surface and intermediate mixes, the edge of the gauge shall be placed within 4 inches of the joint. For base mixes, the edge of the gauge shall be placed within 6 inches of the joint. The Contractor shall not place the gauge over top of the joint. The joint density value shall be recorded. The Contractor shall report to the Engineer and institute corrective action if a single longitudinal joint density reading is less than 95 percent of the target control strip density. The Engineer will not use the values obtained from the joint readings in payment calculation. The Contractor shall furnish the test data developed during the day's paving to the Engineer by the end of the day's operations.

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-4B.

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

On surface, intermediate, and base mixes, the Contractor shall take two plugs or cores per Verification, Sampling and Testing (VST) lot at locations selected by the Engineer. If the Engineer determines the density of the plugs or cores 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 additional sampling to be invoked. The Contractor shall take one additional plug or core from the remaining sublots. Payment for that lot, based on the results of the initial two plugs or cores or referee procedure, will be in accordance with the Table III-4A for Method A on the basis of the percentage of the theoretical maximum density or Table III-4B for Method B on the basis of the percentage of the control strip bulk density achieved.

GUIDELINES — Asphalt projects (plant mix only). {2007-S315QM1}

SP315-000300-00

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
LIMITS OF MAINLINE OVERLAY AT INTERSECTIONS TO PAVED ROADS

July 28, 2010; Reissued July 12, 2016

I. DESCRIPTION

This work shall consist of furnishing and placing asphalt concrete overlay pavement courses on existing paved roadway surfaces that intersect the mainline roadway pavement overlay. This work shall be performed according to the Special Provision for Placement of Asphalt Concrete Overlays, Sections 211 and 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Sections 248 and 317 of the Specifications; and as specified herein. Where pavement planing is required it shall be performed according to Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications and as specified herein.

II. MATERIALS

Materials shall be according to Section 211 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 248 of the Specifications; and the Special Provision for Placement of Asphalt Concrete Overlays.

III. EQUIPMENT

Equipment for furnishing and placing asphalt concrete overlay shall be according to Section 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 317 of the Specifications. Pavement planing equipment shall be according to the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications.

IV. PROCEDURES

Furnishing and placing asphalt concrete overlay shall be according to Section 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 317 of the Specifications. Where pavement planing is required, it shall be according to the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications and as specified herein.

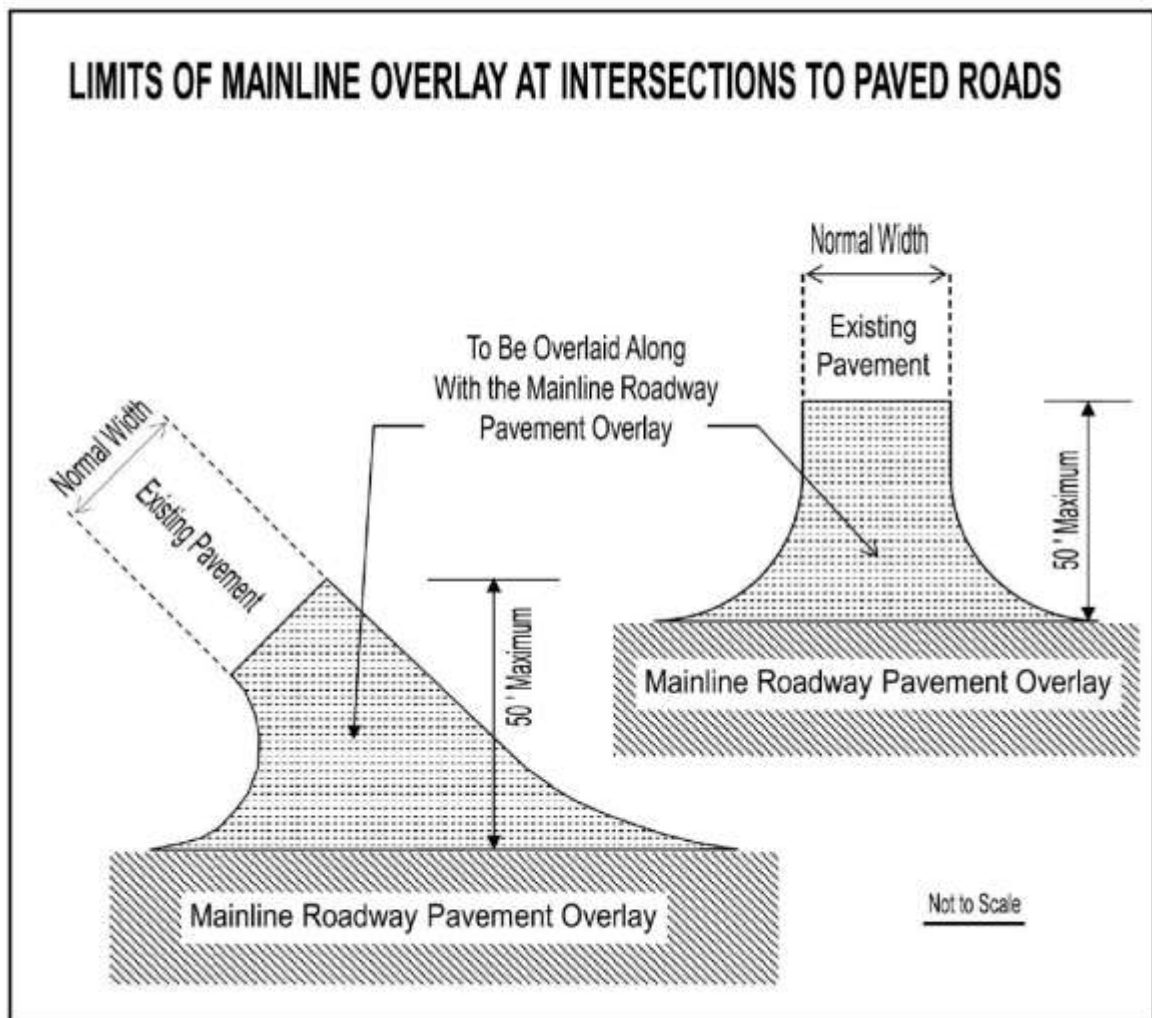
The Contractor shall overlay the intersecting paved road from the edge of pavement of the mainline roadway pavement overlay to a point that includes the entire radius of the intersecting paved road according to the attached drawing. This distance from the edge of pavement of the mainline roadway pavement overlay shall not exceed 50 feet measured according to the drawing herein.

On curb and gutter sections where planing is required for the mainline roadway overlay, planing shall also be required on the intersecting paved road area prior to these areas being overlaid.

Asphalt concrete overlay pavement placed on existing paved roadway surfaces that intersects the mainline roadway pavement overlay shall be constructed using a method approved by the Engineer, which shall include the cutting of a notch into the pavement. The approved method shall provide a smooth transition between new pavement and existing pavement. Such tie-ins shall conform to Section 315.05(c) of the Specifications except that all joints at tie-in locations shall be tested using a 10-foot straightedge according to Section 315.07(a) of the Specifications. The variation from the testing edge of the straightedge between any two contact points with the pavement surface shall not exceed 1/4 inch.

V. MEASUREMENT AND PAYMENT

Overlay at intersections to paved roads will be measured and paid for according to the pay items of Section 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 317 of the Specifications, and the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications.



GUIDELINES — Asphalt projects (plant mix only). When this provision applies include the following in the proposal: [SP515-000100-00](#), [SP315-000220-00](#), [SP315-000200-00](#), [SP315-000300-00](#). {2007-S315NM5}

[SP315-000310-01](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION FOR PLACEMENT OF ASPHALT CONCRETE OVERLAYS

August 3, 2017

I. DESCRIPTION

This work shall consist of furnishing and placing asphalt concrete overlay pavement courses on existing roadway surfaces according to the requirements herein and in conformity with the lines, grades, and thickness as established in the Contract or directed by the Engineer. This work shall be performed according to Section 211 and Section 315 of the Specifications, and where Stone Matrix Asphalt (SMA) is specified in the Contract, Sections 248 and 317 of the Specifications.

II. EQUIPMENT

Equipment for placing asphalt concrete overlay material shall be conform to Section 315.03 of the Specifications, and where Stone Matrix Asphalt (SMA) is specified, Section 317 of the Specifications.

III. PROCEDURES

Where pavement planing is required it shall be performed according to the *Special Provision for COLD PLANING (MILLING) ASPHALT CONCRETE OPERATIONS* and Section 515 of the Specifications. No placement of an overlay or deck planing will be permitted on a bridge deck without the prior written approval of the District Bridge Engineer.

Limitations of operations for placing asphalt concrete overlays shall be according to Section 108.02 of the Specifications, the Contract requirements, and as specified herein.

Prior to commencement of paving overlay operations the Contractor shall clean the existing pavement surface to the satisfaction of the Engineer of accumulated dust, mud, or other debris that may adversely affect the bond of the new overlay. In the event the thoroughness of the Contractor's efforts to clean the existing pavement is questionable, the Engineer may require the Contractor to perform a bond strength test according to the referee system for Nontracking Tack Coat in Section 310 of the Specifications. The cost for cleaning and surface preparation shall be included in the bid price for the asphalt concrete.

The following will be corrected by the Engineer ahead of the Contractor's operations or included in the work performed by the Contractor. When such corrective work is performed by the Contractor, the work will be paid for as designated by the specific pay item(s) in the Contract.

- Pavement irregularities greater than 1 inch in depth shall be filled with a material approved by the Engineer.

- Pavement cracks or joints shall be cleaned and filled according to the *Special Provision for **SEALING CRACKS IN ASPHALT CONCRETE SURFACES OR HYDRAULIC CEMENT CONCRETE PAVEMENT.***

The Contractor shall remove thermoplastic and tape pavement markings and raised pavement markers prior to performing paving overlay operations. Thermoplastic and tape pavement markings shall be 90 percent removed so as not to interfere with bonding of pavement overlay or the transfer of the existing marking thickness up through the overlay. In lieu of grinding to eradicate thermoplastic, the Contractor will be permitted to mechanically scrape off thermoplastic markings employing adequate controls so as not to damage the affected pavement to a point where such markings are flush with the existing pavement surface. This work shall be performed according to Section 512 and Section 704 of the Specifications except as otherwise permitted herein.

The Contractor shall protect and reference utility structures prior to paving in order to locate and/or adjust these structures, if necessary, after paving operations are completed. The protection and referencing of utility structures shall be at no cost to the Department.

Temporary transverse pavement-wedge tie-ins shall be constructed where pavement overlay operations are temporarily halted as allowed or required herein, in Section 315 of the Specifications, elsewhere in the Contract, or by the Engineer. Each temporary tie-in shall be no less than 3 feet in length for every inch of depth of overlaid pavement and shall consist of a mix that is suitable as a surface mix asphalt to provide a smooth transition between the installed overlay and existing pavement or bridge deck. Such temporary tie-ins shall be constructed prior to the overlaid pavement being opened to traffic.

Final transverse pavement tie-ins shall be constructed to provide a smooth transition between newly overlaid pavement and existing pavements, bridge decks, and existing pavement underneath bridge overpasses. Such tie-ins shall conform to Standard Drawing ACOT-1 or Section 315.05(c) of the Specifications, as applicable, except that all joints at tie-in locations shall be tested using a 10-foot straightedge according to Section 315.07(a) of the Specifications. The variation from the testing edge of the straightedge between any two contact points with the pavement surface shall not exceed 1/4 inch. When planing is necessary at tie-ins to existing pavement or bridge decks to obtain the required overlay depth specified in the Contract; the existing pavement shall be planed according to the ACOT-1 Standard or the requirements herein.

No pavement overlay shall decrease the vertical clearance under a bridge. In situations where the pavement under the overpass cannot be planed in direct proportion to the overlay to be placed, the new pavement is to be tied down to the existing pavement under the overpass a minimum of 75 feet from the outer edges of the bridge overpass according to Standard Drawing ACOT-1.

The ACOT-1 Standard for asphalt concrete overlay transitions shall apply when there is at least one (1.00) inch of grade change between the finished asphalt concrete overlay surface and the existing pavement surface and where any of the following conditions exist:

- a. Bridge decks or bridge overpasses are located within the project site to receive the overlay.
- b. The Contractor has to tie-in the top course of asphalt concrete overlay to an existing hydraulic cement concrete pavement surface.
- c. The Contractor has to tie-in the top course of the asphalt concrete overlay to an existing asphalt concrete pavement surface and planing is included in the Contract as pay item.

When tying in the top course of the asphalt concrete overlay to an existing asphalt concrete pavement surface and there is no pay item in the Contract for planing, the asphalt concrete overlay tie-in shall conform to Section 315.07(a) of the Specifications.

When the *Special Provision for RIDEABILITY* applies as specified in the Contract, a distance of 105 feet (0.02 of a mile), measured from the line of the tie-in will be exempted from pay adjustment.

The following restrictions, based on the type of roadway, will apply:

Roadways with Posted Speed Limit of 55 Mph or Greater

The Contractor shall install asphalt concrete overlays to the depths specified for the specific routes identified in the Contract. Where asphalt concrete is being overlaid by 2 inches or less on roadways carrying traffic, the Contractor shall have the option of squaring up the overlay operation at the end of each workday or squaring up all travel lanes, excluding shoulders, before the weekend. Shoulders shall be squared up within 48 hours after the weekend unless required sooner elsewhere in the Contract, and prior to continuing mainline paving. All lanes including shoulders must be squared up before holidays or any temporary shutdowns.

Where overlays of more than 2 inches are being placed, the Contractor must square up the overlay operation at the end of each workday. This requirement shall apply to travel lanes and shoulders.

Asphalt concrete pavement overlay operations shall be performed in only one travel lane at a time. Under no circumstance will the Contractor be permitted to overlay a portion of the width of a travel lane, ramp or loop and leave it exposed to traffic.

Where uneven pavement joints exist either transversely or longitudinally at the edges of travel lanes due to the overlay operations, the Contractor shall provide advance warning signage and traffic control devices for the scope of the overlay operation the Contractor is performing according to the details provided in the Contract. The cost for the advance warning devices and signage shall be included in the cost of other appropriate items. Temporary pavement markings and markers required as a result of staging such operations will be measured and paid for according to the *Special Provision for **SECTION 704—PAVEMENT MARKINGS AND MARKERS*** included in the Contract.

In the event an emergency or an unforeseen circumstance such as equipment failure or breakdown occurs during the Contractor's operations that prevents the Contractor from squaring up the overlaid surface on adjacent lanes prior to a weekend, a holiday or a temporary shutdown, any additional signage, traffic control devices, or markings or markers required to protect the traveling public shall be provided at the Contractor's expense.

Ramps, exits, and turn lanes are to be paved in such a manner that a longitudinal joint with a surface elevation of 1 inch or more between the existing pavement and the overlay (where the overlay is the higher of the two elevations) will not be left for vehicles to cross within the posted speed limits in a "run-on" situation. Ramps, exits, and turn lanes are to be paved to the extent that the joint crossed by traffic is traversed at an angle close to 90 degrees (perpendicular), or the ramp, exit and turn lane shall be squared up with the adjacent mainline lane at the time of installation.

Only approved mixes that have been verified according to Section 211.03(f) of the Specifications and have met the requirement for roller pattern density shall be placed on limited access roadways.

The Contractor shall ensure positive drainage is provided for all overlaid surfaces according to Section 315.05(c) of the Specifications.

B. All Other Roadways

Where asphalt concrete is being overlaid to a height of 2 inches or less on roadways carrying traffic, the Contractor shall have the option of squaring up the overlay operation at the end of each workday or squaring up all lanes including shoulders at least once every 4 consecutive workdays, excluding weekends. All lanes including shoulders must be squared up before weekends, holidays, or any temporary shutdowns.

Where overlays of more than 2 inches are being placed on roadways carrying traffic the Contractor shall square up the overlay operation at the end of each workday. This requirement shall apply to travel lanes and shoulders.

Asphalt concrete pavement overlay operations shall be performed in only one travel lane at a time. Under no circumstance will the Contractor be permitted to overlay a portion of the width of a travel lane, ramp or loop and leave it overnight.

Where uneven pavement joints exist either transversely or longitudinally at the edges of travel lanes due to the overlay operations, the Contractor shall provide advance warning signage and traffic control devices at his expense according to the details provided in the Contract for the scope of overlay operation he is performing.

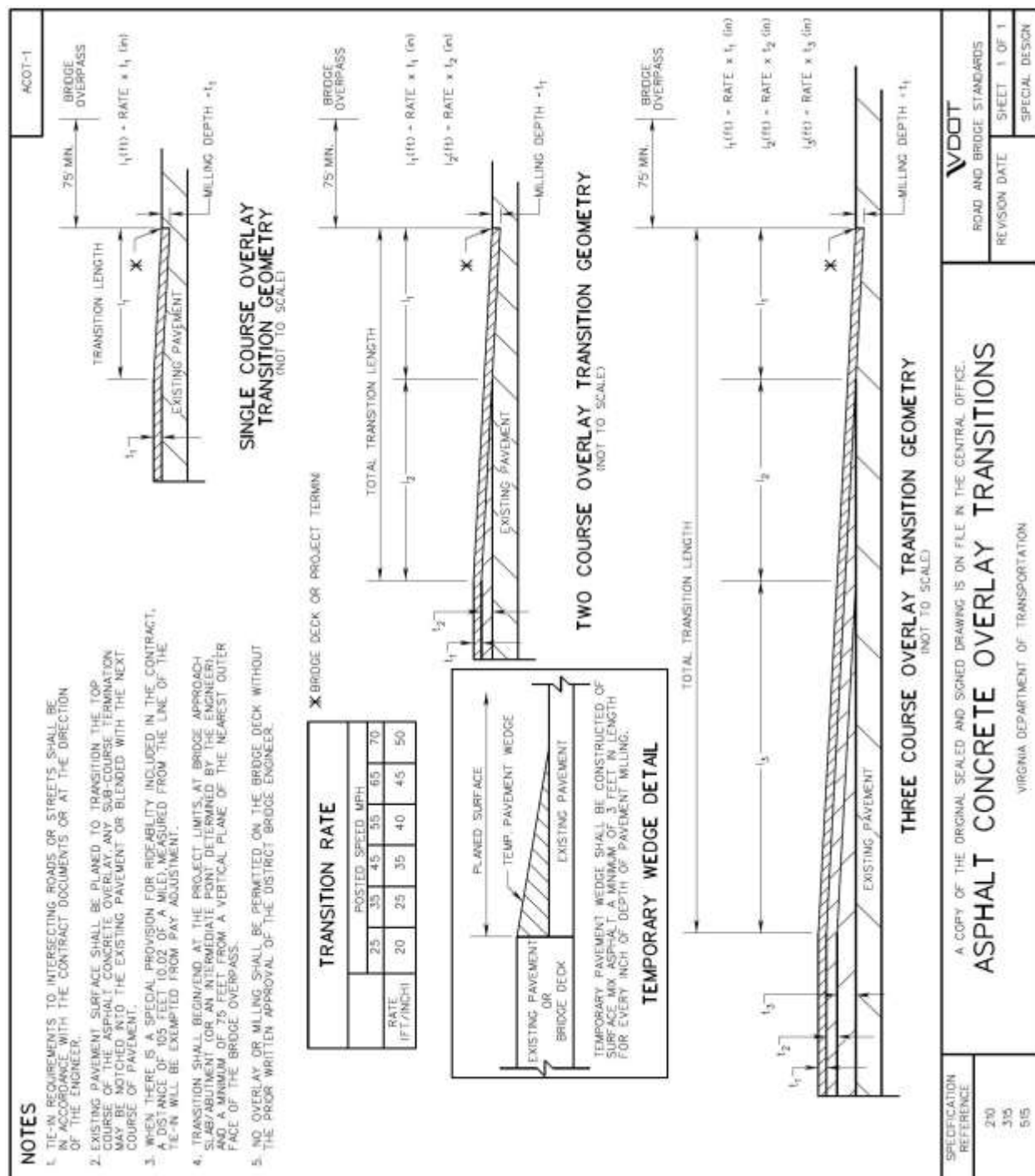
In the event an emergency or an unforeseen circumstance such as equipment failure or breakdown occurs during the Contractor's operations that prevents the Contractor from squaring up the overlaid surface on adjacent lanes prior to a weekend, a holiday or a temporary shutdown, any additional signage, traffic control devices required to protect the traveling public shall be the Contractor's expense

Overlay tie-in requirements to intersecting roads or streets shall be according to the *Special Provision for* **LIMITS OF MAINLINE OVERLAY AT INTERSECTIONS TO PAVED ROADS**.

The Contractor shall ensure positive drainage is provided for all overlaid surfaces according to Section 315.05(c) of the Specifications.

(STANDARD DRAWING ACOT-1 is attached)

(Attachment)
STANDARD DRAWING ACOT-1 December 2012



GUIDELINES – For use on all projects requiring installation of Safety Wedge.

SP315-000320-01

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
PAVEMENT SHOULDER WEDGE

September 16, 2019

I. DESCRIPTION

This work shall consist of installing a consolidated pavement shoulder wedge shape at locations designated in the Plans or as directed by the Engineer. A pavement shoulder wedge is formed by a pavement shoulder wedge device to produce a consolidated wedge shaped pavement edge.

II. APPLICABILITY

The Contractor shall install shoulder wedge on new construction, mill-and-resurface and overlay projects that mill or pave to the edge of pavement. The Contractor shall install shoulder wedge on roadway segments where all of the following conditions are met:

- Open ditch sections (no curb and gutter).
- Paved Shoulder Widths 4 feet wide or less.
- Speed limits greater than 35 mph.
- Specified final asphalt surface lift thickness at least 1.25 inches.

The Contractor shall install shoulder wedge on other roadway segments directed by the Engineer.

The Contractor shall stop installation of the shoulder wedge in specific locations where any of the following field conditions are present, and resume installation after passing these locations:

- Driveways, intersections, interchanges, or bridges.
- Ditch slope begins within one foot from the edge of pavement or less than one foot of unpaved shoulder exists, if wedge is placed on unpaved shoulder as shown in Figures 3 and 4.
- Guardrail exists and the face of guardrail is within 3 feet from the existing edge of pavement.

III. EQUIPMENT

The Contractor shall use a wedge forming and consolidating device to create a sloped edge profile onto the roadway shoulder. The device shall accommodate varying wedge thicknesses from 1-1/4 inches to 5 inches, compact the asphalt concrete, and provide a sloped wedge equal to 30° ±5° measured from the pavement surface cross slope extended. The device shall be adjustable to accommodate transitions to cross roads, driveways and obstructions. The Contractor shall not use a conventional single plate strike off.

The Engineer may require a test section constructed at the beginning of work to demonstrate the edge shape, after the compaction of the pavement surface, to the satisfaction of the Engineer

IV. PROCEDURES

The Contractor shall prepare the unpaved shoulder to accept the pavement shoulder wedge by removing soil build up and vegetation that exists within one foot from the existing edge of pavement.

Pavement shoulder wedge shall be placed either on the existing pavement (Figures 1 and 2) or on the unpaved shoulder (Figures 3 and 4) as directed in the Plans or by the Engineer.

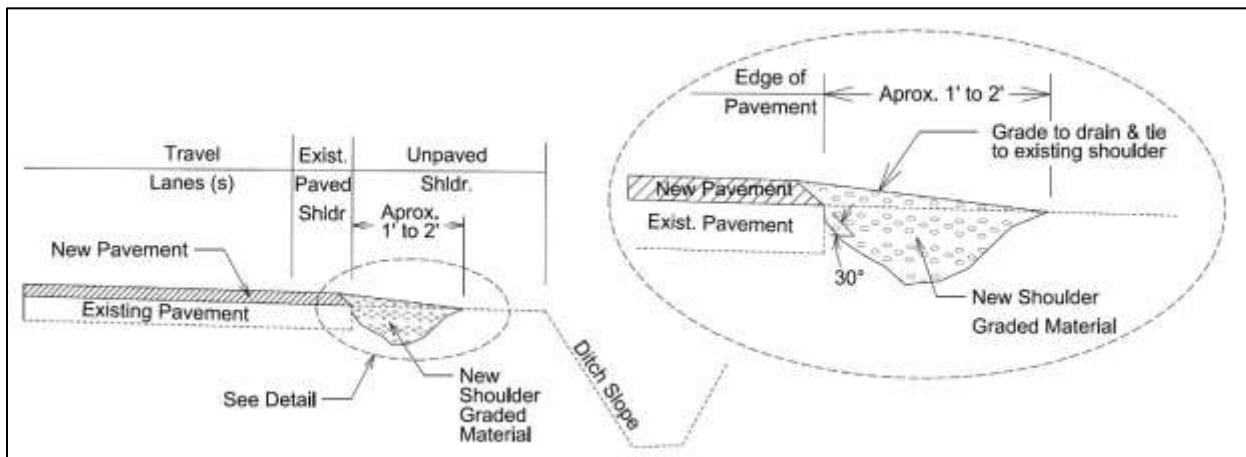


Figure 1: Wedge over Existing Pavement – Low Shoulder

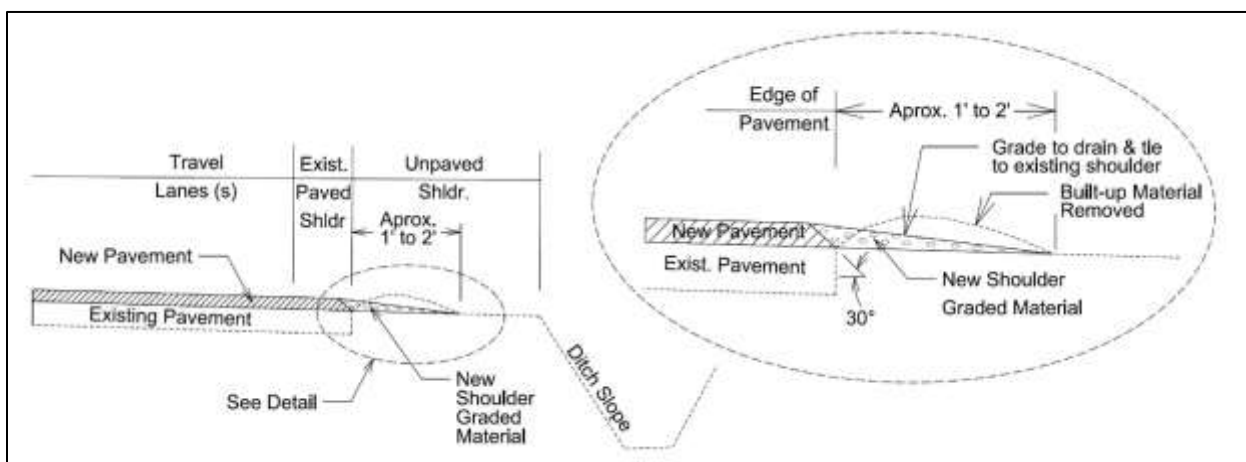


Figure 2: Wedge over Existing Pavement – High Shoulder

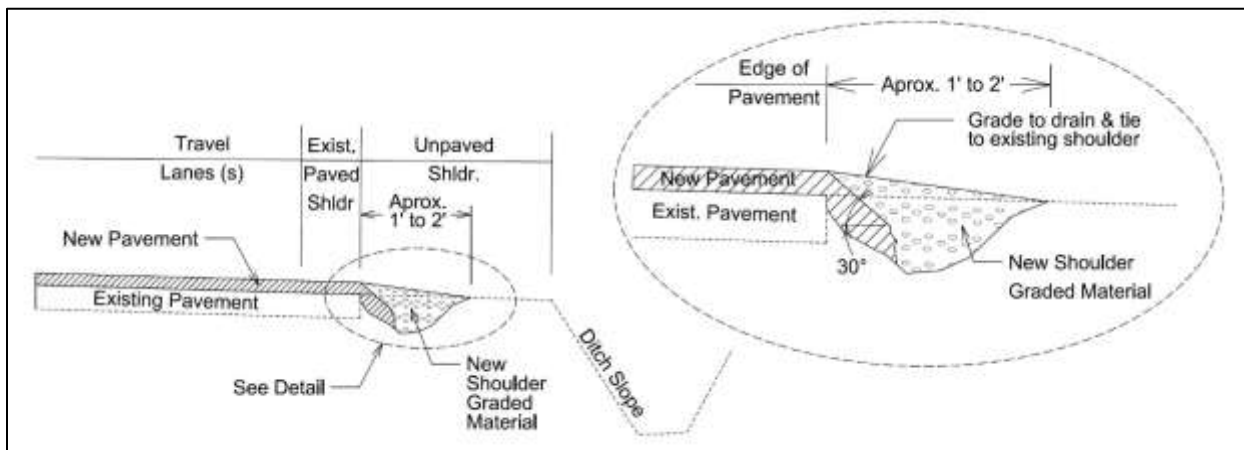


Figure 3: Wedge over Unpaved Shoulder – Low Shoulder

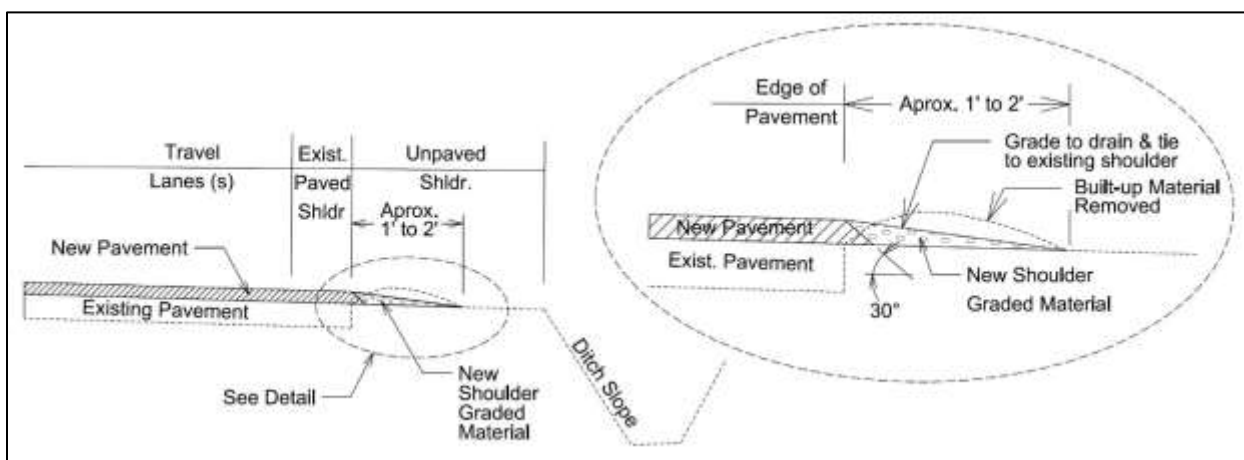


Figure 4: Wedge over Unpaved Shoulder – High Shoulder

The Contractor shall attach the shoulder wedge device to the screed of the paver that confines the material at the end gate and extrudes the asphalt material in such a way that results in a compacted wedge shape pavement edge equal to $30^{\circ} \pm 5^{\circ}$ measured from the pavement surface cross slope extended. Contact shall be maintained between the device and the road shoulder surface and allow for transitions to cross roads, driveways and obstructions. The Contractor shall use the device to consolidate the asphalt to increase the density of the extruded profile.

The Contractor may perform handwork such as transitions at driveways, intersections, interchanges, and bridges or other areas approved by the Engineer.

After paving is complete, shoulders, where specified, shall be constructed to smoothly tie the graded shoulder edge elevation to the adjoining elevation of the final pavement top surface edge or final paved or stabilized shoulder top surface edge. The shoulder shall also be graded to obtain a uniform shoulder slope to the shoulder break that conforms to the Standard Drawings.

The Contractor shall furnish and place aggregate base material where specified. The material shall be spread, graded, and compacted in accordance with Section 305.03(e) of the Specifications, except for the shaping of the subgrade which will not be required.

The Contractor shall follow the SWPPP and ESC Plan in the Contract.

V. MEASUREMENT AND PAYMENT

Pavement shoulder wedge, except for shoulder preparation, will not be measured for separate payment but shall be included in the cost for Asphalt Concrete.

Pavement shoulder wedge prep will be measured in linear feet along the adjacent edge of pavement and will be paid for at the contract unit price per linear foot. This price shall include grading the existing unpaved shoulder to accommodate the pavement shoulder wedge using mechanized equipment or manual methods. This price shall also include the removal and disposal of surplus, tracked, and spilled material resulting from the Contractor's operations

Aggregate base material used to repair and fill low shoulders will be measured and paid for in accordance with Section 305 of the Specifications.

Payment will be made under:

Pay Item	Pay Unit
Pavement shoulder wedge prep	Linear Foot

GUIDELINES — This SP is only to be used for non-schedule projects with simple maintenance of traffic requirements where the contractor can easily determine what he will need and accurately estimate the cost. [Example: bridge rehab(s) where traffic is simply channeled to one side until work on the opposite side is completed. Also, guardrail, or pipe rehab(s) where maintenance of traffic items are simply moved along in a continuous operation as work moves throughout the full length the project until complete.] For bridge projects, each must be specified in the contract by structure no. And as lump sum payment. For guardrail, or pipe rehab(s) projects, the route and location(s) must be specified in the contract as lump sum payment. Contact Construction Division Spec Section for guidance in other uses and modifications. Do not add expensive and/or difficult to estimate items such as temporary signalization or portable changeable message signs (pcms) as items included in this cost. Such items must be handled with separate pay items in Section 512 as appropriate. {2007-[S512MG0](#)}

[SP512-000110-00](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 512—MAINTAINING TRAFFIC – NON-SCHEDULES (LUMP SUM)

July 12, 2016

SECTION 512 of the Specifications is amended as follows:

Section 512.03—Procedures is amended to include 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 according to the *Virginia Work Area Protection Manual*, the *MUTCD* and the Department generated project-specific temporary traffic control plan or requirements provided in the Contract. When the Department provides a sequence of construction in the Contract, 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 as follows:

- (a) **Per structure** wherein, the lump sum price bid shall be for providing maintenance of traffic for a single structure identified in the Contract by its structure number. No measurement will be made.
- (b) **Per route and location(s)** wherein, the lump sum price bid shall be for providing maintenance of traffic for work at a specified location on a single specified route or, specified locations grouped together on a single specified route as one lump sum item. No measurement will be made as detailed in the Contract.

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 according to 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 in the work according to 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.

Additional traffic control layout detail items that are determined and authorized by the Engineer to be necessary to ensure the safety of the traveling public and are **in addition to the number required** by the traffic control layout details in the *VWAPM*, the drawings in herein, and the Contract, will be measured and paid for as follows, therefore, the provisions of Section 104.02 will not apply:

- **Flagger service** shall include furnishing certified flagger, paddles and safety equipment. Where additional flagger service is required, as determined and authorized by the Engineer, flagger service will be measured in hours and paid for at the rate of **\$15** per hour of use.

When flagger service is used for the Contractor's convenience, such as for ingress and egress of construction equipment or materials, payment will not be made. **Note:** The required flaggers described in the two flagging conditions in Section 512.03(h) of the Specifications will not be measured as a separate pay item but will be considered incidental to the traffic control operations described.

- **Pilot vehicles** shall include furnishing vehicles, necessary warning devices, drivers, fuel and maintenance. Where additional pilot vehicles are required as determined and authorized by the Engineer, such vehicles will be measured in hours of actual use and will be paid for at the rate of **\$23** per hour of employed use.
- **Electronic arrows** shall include furnishing arrow panels, fuel, maintenance, and a truck or trailer having flashing amber warning lights for mobility of the electronic arrow. Where additional electronic arrows are required as determined and authorized by the Engineer, electronic arrows will be measured in hours of actual use and will be paid for at the rate of **\$5** per hour for each hour of employed use.
- **Warning lights** for use on sign panels or installed on traffic barrier service will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include maintaining, relocating, and removing.
- **Group 1 channelizing devices** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items.

- **Group 2 channelizing devices**, not designated in the Contract as a separate pay item but where additional Group 2 channelizing devices are required as determined and authorized by the Engineer, these will be measured in days and paid for at the rate of **\$1** per day per device. This price shall include furnishing and maintaining devices, removing devices when no longer required and signs. When group 2 channelizing devices are moved to a new location or are removed and re-installed at the same location, they will be measured for separate payment. However, when group 2 channelizing devices are moved within the lane or from one lane to another by simply moving the devices across the lane edge line without removal from the roadway, no additional payment will be made.
- **Traffic barrier service** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include warning lights, delineators, barrier vertical panels, fixed object attachments, patching restraint holes, fixed object attachments used on traffic barrier service in locations where existing guardrail is in place including restoring existing guardrail to its original condition, maintaining, and removing traffic barrier service when no longer required.
- **Traffic barrier service guardrail terminal** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing, installing, moving to a new location as directed or approved by the Engineer, and removing when no longer needed.
- **Impact attenuator service** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include Impact attenuators used with barrier openings for equipment access.
- **Construction pavement markings** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing marking materials, preparing the surface, adhesive, installation, maintaining, removing removable markings when no longer required, inspections, and testing.
- **Construction pavement message markings** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include marking materials, preparing the surface, adhesive, maintaining, and removing removable markings when no longer required.
- **Temporary pavement markers** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing and installing pavement markers, surface preparation, adhesive, and maintaining and replacement of lost or damaged markers and removing the pavement markers and adhesive when no longer required.
- **Aggregate material** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include preparing the grade and furnishing, placing, maintaining, and removing material as required.
- **Type III barricades** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing and placing barricades, retroreflective sheeting, maintaining, relocating to new locations and removing when no longer required.
- **Construction signs** except those already required by the Contract (which includes those signs required by the VWAPM, the drawings herein, and such signs as **“Loose Gravel”**, **“Unmarked Pavement”**, and **“Low Shoulder”** that may be required by the Engineer to

ensure the safety of the traveling public due to the nature of the Contractor's operations) when determined and authorized by the Engineer, will be measured in square feet and paid for at **\$20** per square foot. This payment, based on square footage, shall be compensation for furnishing, placing, relocating, covering, uncovering, and removing the sign(s) when no longer needed for the duration of the project; multiple payments for the same sign used more than once will not be allowed. Such extra signs will consist of either a greater number of the standard signs already listed in the applicable traffic control layout details in the VWAPM, the drawings herein, and the Contract, or other signs included in the VWAPM but not originally considered applicable for use on this Contract.

- **Truck mounted attenuators**, not designated in the Contract as a separate pay item but where additional Truck Mounted Attenuators are required as determined and authorized by the Engineer, these will be measured in hours of actual use required, and will be paid for at the rate of **\$22** per employed hour. This price shall include furnishing the truck mounted attenuator, mounting vehicle, lights, electronic arrows, if allowed but not required, and maintenance. When electronic arrows are used at the option of the Contractor in lieu of the rotating or high intensity amber strobe light, the cost of the electronic arrow shall be included in the price for truck mounted attenuators. When electronic arrows are required and authorized as determined by the Engineer and not incidentally mounted (and permitted) on such truck mounted attenuator support vehicles, they will be paid for separately as specified herein.
- **Portable traffic control signal** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include portable traffic control signal equipment, installation, energy source, maintaining, adjusting, aligning, removing and relocating equipment.
- **Portable Changeable Message Signs (PCMS)**, not designated in the Contract as a separate pay item but where additional Portable Changeable Message Signs are required as determined and authorized by the Engineer, these will be measured in hours of actual use and paid for at the rate of **\$15** per hour for each hour of employed use. This price shall be full compensation for furnishing or mobilizing the unit(s) to the project, maintenance, operation, and repositioning the unit(s).

Payment will be made under:

Pay Item	Pay Unit
Maintenance of traffic (Structure No.)	Lump sum
Maintenance of traffic (Route and Location[s])	Lump sum

GUIDELINES — For use on all projects requiring the use of Portable Temporary Rumble Strips according to [IIM-TE-386](#). DO NOT use until the first July 2019 advertisement.

[SP512-000130-00](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
EMPLOYMENT OF PORTABLE TEMPORARY RUMBLE STRIPS

January 24, 2019

I. Description

This work shall consist of employing Portable Temporary Rumble Strips (PTRSs) in support of work-zone flagging operations at locations or times designated herein, on the Plans, in the VWAPM, or as directed by the Engineer. A PTRS is a transverse rumble strip that consists of intermittent, narrow, transverse areas of rough-textured or slightly raised or depressed surface that extends across the travel lane to alert drivers to unusual vehicular traffic conditions. PTRSs are not required during emergency work, or during rain, snow, or icy weather conditions, as determined by the Engineer.

II. Materials

PTRSs shall be made of rubber or recycled rubber and the color shall be orange or black. Colors shall not be mixed within one work zone. It shall have a recessed, raised or grooved design to prevent movement and hydroplaning. A PTRS shall consist of hinged segments of equal length that prevent separation while in use. The combined usable length of the PTRS shall be between 10 feet 9 inches and 11 feet. The width of the PTRS shall be 12 to 13 inches. The maximum height of the PTRS shall be 1 inch; and the minimum height shall be 5/8 inch. The weight of each roadway strip shall be a minimum of 100 lbs. to a maximum of 120 lbs. The leading and departing edge taper shall be between 12 and 15 degrees. Each roadway length of the PTRS shall have either a minimum of one cutout handle in the end of the rumble strip, or an interlocking segment which can be used as a handle for easy deployment or removal.

III. Requirements for Employment

PTRSs shall be employed in accordance with the VWAPM when all of the following conditions are met:

- Work operations involving flaggers occurring on a two-lane roadway during daylight hours
- The duration of the activity at a location is greater than 3 hours but less than 72 consecutive hours
- Existing speed limit is 35 MPH or greater
- Existing roadway has a marked centerline

PTRSs shall not be used on loose gravel, bleeding asphalt, heavily rutted pavements as determined by the Engineer, or unpaved surfaces.

PTRSs shall be installed in advance of horizontal curves if determined necessary for driver visibility by the Engineer. PTRSs installed at the beginning of a non-stationary flagging operation in accordance with the VWAPM will not require repositioning as the work advances.

IV. Installation and Employment

The manufacturer of the PTRS shall provide a signed affidavit that states the PTRS is able to withstand being run over by an 80,000 pound vehicle and retain its original placement with minor incidental movement of 6 inches or less during an 8 hour deployment. Incidental movement of the PTRS shall be parallel with other rumble strips in an array but shall not move so that its placement compromises the performance and safety of the other rumble strips, workers or the traveling public. PTRS shall be used in arrays of three rumble strips at the center to center spacing shown on the Typical Traffic Control figure in the VWAPM, placed transversely across the travel lane, without intruding into the opposing travel lane. . The PTRS shall be installed without the use of adhesives or fasteners.

The PTRS shall be repositioned ahead of queueing traffic if directed by the Engineer.

V. **Measurement and Payment**

Portable Temporary Rumble Strip Array will be measured in days per array and will be paid for at the Contract day price. This price shall include installing, maintaining, removing devices when no longer required, and relocating throughout the day.

Payment will be made under:

Pay Item	Pay Unit
Portable Temporary Rumble Strip Array	Day

GUIDELINES — Projects requiring cold planing (milling) of asphalt pavement. {2007-S515B03}

[SP515-000100-00](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
COLD PLANING (MILLING) ASPHALT CONCRETE OPERATIONS

July 12, 2016

I. DESCRIPTION

This provision shall govern cold planing (milling) asphalt concrete operations in preparation for pavement repair and/or pavement overlay. Cold planing of asphalt concrete pavement shall be performed according to Section 515 of the Specifications and the requirements herein.

II. GENERAL PROCEDURES

The Contractor is permitted to perform either regular pavement planing or performance pavement planing to the Contract specified depth or as directed by the Engineer in order to provide a uniform sound substrate prior to paving roadways designated in the schedules according to Section 315 of the Specifications, the requirements herein, or elsewhere in the Contract.

A. Regular and Performance Planing

The following general conditions apply to either type of cold pavement planing:

Limitations of operations for planing shall be performed according to Section 108.02 of the Specifications, other Contract specific requirements, and as specified herein.

Where the depth of planing designated in the Contract or directed by the Engineer is 2 inches or less, the Contractor shall have the option of planing the abutting lane or shoulder on alternate days or squaring up the planing operation at the end of each work shift. However, abutting lanes or shoulders shall be planed and squared up regardless of planing depth prior to holidays or any temporary shutdowns.

Where the depth of planing designated in the Contract or directed by the Engineer is greater than 2 inches in the Contract, the Contractor shall square up the planing operation at the end of each workday or plane adjacent lanes including abutting shoulders within the same day for the length of that day's planing operation.

The Contractor will not be permitted to plane a portion of the width of a travel lane, ramp, loop or shoulder and leave it unpaved and open to traffic. Abutting shoulders may also be planed during single and multiple lane planing operations. Planing operations shall be planned and performed to maintain positive drainage according to Section 315.05(c) of the Specifications.

In the event an emergency or an unforeseen circumstance such as equipment failure or breakdown occurs during the Contractor's operations and such emergency or unforeseen circumstance within his control prevents the Contractor from squaring up

the planed surface on adjacent lanes prior to a holiday or temporary shutdown, any additional signage, traffic control devices or temporary markings or markers required to protect the traveling public shall be the Contractor's responsibility and at his expense.

Where uneven pavement joints exist either transversely or longitudinally at the edges of travel lanes, the Contractor shall provide advance warning signage and traffic control devices to inform the traveling public according to the details provided in the Contract for the scope of operation he is performing. The cost for such advance warning signage and traffic control devices shall be included in the cost of other appropriate items

Where appropriate according to Contract requirements and site specific conditions, the existing asphalt concrete layers shall be planed to permit the transition of the top course of the asphalt concrete overlay according to the details of the ACOT-1 Standard. Any sub-courses termination may be notched into the existing pavement or blended with the next course of pavement.

B. Performance Planing Only Limitations:

When the Contractor elects to performance plane on roadways specified to be planed to a depth of 2 inches or less, the Contractor shall performance plane only that amount of pavement which can be paved back within the time allowance specified herein for completion of planing the roadway or portion of roadway. The Contractor is required to perform pavement surface testing as specified in Section 515.04 of the Specifications to verify the Contractor has achieved the acceptable surface texture specified in that Section prior to opening the performance planed surface to traffic. Additional traffic control devices and signage required for the extended pave back time allowance specified herein for performance planing operations versus the traffic control devices required for the pave back operations for regular pavement planing operations specified herein shall be at the Contractor's expense.

III. ROADWAY CLASSIFICATION LIMITATIONS

The following restrictions, based on the type of roadway, shall apply:

A. All Interstates and other Limited Access Roadways including Ramps and Loops posted at 55 Mph or Greater

1. Regular planing and performance planing in multiple lanes

The Contractor shall plan, execute and maintain pavement planing operations to avoid trapping water on the roadway. On roadways with a combination of 3 or 4 lanes and shoulders (i.e. 2 travel lanes and 1 or 2 shoulders in one direction) where the travel lanes and shoulders will not be completely planed to drain prior to the start of paving operations, planing shall be performed so that water will not pond on the travel surface. When the Contract does not include the removal of the shoulder at the specific roadway planing location, the Contractor shall cut drainage outlets through the shoulder at locations the Engineer designates (excluding curb and gutter sections) for those portions of the planed roadway that are to be opened to traffic. The Contractor shall restore the shoulders to their original grades once paving operations are completed, unless otherwise directed by the Engineer. The cost for cutting and restoring roadway shoulders shall be included in the price bid for other items of work.

On roadways with a combination of 5 or more lanes and shoulders (i.e. 3 or more travel lanes and 2 shoulders in one direction, the extent to which the interior lanes shall be planed will be such that the planed portions can be repaved within the work-zone time limits unless provisions are made to mitigate the ponding of water (i.e., milling adjacent lane(s) and shoulders or cutting drainage outlets through the shoulder).

Ramps and exits shall be planed in such a manner that an even longitudinal joint (elevation difference of greater than 1 inch) is not left for vehicles to cross within the posted speed limits in a “run on” situation. To prevent this, the Contractor can plane ramps and exits to the extent that the joint line between new and existing pavement crossed by traffic is traversed at an angle close to ninety (90) degrees per the ACOT-1 Standard for temporary transverse joints or can perform tapered planing along the ramp/exit longitudinal joint to provide a smooth transition for vehicles to cross, or can square up ramp or exit pavement with the adjacent mainline lane at the time of installation.

The following additional restrictions will apply to roadways where **regular pavement planing** is applicable:

- The Contractor will be limited in the case of regular pavement planing, whether in a single lane or multiple lane operation, to only that amount of pavement that can be paved back within 24 hours of completion of planing that roadway or portion of roadway.
- The Contractor shall pave all roadways, ramps and loops planed during the week before that weekend.
- On roadways with a combination of 4 or more lanes and shoulders (i.e. 2 or more travel lanes and 2 shoulders) in one direction, all travel lanes must be paved back before the weekend. Up to two thousand five hundred (2,500) feet of shoulder may be planed and left over the weekend provided the portion of planed shoulder left unpaved over the weekend is paved within 24 hours after the end of the weekend period.

The following additional restrictions will apply to roadways where **performance pavement planing** is planned by the Contractor:

- Performance planing may be performed in multiple lanes across the entire widths of the lanes up 4 miles of travel lane unless otherwise stated in the Contract. Performance planed travel lanes surfaces must be paved back within 96 hours from the end of the performance planing operation
- Where the Contractor decides to performance plane multiple lanes, the Contractor shall be responsible for furnishing and installing advance warning signage and traffic control devices to inform the traveling public according to the details provided in the Contract. Temporary pavement markings and markers used for lane demarcation on performance planed surfaces will be according to Section 704.04 of the Specifications and the *Special Provision for SECTION 704—PAVEMENT MARKINGS AND MARKERS* included in the Contract. The cost for such warning devices and advance signage required by multiple lane planing operations shall be included in the cost of other appropriate items unless otherwise specified in the Contract by a specific pay item(s) for separate payment.

B. Non-Limited Access Roadways with an ADT of 10,000 or Greater (Traffic Group XV and above) and a Posted Speed Limit of 45 Mph or Greater

1. Regular planing and performance planing in multiple lanes

The Contractor shall plan and proceed with the pavement planing operation to avoid trapping water on the roadway. On roadways with a combination of 3 or 4 lanes and shoulders (i.e. 2 travel lanes and 1 or 2 shoulders) in one direction where the travel lanes and shoulders will not be completely planed prior to the start of paving operations, planing operations shall be performed so water will not pond on the travel surface. When the Contract does not include the removal of the shoulder, the Contractor shall cut drainage outlets through the shoulder at locations the Engineer designates, excluding curb and gutter sections, for those portions of the planed roadway that are to be opened to traffic. The Contractor shall restore the shoulders to their original grades once paving operations are completed, unless otherwise directed by the Engineer. The cost for cutting and restoring the roadway shoulder shall be included in the price bid for other items of work.

On roadways with a combination of 5 or more lanes and shoulders (i.e. 3 or more travel lanes and 2 shoulders in one direction), the extent of pavement planing on the interior lanes shall be such that the planed surface can be repaved within the timeframe of the work-zone time limits unless provisions are made to mitigate the ponding of water (i.e. planing adjacent lane(s) to mitigate the ponding of water).

The following additional restrictions will apply to roadways where **performance pavement planing** is planned by the Contractor:

- Performance planing may be performed in multiple lanes across the entire widths of the lanes up a total of 4 miles of travel lane unless otherwise stated in the Contract.
- Performance planed travel lane surfaces must be paved back within 10 days from the start of the performance planing operation.
- Where the Contractor decides to performance plane multiple lanes, the Contractor shall be responsible for furnishing and installing advance warning signage and traffic control devices to inform the traveling public according to the details provided in the Contract. The cost for such warning devices and advance signage required by multiple lane planing operations shall be included in the cost of other appropriate items unless otherwise specified in the Contract by a specific pay item(s) for separate payment. Temporary pavement markings required by such operations will be handled according to Section 704.04 and the *Special Provision for* **SECTION 704—PAVEMENT MARKINGS AND MARKERS** included in the Contract.

The following additional restrictions will apply to roadways where **regular pavement planing** is applicable:

- The Contractor will be limited whether in a single lane or multiple lane operation, to only that amount of pavement that can be paved back within 24 hours of completion of planing that roadway or portion of roadway.

- The Contractor shall pave all roadways that have been regular planed during the week before that weekend.
- On roadways with a combination of 4 or more lanes and shoulders (i.e. 2 or more travel lanes and 2 shoulders in one direction, all travel lanes must be paved back before the weekend. Up to two thousand five hundred (2,500) feet of shoulder may be planed and left over the weekend provided the portion of planed shoulder left unpaved over the weekend is paved within 24 hours after the end of the weekend period.

C. All Other Roadways

1. Regular Pavement Planing (single or multiple lanes)

If the Contractor elects to perform regular pavement planing the Contractor will be permitted to leave up to two miles of travel lane open to the traveling public provided such planing (milling) is performed across the entire lane width. This same total length restriction will apply in cases where multiple-lane regular pavement planing is permitted in the Contract or allowed by the Engineer. The Contractor will be limited in the case of regular pavement planing, whether in a single lane or multiple lane operation, to only that amount of pavement that can be paved back within 96 hours of completion of planing that roadway or portion of roadway.

2. Performance Pavement Planing

When the Contractor elects to performance plane roadways specified to be planed to a depth of 2 inches or less, the Contractor shall plane only the amount of pavement that can be paved back within 14 calendar days of completion of planing that roadway or portion of roadway. The Contractor is required to perform pavement surface testing as specified in Section 515.04 of the Specifications to verify the Contractor has achieved the acceptable surface texture prior to opening the performance planed surface to traffic. The additional traffic control devices and signage required for the 14 calendar day pave back operation allowance for performance planing operations shall be at the Contractor's expense.

Temporary pavement markings required by such operations will be handled according to Section 704.04 and the *Special Provision for **SECTION 704—PAVEMENT MARKINGS AND MARKERS*** included in the Contract.

Roadways on which the roadway edges (i.e. edge milling) are to be planed shall be paved back within 10 days from the completion of the planing operation.

IV. MEASUREMENT AND PAYMENT

Measurement and payment will be according to Section 515.05 of the Specifications.

GUIDELINES – ASPHALT PROJECTS (PLANT MIX ONLY).

SP703-000110-00

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
REPLACEMENT OF LOOP DETECTORS

March 16, 2017

I. Description

Loop Detectors shall be installed in accordance with the Section 703. Installation of loop detectors shall be performed in the presence of the Engineer.

II. Materials

Loop detector cables shall be No. 14 AWG stranded copper in accordance with Section 238. Loop sealant shall be from the Pre-Approved Traffic Control Device Listing.

New loop detectors shall be of the same size, configuration and locations as existing loop detector(s) unless otherwise indicated.

III. Procedures

When replacement of loop detectors is included in the Contract, the Contractor will be required to install new loop detector items either within the planed surface prior to the placement of new surface mix, or through the finished riding surface.

Loop detectors shall be installed at the depth specified in the TD-Series Standard Drawings for loop detectors installed in the planed surface or final riding surface, as applicable.

When an existing loop detector is taken out of service by the Contractor's planing operation, the Contractor shall have the new loop detector items installed and operational 96 hours after being taken out of service, unless otherwise stated in the Contract. In no case shall any loop detector be out of service for more than 96 hours. If the Contractor chooses to install new loop detector items through the final riding surface, all loop detector items shall be installed and operational within 96 hours after completion of the paving operations in the affected intersection.

The Contractor shall notify the Engineer at least 72 hours prior to planing at locations that contain loop detectors.

GUIDELINES – Surface treatment, slurry seal, latex emulsion treatment, and plant mix projects. {2007-S704M06}

[SP704-000100-03](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 704—PAVEMENT MARKINGS AND MARKERS

August 9, 2018

SECTION 704—PAVEMENT MARKINGS AND MARKERS of the Specifications is amended as follows:

Section 704.02(a) Pavement Markings is amended to add the following:

The sizes and shapes of symbols and characters shall match the size and shape specified in the Standard Drawings or elsewhere in the Contract. Hand-drawn or “stick” symbols or characters will not be allowed.

Section 704.02(e) Flexible Temporary Pavement Markers (FTPMs) is inserted as follows:

Flexible Temporary Pavement Markers (FTPM's) shall conform to Section 235 of the Specifications. All FTPM's shall be new product. FTPM's are suitable for use up to one year after the date of manufacture when stored in accordance with the manufacturer's recommendations.

The color of FTPM units and their reflective surfaces shall be the same color (white or yellow) as the temporary pavement markings they are being used in substitution for.

FTPM's shall consist of products from the Materials Division's Approved Products List No. 22. FTPM's shall include a removable material covering the reflective lens to protect the lens from being obscured or damaged during the paving operation.

Section 704.03—Procedures is amended by replacing the third and fourth paragraphs with the following:

The Contractor shall provide staking in the field that documents any changes in passing zones on undivided roads, exact placement of all aerial speed enforcement markings, and placement of railroad crossing markings. Any changes to these markings that are specified in the Contract shall be staked. The Contractor shall complete all staking and notify the Engineer at least 14 days prior to the scheduled start of resurfacing operations.

The Contractor shall reference this staking when installing temporary markings, and for the premarking to be done in advance of permanent marking installation. The stakes shall be removed at the conclusion of the project.

All existing markings shall be replaced with permanent markings of the same width, color, size, and location unless otherwise directed in the PM Series Standard Drawings, in the Contract, or by the Engineer. All existing markers shall be replaced with new markers with the same retroreflector colors (front and back) unless otherwise directed in the Contract or by the Engineer.

The Contractor shall sweep clear all surface-treated, slurry seal, and latex emulsion roadways prior to installation of permanent pavement markings. Any loose aggregate remaining on the surface shall be blown-out with an air compressor or other approved method.

Section 704.03—Procedures is amended by replacing the 13th paragraph with the following:

Non-truck mounted equipment shall be regulated to allow for calibration of the amount and type of material applied.

Section 704.03(a)2 Type B markings is amended to replace the third paragraph with the following:

Non-truck mounted equipment for application of thermoplastic material shall include an extrude die with a burner, temperature controller, agitator, and mechanical bead applicator to allow for the correct amount of material to be applied.

Section 704.03(a)2e Patterned Preformed Tape (Type B, Class VI) is amended to insert the following:

Only products on Materials Division Approved List 17 which are warranted by the manufacturer against failure resulting from improper installation and material defects when used on Latex Emulsion or other Surface Treatments shall be used on these applications, in conjunction with a low-VOC surface preparation primer adhesive.

The Contractor shall install Type B, Class VI markings on existing asphalt concrete roadway surfaces, hydraulic cement concrete surfaces, and existing or new surface treatment, slurry seal, and latex emulsion surfaces in accordance with the manufacturer's installation instructions for pavement surface preparation, sweeping, and installation techniques for non-embedded (adhesive) surface applications and splicing.

Prior to tape installation on new latex emulsion surfaces:

- The surface shall be swept clear of all loose aggregate immediately prior to spraying the surface preparation primer adhesive.
- The primer adhesive shall be sprayed uniformly at the correct thickness (shall not exceed the maximum thickness specified by the manufacturer), and cured in accordance with the manufacturer's installation instructions.

After application of the surface preparation primer adhesive, the tape shall be tamped to the road using a 200 pound minimum tamper cart and vehicle wheels. The Contractor shall ensure that the vehicle tires, if used, ride true down the length of the tape marking and in accordance with manufacturer instructions.

Section 704.03(d) Pavement Markers is amended to add the following:

Permanent markers shall not be installed until after the installation of the adjacent permanent line marking.

The Contractor may choose to substitute FTPM's in lieu of Type A-temporary paint or in lieu of Type D temporary pavement markings. The Contractor's plan for FTPM's shall be in accordance with the *Typical Plan for FTPM Placement* drawings included herein.

When FTPM's are used to simulate temporary edgelines, then FTPM's shall be spaced every 20 feet and shall match the color of the line markings being simulated.

FTPM's shall be installed at the same locations that permanent pavement markings will be installed.

For surface treatment, slurry seal or latex emulsion treatment operations, the appropriate FTPM's with protective covering shall be installed prior to placing the new treatment. The lens protective covering shall be kept in place during the final surface placement to protect the lens from being obscured or damaged by the paving operation. Upon completion of surface treatment, slurry seal or latex emulsion treatment placement, the Contractor shall remove the protective covering from the reflective lens of the FTPM's prior to leaving the work site. Failure to remove such covering shall result in the non-payment for that portion type (skip or solid) of temporary pavement marking.

For plant mix operations, the appropriate FTPM's shall be installed on the newly-placed pavement after the pavement is thoroughly compacted and has cooled to the FTPM manufacturer's recommended temperature for installation.

The Contractor shall maintain the FTPM's until the permanent pavement markings are installed. Damaged or missing FTPM's shall be replaced within 24 hours of discovery at the Contractor's expense with new FTPM's of the same manufacturing type, color and model. No more than one FTPM may be damaged or missing out of every skip line simulated segment. No two consecutive FTPMs may be damaged or missing on a simulated solid line application, and no more than 30 percent of the FTPM's may be damaged or missing on any measured 100-foot segment of simulated solid line.

Once applied, FTPM's will be considered for a single use. If a FTPM requires replacement, it shall be properly disposed of and replaced with a new FTPM at no additional cost to the Department. FTPM's may remain in place, undamaged, after installation for up to 14 consecutive days. When FTPM's are applied prior to final surface placement (such as with surface treatment, slurry seal, or latex emulsion operations) this 14 -consecutive-day time limit shall begin at the time of actual installation of the FTPM's, not at the time of surface placement. The Engineer may approve an extension of the 14 days if all damaged FTPM's are replaced and the remaining FTPM's are maintained.

FTPM's shall be removed and properly disposed of when permanent pavement markings are installed. Used FTPM's removed from the pavement, including all containers, packaging, damaged FTPM's and all other miscellaneous items of waste, shall be appropriately disposed of in accordance with Section 106.04.

Section 704.03(d)1 Snow-Plowable Raised Pavement Markers is amended to insert the following:

All SRPMs on plant mix surfaces shall be installed within 30 calendar days after the end of the last workday (final surface) of continuous paving on that section of roadway.

All SRPMs on surface treatment, slurry seal, or latex emulsion surfaces shall be installed within 14 calendar days after the final markings are installed, unless a time extension is approved by the Engineer. Time extensions will be granted when weather conditions prohibit installation or other operations on the project would damage the markers. The time limit commences for a continuous section at the end of the last workday that the final surface is placed. For roads with more than two lanes, each direction will be considered a separate continuous section.

Replacement of existing retroreflector lenses shall be in accordance with the manufacturer's installation instructions. If the new retroreflectors are dirtied or damaged during installation they

shall be replaced at no additional cost to the Department. Properly dispose of the existing retroreflectors in accordance with Section 106.04.

Section 704.03(f) Maximum Allowable Time Limits for Unmarked Roads is inserted as follows:

Maximum Allowable Time Limits for Unmarked Roads

Existing markings that are obscured, covered, or eradicated by resurfacing operations (including existing symbol and message markings where the need for temporary symbol or message markings has been identified in the Contract) shall be replaced with either temporary or permanent markings within the time limits established in Table VII-4, unless otherwise approved by the Engineer.

If the Contractor begins the next lift within the time limits specified in Table VII-4 for a non-final surface, then the time limits shall be recalculated as starting at the end of the work day from the time of that next resurfacing operation.

The Engineer may allow the extension of the time limits by up to 12 hours for 10,000 ADT or greater roads, up to 24 hours for 9,999 to 3000 ADT roads, and up to 48 hours for less than 3000 ADT roads, provided that all of the following apply:

- The road is non-limited access.
- The road has a posted or statutory speed limit of 40 mph or below.
- All lanes are delineated by the milled surface or asphalt overlay.
- The road is on tangent alignment.
- “Unmarked Pavement Ahead” or “No Center Line” warning signs were properly installed in accordance with the VWAPM when the unmarked lane was opened to traffic.

For final surfaces, the Contractor shall determine if the permanent markings can be installed within these time limits, based on the installation requirements for that permanent marking material on that type of surface, and the weather conditions. If the permanent markings will not be installed within these time limits, then temporary markings shall be installed.

Table VII-4: Time Limits for Unmarked Roads is inserted as follows:

Table VII-4: Time Limits for Unmarked Roads	
Road Type	Maximum allowable duration for unmarked roads
Interstates and other freeways (limited access roads) posted at 55 MPH or greater (including interstate/freeway ramps) ¹	<p>All lane line markings, at a minimum, shall be temporarily or permanently installed before opening the lane to traffic. If the latex emulsion surface has not cured enough to hold the temporary markings (weathered-in texture), then the Contractor shall apply the temporary paint before opening the lane to traffic and then, if necessary and when directed by the Engineer, shall refresh the temporary markings within 24 hours at VDOT expense. -Contractor shall install FTPMs on top of all SRPMs in each lane and gore area with protective covering prior to latex placement in accordance with SP. For covering Cleaning and Inspecting Existing Raised Pavement Markers.</p> <p>All other markings shall be temporarily or permanently installed within 24 hours after the end of the workday when the corresponding existing markings were obscured, removed, or eradicated.</p>

Non-freeway roads with ADT of 10,000 or greater (Traffic Groups XV and above) ^{2,3,4}	All lane line and center line markings shall be temporarily or permanently installed within 24 hours after the end of the workday when the corresponding existing markings were obscured, removed, or eradicated. Application of temporary markings on surface treatment, slurry seal and latex emulsion shall be as soon as the surface has cured enough to hold the temporary markings.
Non-freeway roads with ADT between 3,000 and 9,999 (Traffic Groups XI through XIV)	All lane line and center line markings shall be temporarily or permanently installed within 48 hours after the end of the workday when the corresponding existing markings were obscured, removed, or eradicated.
Non-freeway roads with ADT between 600 and 2,999 (Traffic Groups VII - X) ^{5,6}	All lane line and center line markings shall be temporarily or permanently installed within 72 hours after the end of the workday when the corresponding existing markings were obscured, removed, or eradicated.
Non-freeway roads with ADT less than 600 (Traffic Groups I – VII)	Temporary markings are not required if all “Unmarked Pavement Ahead” or “No Center Line” warning signs were properly installed as per the VWAPM when the unmarked road was first opened to traffic.

¹For the purposes of this Special Provision, freeways shall be defined as any fully limited-access, divided roadway with two or more travel lanes in each direction and 55 mph or greater speed limit.

²If an approach to a signalized intersection has (a) two or more approach through lanes, (b) 45 mph or greater speed limit, (c) greater than 3000 ADT, and (d) all markings on the approach are obliterated, then all lane lines and centerlines within 250 feet of the location of the stop line location shall be temporarily or permanently marked within **24 hours** of opening the approach to traffic, unless a time extension is approved by the Engineer and “Unmarked Pavement Ahead” or “No Center Line” warning signs were properly installed as per the VWAPM when the unmarked approach was first opened to traffic.

³If the Contract Documents require temporary symbol/message markings or temporary edge line markings, those markings shall be temporarily or permanently marked within **72 hours** after the end of the workday when the corresponding existing markings were obscured, removed, or eradicated on non-freeway roads with 10,000 or greater ADT, and **96 hours** on less than 10,000 ADT non-freeway roads, unless the Engineer approves a time extension.

⁴If the next resurfacing operation will obliterate the temporary markings within approximately **24 hours**, the Engineer may approve an extension of time for temporary marking installation if the posted/statutory limit is less than 45 mph, and all “Unmarked Pavement Ahead” or “No Center Line” warning signs were properly installed as per the VWAPM when the unmarked approach was first opened to traffic.

⁵On surface treatment roads with ADT between 1000 and 2999, if it is anticipated that the surface treatment will not be sufficiently cured to permit temporary paint installation within 72 hours, then the Engineer may direct the Contractor to either use yellow FTPMs to simulate the centerline, or to apply temporary pavement markings within 72 hours and then, if the Engineer determines it necessary, refresh those temporary pavement markings with a second application of Type A temporary paint at VDOT's expense.

⁶On curved portions of surface treatment roads with ADT between 600 and 999, if it is anticipated that the surface treatment will not be sufficiently cured to permit temporary paint installation within 72 hours, then the Engineer may direct the Contractor to use either yellow FTPMs to simulate the centerline on the curves, or to apply temporary pavement markings within 72 hours on the new surface and then, if the Engineer determines it necessary, refresh those temporary pavement markings with a second application of Type A temporary paint at VDOT's expense. Temporary markings may be omitted on tangent sections of roadway if all “Unmarked Pavement Ahead” or “No Center Line” signs were properly installed as per the VWAPM when the unmarked road was first opened to traffic, and if approved by the Engineer.

Section 704.03(g) Temporary Pavement Markings is inserted as follows:

Temporary Pavement Markings

Premarking, dotting or layout marking shall not be used as a substitute for temporary pavement marking.

Temporary linear, symbol, and message pavement markings specified in the Contract shall be installed at the same locations that the permanent pavement markings are to be installed, unless otherwise approved by the Engineer.

Type D-removable tape shall be installed and removed in accordance with manufacturer's installation instructions.

Type A temporary paint shall be installed in accordance with the manufacturer's installation instructions and as detailed in the following table:

	Milled Surface	Intermediate Lifts or Final Surface
Thickness	15 mils	8 to 10 mils ¹
Glass Bead Application Rate	6 lbs. of glass beads per gallon of material	3 lbs. of glass beads per gallon of material for 8 to 10 mils and 6 lbs. per gallon for 11 to 15 mils
Long Line Width	Same width as the permanent markings	75% of the permanent marking width
Skip Line Pattern	10-foot line segments / 30-foot gaps (approx.)	8-foot line segments / 32-foot gaps (approx.)

¹Type A paint at approximately 15 mils thickness with 6 lbs. of glass beads per gallon will be permitted for the temporary lane line markings provided that the Type A is worn down to no more than 10 mils thickness prior to permanent marking installation. The contractor shall assess how long the temporary lane line, center-line and edge line temporary markings will be in service and may increase the thickness based upon the duration and expected wear.

Temporary Type A pavement markings on final surfaces shall be arranged and spaced so that they will be completely covered by the subsequent installation of permanent pavement markings atop those temporary paint markings.

The following Temporary markings location and placement types shall comply with the following:

- Skip and solid lane line markings shall be required at all locations unless otherwise directed in the Contract.
- Centerline markings shall be required at all locations unless otherwise directed in the Contract. Temporary passing zone changes shall be at the same location as the permanent marking passing zone change locations.
- Edgelines shall only be required where specified in the Contract, subject to the surface reaching a condition to support the markings and the equipment. Temporary edgelines are not required when the shoulder surface is in a milled condition.
- Temporary stop lines, when required by the Contract, shall be 12 inches wide unless otherwise directed.
- Temporary crosswalks, when required by the Contract, shall be two parallel 6-inch white lines unless otherwise directed.

Temporary lane lines, centerlines, and edge lines may be marked with Type D removable tape, Type A-temporary paint, or FTPMs. All temporary symbol and message markings and other types of temporary markings may be marked with Type D-removable tape or Type A-temporary paint.

VTM-94 is not required for temporary pavement marking. However, if the VTM-94 moisture test is not performed, the Contractor shall document the approximate surface wetness on the Form C-85.

If the surface is visibly dry (does not have puddling or free-standing water present), the Contractor is responsible for installing and maintaining the temporary pavement markings. If the Contractor opts not to perform VTM-94 and the temporary markings applied to a visibly dry surface do not sufficiently adhere to the surface, temporary pavement markings shall be reapplied at no additional cost to the Department.

If the surface has puddling or free-standing water present, or if a VTM-94 moisture test result indicates that the condition of the surface is not suitable for temporary pavement marking application, the Engineer may direct the Contractor to install temporary pavement markings on the surface in order to avoid having traffic operate on an unmarked road. In such circumstances the Department may direct the Contractor to install one subsequent reapplication of the temporary markings once the surface has dried, if the previous installation did not satisfactorily adhere to the road. In such circumstances the Contractor will be compensated at the Contract bid price for those temporary markings.

In order to quicken the paint drying process, the Contractor may spray an Engineer-approved drying agent into the traffic paint during installation in accordance with the manufacturer's installation instructions, at no additional cost to the Department.

The Contractor may employ approved methods of drying the pavement surface that will not damage the pavement. Methods that may damage the pavement, such as "torching" of the pavement, will not be allowed. Any drying of pavement will be at no extra cost to the Department.

While in place, temporary pavement markings sizes, shapes and retroreflectivity shall be maintained at adequate visibility and retroreflectivity, as defined in Section 512, until the permanent markings are installed. No additional application (refreshing) is required as long as the temporary markings continue to meet these requirements.

If Type D-removable tape fails the visual evaluation or is deficient in any other respect prior to the installation of permanent markings, the tape shall be removed and new Type D-removable tape, or Type A-temporary paint shall be reapplied, at no additional cost to the Department.

If Type A temporary paint does not meet the requirements of Section 512 prior to the installation of permanent markings, such temporary markings shall be refreshed by the application of a lighter application (applied so as to enhance visibility but not as to require eradication before application of permanent markings) of Type A-temporary markings at the Contractor's expense.

Permanent pavement markings shall not be installed atop Type A temporary markings if the paint is not fully dry or if the paint exceeds the maximum specified thickness in Table VII-3. If the temporary pavement markings are not located directly underneath the location where the permanent markings are to be installed, they shall be 100% eradicated in accordance with Section 512 prior to installation of permanent markings at no additional cost to the Department.

Section 704.03(h) Time Limits for Permanent Pavement Marking Application is inserted as follows:

Time Limits for Permanent Pavement Marking Application

All permanent linear, message, and symbol markings on Interstate and Limited Access Roadways posted at 55 MPH or greater, all other roadways with 10,000 ADT or greater with a

posted or statutory speed limit of 45 mph or greater, shall be placed within the following time limits:

1) For Plant Mix operations:

- a. All Type B Class VI shall be inlaid the same day as the final surface is placed as specified herein.
- b. All other permanent markings shall be completed within 30 days after the end of the last workday of continuous paving on that section of roadway.

2) For Slurry Seal, Latex Emulsion, and Surface Treatment operations:

The contractor shall evaluate the pavement surface between 14 and 18 days after the end of the last workday of continuous paving on that section of roadway. If that evaluation ascertains that the pavement surface meets the markings manufacturer's requirements for application of permanent markings, the texture is weathered-in on the edges, and the temporary marking is worn down to 10 mils or less, then the Engineer shall be notified that the surface meets the markings manufacturer's specifications. The permanent markings shall be installed between 14 days and 30 days after the end of the last workday of continuous paving on that section of roadway.

On all other roadways (non-interstate and non-limited access roads with less than 10,000 ADT, or posted or statutory speed less than 45 MPH), all permanent linear and message or symbol markings shall be installed within 30 days on plant mix surfaces and between 30 and 45 days on surface treatment, slurry seal, and latex emulsion surfaces, after the end of the last workday of continuous paving on that section of roadway.

Permanent markings shall not be installed where pavement curing time or weather conditions prohibit installation, or where the pavement surface does not meet the markings manufacturer's requirements (e.g. the aggregate is not worn-in at the edges).

Any necessary refreshing or replacement of temporary pavement markings or FTPMs will not affect the allowable time limit for completion of permanent pavement marking installation.

Section 704.04—Measurement and Payment is amended to replace the first paragraph with the following:

Pavement line markings will be measured in linear feet and paid for at the contract linear foot price for the type, class and width specified. This price shall include furnishing and installing the pavement marking material, surface preparation, premarking, documentation and staking of existing markings, quality control tests, daily log, guarding devices, primer, adhesive, glass beads, and manufacturer's warranty.

Section 704.04—Measurement and Payment is amended to add the following:

Temporary pavement line markings will be measured in linear feet and paid for at the Contract linear foot price for the type, class, and width specified. This price shall include furnishing, installing, and maintaining the pavement marking materials; surface preparation, inspections, testing, daily log, and guarding devices; providing primer, adhesive, glass beads, and drying agents; and disposal, and removing removable markings when no longer required.

If temporary line markings require refreshing, reapplication, or replacement before the final surface or the permanent markings are installed, all cost for refreshing, reapplication, or replacement shall be at the Contractor's expense, unless the Contractor was directed by the

Engineer to apply the temporary markings to a visibly wet surface or to an insufficiently cured latex emulsion, slurry seal, or surface treatment surface.

In the event the Contractor uses FTPM's in lieu of Type A-temporary paint to simulate a longitudinal line marking as allowed herein, the Contractor will be paid at the linear foot pay unit for the length of simulated line marking at the Type A-temporary paint unit price. That measurement shall represent all FTPM's required for that simulated line marking. This cost shall include furnishing, installing and maintaining the FTPM's, removable covers, surface preparation, quality control tests, daily log, guarding devices, removal, and disposal.

Temporary pavement message (word) markings will be measured in units of each and paid for at the contract each price for the character size, type, and class specified. This price shall include furnishing, installing, and maintaining the pavement marking materials; surface preparation, inspections, testing, daily log, and guarding devices; providing primer or adhesive, glass beads, and drying agents; and disposal, and removing removable markings when no longer required.

Temporary pavement symbol markings will be measured in units of each and paid for at the contract each price for the size, type, and class specified. This price shall include furnishing, installing, and maintaining the pavement marking materials; surface preparation, inspections, testing, daily log, and guarding devices; providing primer or adhesive, glass beads, and drying agents; and disposal, and removing removable markings when no longer required.

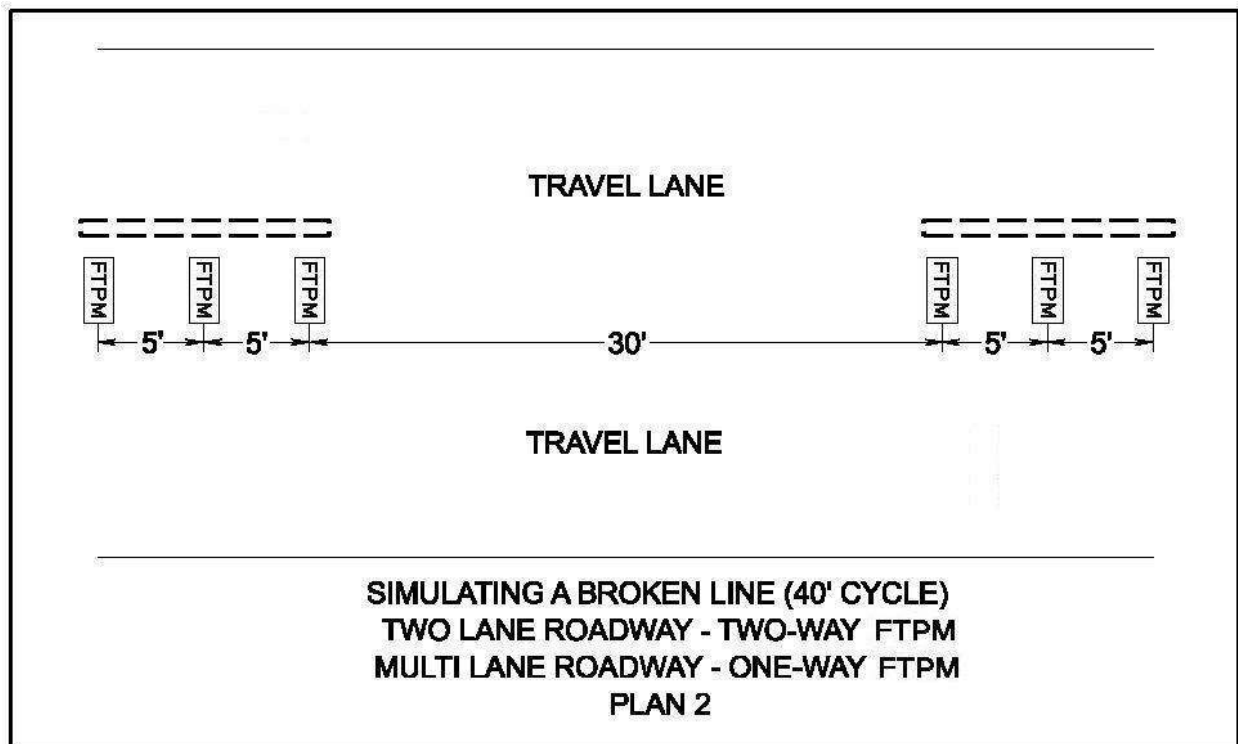
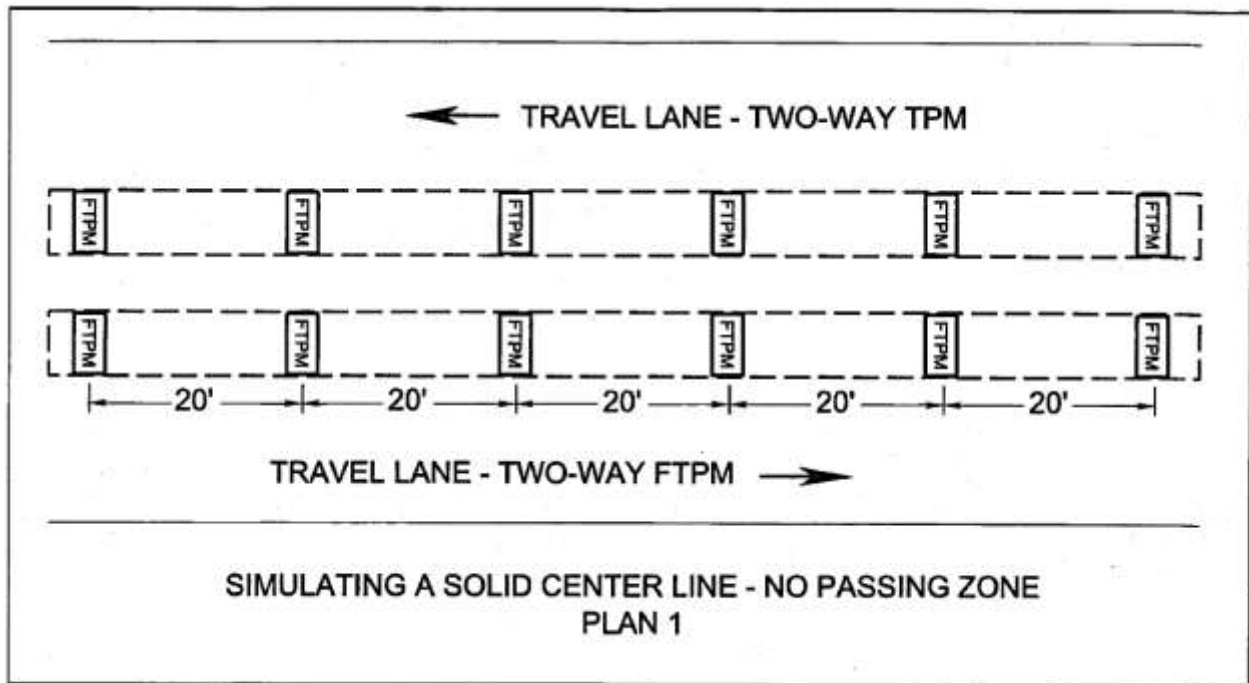
If temporary pavement line, message, or symbol markings require refreshing, reapplication, or replacement before the final surface or the permanent markings are installed, all cost for refreshing, reapplication, or replacement (including Maintenance of Traffic costs) shall be at the Contractor's expense unless the Contractor was directed by the Engineer to apply the temporary markings to a visibly wet surface or to an insufficiently cured latex emulsion, slurry seal, or surface treatment surface.

Pavement Marker Retroreflector Replacement will be measured in units of each and paid for at the contract each price for the type specified. This price shall include furnishing retroreflectors, removal and disposal of the existing retroreflector, cleaning of the existing casting, adhesive, installation of the new retroreflector, quality control tests, daily log, and manufacturer's warranty.

Payment will be made under:

Pay Item	Pay Unit
(Type or class) Temporary pavement line marking (width)	Linear foot
Temporary pavement message (word) marking (size character, type or class material)	Each
Temporary pavement symbol marking (Symbol, Type or class material)	Each
Pavement marker retroreflector replacement (Type)	Each

TYPICAL PLAN FOR FTPM PLACEMENT



GUIDELINES – For use on all projects which contain a lane closure on VDOT controlled roadways; including interstates, limited access highways, and Corridors of Statewide Significance (CoSS). This Special Provision may also be used on other primary and secondary roadways, if designated by the District Administrator.

[SP801-000100-01](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
LANE CLOSURE COORDINATION (LCC)/LANE CLOSURE IMPLEMENTATION (LCI)

September 20, 2017

I. General Requirements

This work shall consist of coordinating and communicating lane closure operations through the local Transportation Operations Centers (TOC's). The Contractor shall coordinate lane closures in accordance with this Special Provision, and only implement lane closures with approval from the Department.

II. Training

The Contractor shall have individuals trained to input work-zone information into the Department's LCC/LCI system, currently LCAMS and VaTraffic, on a weekly basis and to update as needed. These individuals shall be able to speak, understand, read, and write English, and be able to operate a computer. No advanced computer skills are needed to use the LCAMS or VaTraffic systems. The Contractor shall have a computer with internet connectivity and email capability.

The Contractor shall contact the Regional TOC Work Zone Lane Closure (LCAMS/VaTraffic) Coordinator to initiate system access and schedule training, when necessary. The Department requires a 10 business-day notice to schedule classroom training for LCAMS. The Contractor's designated individuals shall complete the courses Introduction to VaTraffic, VaTraffic Reports, VaTraffic Planned Events, and VaTraffic Work Zones. LCAMS and VaTraffic training for the individuals shall be completed prior to the Notice to Proceed date.

III. Lane Closure Process

1. **Lane Closure Coordination Process.** All lane closures shall be entered as precisely as possible into the Lane Closure Advisory Management System (LCAMS) and VaTraffic no later than 8 AM on Thursday of the week prior to the planned lane closure, and updated as needed. For the purposes of this Special Provision, a week starts on Sunday. If this submission deadline changes (e.g., for weeks involving a holiday), the Engineer will notify the Contractor at least one week in advance. Final approval for the lane closure will be issued by the Engineer. All fields in LCAMS and VaTraffic must be properly filled out.

A. **Point of Contact.** The data fields labeled "Requesting Org POC" in LCAMS and "Point of Contact" in VaTraffic shall contain the name and email address of the person physically entering the request into LCAMS.

B. **Conflict Resolution.** LCAMS will identify and flag most conflicts, and will automatically assign priority as first-come, first-serve. The Contractor has the right to contact the higher-priority party and attempt resolution with them, provided the Contractor submits the final resolution to the Engineer no later than 5 PM on Thursday of the week prior to the planned lane closure. The Engineer will handle all unresolved conflicts between requests and other events according to the priorities listed below, with the highest priority item first. If some or all

requests involved in the conflict are the same priority level, conflict resolution will be on a first-come, first-serve basis.

- (1) **Emergency Work.** Work that if not done “*will result*” in damage to a motorist vehicle or infrastructure, or danger to public health and safety.
 - (2) **Lower Priority Items Previously Delayed.** Work that while considered a lower priority, if perpetually delayed could result in severe consequences.
 - (3) **Urgent Work.** Work that if not done “*may result*” in damage to the motorist vehicle or infrastructure, or danger to public health and safety.
 - (4) **Contractual Obligated Work.** Work that is expected to be accomplished “*on-time, on-budget*”.
 - (5) **Weather Dependent Work.** Work that is dependent on the temperature and clear or dry conditions.
 - (6) **Routine Maintenance Work.** Work that is routine in nature that can be rescheduled and moved around, within limits, without undue risk.
- C. The request shall be supported by the Schedule of Record, and the Engineer may deny requests which are not. The Contractor will be allowed to request lane closures to accommodate potential weather delays.
- D. The Contractor may revise his entries in LCAMS and VaTraffic after the Thursday deadline subject to the approval of the Engineer and the conflict resolution requirements herein.
2. **Lane Closure Implementation Process.** The Contractor shall notify the Regional TOC no later than 15 minutes, but no earlier than 45 minutes, prior to installing the lane closure, or no later than 15 minutes prior to scheduled start time if lane closure is delayed or canceled. The Contractor shall notify the TOC and update VaTraffic of any changes in lane-closure impact during the execution of work. The Contractor shall notify the Regional TOC no later than 15 minutes after the lane is reopened to traffic.
3. **Emergency Lane Closure.** If an Emergency Lane Closure is required, the Contractor shall coordinate directly with the TOC regarding the lane closure as soon as the location and size of the lane closure is known. An Emergency Lane Closure is defined as road work which could not have been anticipated and is required to protect the public from immediate, severe harm, and has a priority as defined by Section III-1B(1).

IV. Measurement and Payment

Lane closure coordination will not be measured or paid for separately, but the cost thereof shall be included in the price of other items.

VDOT SUPPLEMENTAL SPECIFICATIONS (SSs)

GUIDELINES — For projects requiring asphalt.

SS210-002016-04

September 16, 2019

**VIRGINIA DEPARTMENT OF TRANSPORTATION
2016 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 210 – ASPHALT MATERIALS**

SECTION 210 – ASPHALT MATERIALS is replaced with the following:

210.01 – Description

These specifications cover the manufacturing and material requirements for asphalt material consisting of asphalt, asphalt cement, asphalt cutback, or asphalt emulsion as defined in ASTM D8.

210.02 – Materials

Asphalt material shall be homogeneous and shall conform to the following:

- (a) **Rapid curing and medium curing liquid asphalts used as surface treatments** shall contain a heat-stable additive conforming to Section 211.
- (b) **Liquid asphalt material** will be tested for coating ability in accordance with AASHTO T182, with the following modifications:
 - 1. Material that can coat 95 percent of a shady dolomite will be classified Type I.
 - 2. Material that can coat 95 percent of a siliceous gravel wetted with 2 percent water by weight will be classified Type II.
- (c) **Rapid curing cutback asphalts** shall conform to AASHTO M81.
- (d) **Medium curing cutback asphalts** shall conform to AASHTO M82.
- (e) **Asphalt Binders** shall conform to AASHTO M332, Table 1. High polymer Binder shall consist of mixes incorporating a neat asphalt material with a high polymer modification (approximately 7.5%) complying with AASHTO M332 for PG 76E-28(HP) with the exception that the Multiple Stress Creep Recovery (MSCR) shall have a $J_{nr3.2}$ maximum value of 0.1 kPa⁻¹ when tested according to AASHTO T350. The minimum MSCR percent recovery at 3.2 kPa shall be 90%. The MSCR test for J_{nr} and percent recovery shall be run at 76°C. The viscosity shall be less than or equal to 3.0 Pa-s, however the Engineer may increase the viscosity limit to 5.0 Pa-s if the binder supplier and Contractor agree that the binder is suitably workable. The Contractor shall use an approved asphalt binder shown on the Department's Approved list 50.
- (f) **Cationic Emulsified Asphalt** shall conform to AASHTO M208, except that the penetration for CRS-1h shall be 40 to 110. The Contractor shall use an approved emulsion shown on the Department's Approved List 50.1.
- (g) **Polymer Modified Cationic Emulsified Asphalt** shall conform to AASHTO M316. CRS-2L shall have the same requirements as CRS-2P. Penetration requirement at 77 °F shall be a minimum 70 and maximum 140. The Contractor shall use an approved polymer-modified cationic emulsions shown on the Department's Approved List 50.1.

- (h) **Non-tracking tack** will be tested in accordance with Section 210.04. The Contractor shall use an approved non-tracking tack shown on the Department's Approved List 50.1A.

210.03 – Sampling & Testing

Samples shall be taken in the presence of VDOT personnel or a VDOT representative in accordance with AASHTO R-66, with the exception that asphalt emulsion samples shall be a minimum of 0.5 gallons (2 liters).

The Contractor shall ensure the quality control tests on asphaltic materials, as detailed in Section 210.04, are conducted by the Manufacturer.

210.04 – Tests

(a) PG Asphalt Binders:

1. Certified Test Reports for PG Asphalt Binders shall be based upon the results of tests performed in accordance with AASHTO M332, Table 1. The manufacturer is not required to perform the Direct Tension Test, AASHTO T314.
2. For asphalt binders tested in accordance with AASHTO T350, indication of elastic response shall be determined using the Figure 1 from AASHTO R 92. When the plotted point falls on or above the line shown in Figure 1 in AASHTO R 92, this indicates that the asphalt binder is modified with an acceptable elastomeric polymer. When the plotted point falls below the line on Figure 1 in AASHTO R 92, this indicates that the asphalt binder is not modified with an elastomeric polymer and the sample fails. The percent recovery requirement will not apply to non-polymer binders (PG 64S and PG 64H).

(b) Cutback Asphalts:

1. Certified Test Reports for Cutback Asphalts shall be based upon the results of tests performed in accordance with AASHTO M81 and M82.
2. When used in surface treatments, the Coating Ability test shall be conducted subject to the specifications listed in Section 210.02.

(c) Emulsified Asphalts:

1. Certified Test Reports for Emulsified Asphalts shall be based upon the results of tests performed in accordance with AASHTO M208 or AASHTO M316, as specified below. Emulsions will be sampled and tested in accordance with AASHTO T59 except that viscosity will be tested in accordance with VTM-64.
 - a. Cationic Emulsions- Table 1 (from AASHTO M208 or M316, as applicable), specifically
 - (1) Tests on Emulsions:
 - Saybolt Furol Viscosity
 - Sieve Test (if necessary)
 - Demulsibility (if applicable)
 - Particle Charge Test

- Residue by Distillation
- (2) Tests on residue from distillation:
 - Penetration
 - Ductility
- b. **CQS-1h** (Quick Set) shall be tested the same as Cationic Emulsions, with the addition of “Quick set Emulsified Asphalt Setting Time (VTM-89).”
- c. Latex Modified Cationic Emulsions
 - (1) CQS-1h Latex Modified (CQS-1hLM)
 - (a) Tests on Emulsions
 - Saybolt Furol Viscosity
 - Sieve Test (if necessary)
 - Particle Charge Test
 - Residue by Evaporation (VTM-78)
 - (b) Tests on residue
 - Penetration
 - Ring and Ball Softening Point
 - (2) CRS-2 Polymer Modified (CRS-2L and CRS-2P)
 - (a) Tests on Emulsions
 - Saybolt Furol Viscosity
 - Sieve Test (if necessary)
 - Particle Charge Test
 - Residue by Evaporation
 - (b) Tests on residue by Evaporation
 - Penetration
 - Ring and Ball Softening Point
 - Elastic Recovery at 10°C

2. The manufacturer is not required to perform the Flash Point, Ductility, or Ash Content tests unless the Engineer directs the Contractor to require it. If the manufacturer elects to conduct these tests to better control production, the results shall be included on the certified test report.

(d) **Non-Tracking Tack:**

Non-Tracking Tack shall meet the requirements based upon the results of tests performed, as specified below:

1. Requirements for Non-Tracking Emulsified Tack

Property	Test Method	Min	Max
Residue by Evaporation, %	AASHTO T59	50	
Viscosity, 77° F	AASHTO T59		150
Sieve (plant)	AASHTO T59		0.1%
Sieve (field)	AASHTO T59		0.3%
Penetration	AASHTO T49		50
Softening Point	AASHTO T 53	57°C	

2. Requirements for Non-Tracking Hot-Applied Tack

Test	Test Method	Min	Max
Penetration, 25°C, 100g, 5s (dmm)	AASHTO T49		35
Softening Point (°C)	ASTM D36	70	
Rotational Viscosity, 149°C, (Pa-s)	AASHTO T316		3.0
Ductility, 25°C, (cm)	ASTM D113-17	20	

210.05 – Storing and Shipping

(a) **Shipping:**

1. Shipments of asphalt material shall be made in transporting media that are free from contamination. Tank trucks or trailers shall be equipped with an Engineer approved sampling device. The device shall have an inside diameter of 1/2 to 1 inch and a gate valve or petcock. The device shall be built into the tank or the recirculating or discharge line so that a sample can be drawn during circulation or discharge.
2. All shipping documents shall contain sufficient information such that at any point, the material may be traceable back to the original test results. If the material is mixed with other approved material for storage, the record system will be such as to assure the traceability of all the material which is being mixed.
3. All shipping documents shall be accompanied by a statement similar to "We certify that all material being shipped on this invoice/bill of lading has been tested and approved under the Virginia Asphalt Acceptance Program and that the material has been loaded under the supervision of our representative into carriers that are suitable for shipment of this material."
4. All shipping documents shall be kept by the recipient of the material and are available for verification by VDOT personnel.
5. Only material tested and certified in accordance with the VAAP and on VDOT approved product lists shall be mixed and shipped to VDOT projects.

- (b) **Storing:** Asphalt material shall be placed in storage tanks that are free from contamination. Emulsified asphalts stored longer than 30 days from the shipping date on the Bill of Lading shall be retested in accordance with Section 210.04 to verify the material still meets product specifications.

210.06 – Payment Adjustment System

If the asphalt material represented by any one sample does not conform to the requirements herein and the material is a pay item, the Engineer will reduce the Contract unit price for the item by 4 percent for each property that does not conform to the Specifications for the quantity represented by the sample that was used on the project. The Engineer will reject any unused material represented by the failing sample.

The Engineer will consider any failed sampled asphalt material that is not a pay item unacceptable and subject to the provisions of Section 105.18 and Section 106.10.

GUIDELINES — For projects requiring SUPERPAVE asphalt concrete.

[SS211-002016-03](#)

January 8, 2019

VIRGINIA DEPARTMENT OF TRANSPORTATION
2016 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
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) ¹	Aggregate Nominal Maximum Size ²
SM-9.0A	0 to 3	64S-16	3/8 in
SM-9.0D	3 to 10	64H-16	3/8 in
SM-9.0E	Above 10	64E-22	3/8 in
SM-9.5A	0 to 3	64S-16	3/8 in
SM-9.5D	3 to 10	64H-16	3/8 in
SM-9.5E	Above 10	64E-22	3/8 in
SM-12.5A	0 to 3	64S-16	1/2 in
SM-12.5D	3 to 10	64H-16	1/2 in
SM-12.5E	Above 10	64E-22	1/2 in
IM-19.0A	Less than 10	64S-16	3/4 in
IM-19.0D	10 to 20	64H-16	3/4 in
IM-19.0E	20 and above	64E-22	3/4 in
BM-25.0A	All ranges	64S-16	1 in
BM-25.0D	Above 10	64H-16	1 in

¹**Minimum Asphalt Performance Grade (PG)** is defined as the minimum binder performance grade for the job mixes as determined by AASHTO T170 or AASHTO M332.

²**Aggregate Nominal Maximum Size** is defined as one sieve size larger than the first sieve to retain more than 10 percent aggregate.

Note: SM = Surface Mixture; IM = Intermediate Mixture; BM = Base Mixture

Asphalt concrete shall conform to the requirements for the mix type designated on the plans or elsewhere in the Contract for use.

At the Contractor's option, an approved Warm Mix Asphalt (WMA) additive or process may be used to produce the asphalt concrete (AC) mix type designated.

Table II-13 – Asphalt Concrete Mixtures: Design Range is replaced with the following:

TABLE II-13 Asphalt Concrete Mixtures: Design Range											
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
SM-9.0 A,D,E					100 ¹	90-100	90 max.	47-67			2-10
SM-9.5 A,D,E					100 ¹	90-100	58-80	38-67	23 max		2-10
SM-12.5 A,D,E				100	95-100	90 max.	58-80	34-50	23 max		2-10
IM-19.0 A,D,E			100	90-100	90 max.	--	--	28-49			2-8
BM-25.0 A,D		100	90-100	90 max.	--	--	--	19-38			1-7
C (Curb Mix)					100	92-100	70-75	50-60	28-36	15-20	7-9

¹A production tolerance of 1% will be applied to this sieve regardless of the number of tests in the lot.

Table II-14 – Mix Design Criteria is replaced with the following:

<p style="text-align: center;">TABLE II-14 Mix Design Criteria</p>						
Mix Type	VTM (%) Production	VFA (%) Design	VFA (%) Production	Min. VMA (%)	Fines/Asphalt Ratio	No. of Gyrations N Design
SM-9.0A ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.0D ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.0E ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.5A ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-9.5D ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-9.5E ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-12.5A ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
SM-12.5D ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
SM-12.5E ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
IM-19.0A ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
IM-19.0D ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
IM-19.0E ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
BM-25.0A ^{2,3}	1.0-4.0	67-87	67-92	13.0	0.6-1.3	50
BM-25.0D ^{2,3}	1.0-4.0	67-87	67-92	13.0	0.6-1.3	50

¹Asphalt content should be selected at 4.0% air voids for A & D mixes, 3.5% air voids for E mix.

²Fines-asphalt ratio is based on effective asphalt content.

³Base mix shall be designed at 2.5% air voids. BM-25A shall have a minimum asphalt content of 4.4% unless otherwise approved by the Engineer. BM-25D shall have a minimum asphalt content of 4.6% unless otherwise approved by the Engineer.

Section 211.04(e)4 – Type E(HP) asphalt mixtures is inserted as follows:

Type E(HP) asphalt mixtures shall consist of mixes incorporating a neat asphalt material with a high polymer modification (approximately 7.5%) complying with AASHTO M332 for PG 76E-28(HP) with the exception that Multiple Stress Creep and Recovery (MSCR) shall have a $J_{nr3.2}$ maximum value of 0.1 kPa⁻¹ when tested according to AASHTO T350. The minimum MSCR %

recovery at 3.2 kPa shall be 90%. The MSCR test for J_{nr} and % recovery shall be run at 76°C. The viscosity shall be less than or equal to 3.0 Pa-s, however the Engineer may increase this limit to 5.0 Pa-s if the binder supplier and contractor agree that the binder is suitably workable. HP designated mixtures shall not contain more than 15% RAP material.

Section 211.05 – Testing is amended by deleting the eighth and ninth paragraphs.

Section 211.08 – Acceptance is amended by replacing the sixth paragraph with the following:

Asphalt content will be measured as extractable asphalt or weight after ignition. The Contractor shall submit a copy of burn tickets from an ignition oven to the Engineer and all the original tickets shall be available upon Engineer's request. Original tickets shall be maintained on file by the Contractor for a period of 5 years or until final acceptance of the applicable contract, whichever is greater.

GUIDELINES — For use on all projects with tack coat.

SS310-002016-03

August 21, 2019

VIRGINIA DEPARTMENT OF TRANSPORTATION
2016 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 310 – TACK COAT

SECTION 310 – TACK COAT of the Specifications is replaced with the following:

310.01 – Description

This work shall consist of preparing and treating an existing asphalt or concrete surface with asphalt in accordance with these specifications and in conformity with the lines shown on the plans or as established by the Engineer.

310.02 – Materials

The Contractor shall not dilute tack coat or non-tracking tack coat materials with water.

- (a) **Tack Coat.** Asphalt tack coat shall be CQS-1h, CRS-1h, or CSS-1h conforming to Section 210 and selected from the Department's Approved List 50.1. Asphalt emulsion CMS-2 conforming to Section 210 may be used during the winter months.
- (b) **Non-Tracking Tack Coat** liquefied asphalt shall be selected from the Department's Approved List 50.1A and conforming to Section 210.

310.03 – Procedures

The existing surface shall be patched, cleaned, and rendered free from irregularities to the extent necessary to provide a reasonably smooth and uniform surface. The Contractor shall remove unstable corrugated areas, and replace with suitable patching materials when required by the Contract. The Contractor shall clean the edges of existing pavements that are to be adjacent to new pavement to permit adhesion of tack.

The Contractor shall uniformly apply tack coat or non-tracking tack coat material with a pressure distributor conforming to Section 314.04(b). Hand spray equipment shall not be used except in areas inaccessible by a pressure distributor.

The distributor shall be calibrated by the Contractor in the presence of the Engineer prior to initial asphalt plant mix placement to demonstrate an even and accurate spray application. Calibration will be considered acceptable when the spray rate is uniform and within 0.02 gal/yd² of the design application rate.

All tack coat and non-tracking tack coat materials stored longer than 30 days from the shipping date on the Bill of Lading shall be retested in accordance with Section 210.06 to verify the material still meets product specifications.

Tack at joints, adjacent to curbs, gutters, or other appurtenances shall be applied with a hand wand or with a spray bar at the rate of 0.2 gal/yd². 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 pavement 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.

Care shall be taken to prevent spattering adjacent items during the application of tack coat. The distributor shall not be cleaned or discharged into ditches or borrow pits, onto shoulders, or along the right of way.

When not in use, the Contractor shall ensure equipment is parked so that the spray bar or mechanism will not drip asphalt on the surface of the traveled way.

The tack coat or non-tracking tack coat shall be applied to the pavement surface in such a manner that it will bond the overlay and the underlying surfaces together.

The Contractor shall apply tack coat and non-tracking tack coat in accordance with the weather limitations that apply to the course being placed as well as the manufacturer's recommendations. The Engineer will verify, and reserves the right to alter, the quantity, rate of application, temperature, and areas to be treated prior to application.

The tack coat or non-tracking tack coat shall be applied in a manner to offer the least inconvenience to traffic and to permit one-way traffic without pick up or tracking of the asphalt onto adjacent non-treated areas. All traffic, including construction traffic, shall be excluded from tacked sections until the tack has cured.

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

The Contractor shall measure and report the rate of tack material applied on a daily basis in accordance with VTM-137 Method B (Tack Yield Method), on forms provided by the Engineer. On a daily basis, the Contractor shall provide the Engineer readings taken from the calibrated distributor establishing the quantity of gallons placed for that day.

The Engineer will verify the desired tack application rate is achieved in accordance with VTM-137 Method A (Tack Plate Method). This test shall be performed, at a minimum frequency of once per each roadway, within the first 500 tons of asphalt mix placed, unless otherwise approved by the Engineer.

The Engineer reserves the right to perform the tack plate method testing at a higher frequency, as determined necessary, to ensure adherence to specifications.

(a) Tack Coat

Equipment for heating and applying asphalt shall conform to Section 314.04(b). The maximum application temperature of liquid asphalt shall conform to Table III-1.

TABLE III-1	
Liquid Asphalt Application Temperature	
Grade	Max. Temperature (°F)
RC-70	180
RC-250	220
RC-800	225
RC-3000	290

MC-70	180
MC-250	220
MC-800	255
MC-3000	290
AC-5	300
AC-10	300
AC-20	300
AC-40	300
RS-2	175
SS-1h	180
AE-4	150
CRS-2	175
CSS-1h	180
CMS-2	200
CRS-1h	175
CRS-1	175
CQS-1h	180

The Contractor shall apply tack at the rate of 0.05 to 0.10 gal/yd².

The Contractor shall allow the tack coat to properly cure and break before placement of the hot mix asphalt course.

(b) Non-Tracking Tack Coat

The Contractor shall apply nontracking tack coat between May 1 and October 1. The Contractor may use tack coat as specified herein at other times.

Equipment for heating and applying asphalt shall conform to Section 314.04(b) or the non-tracking tack coat material's manufacturer's recommendations. The maximum application temperature of liquefied asphalt shall conform to the manufacturer's requirements.

The Contractor shall apply tack material at the rate recommended by the manufacturer. This rate is typically between 0.05 to 0.10 gal/yd².

Adjacent concrete or asphalt concrete surfaces shall show minimal visible evidence and white or yellow pavement markings shall show no visible evidence of the asphalt tack material tracking at the end of the production shift. Tracking of the tack material on pavement markings will require the Contractor to immediately restore the marking to their original pre-tack condition. The Contractor shall remove build-up of the tack material on existing pavement surfaces.

(c) Referee System

When a new asphalt course is placed on a milled or non-milled surface, the Contractor shall take steps to ensure an adequate bond is made between the new material and the existing surface. If the Engineer suspects the Contractor is failing to apply good bond promoting procedures or adequately tacking the existing surface per the manufacturer's recommendations, the Engineer may core a minimum of five core locations to determine the shear strength of the interface.

The Engineer will determine these locations by using a stratified random selection process. The Department will test cores in the Department's laboratory in accordance with VTM-128. For the surface to be acceptable, the average results for shear strength specified herein shall be met.

1. **Milled surfaces:** The average shear strength shall meet or exceed 100 psi with no single core having a shear strength less than 50 psi.
2. **Un-milled surfaces:** The average shear strength shall meet or exceed 50 psi with no single core having a shear strength less than 30 psi.

The Contractor shall remove and replace the area if the minimum shear strength requirements in that area are not met at no cost to the Department.

310.04 – Measurement and Payment

Tack coat, whether standard Tack Coat or Non-Tracking Tack Coat, when a pay item, will be measured in gallons and paid for at the Contract gallon price. The volume will be based on daily volume with temperature corrections in accordance with Section 109.

When not a pay item, the Contractor shall include the cost in the contract unit price for other appropriate items.

Payment will be made under:

Pay Item	Pay Unit
Tack coat	Gallon

GUIDELINES – For use on all projects with traffic signs.

[SS701-002016-01](#)

March 11, 2019

VIRGINIA DEPARTMENT OF TRANSPORTATION
2016 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 701—TRAFFIC SIGNS

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

Section 701.02—Materials is replaced with the following:

(a) **Reflective sheeting** shall conform to Section 247 and shall be selected from the Department's Approved List 46. The color for the legend and background shall be in accordance with the MUTCD and as specified in the Plans.

1. **Overhead Permanent Signs** (signs attached to sign structures which overhang travel lanes) that are not illuminated with sign lighting shall use ASTM D4956 Type XI reflective sheeting. Overhead permanent signs that are illuminated with sign lighting shall use ASTM D4956 Type IX sheeting.
2. **Non-Overhead Permanent Signs** (including ground-mount signs, signs attached to traffic signal supports, and signs attached to sign structures that do not overhang travel lanes) shall use ASTM D4956 reflective sheeting as follows:

Background Color of Sign	Sheeting Type ¹
White	ASTM D4956 Type XI
Red	ASTM D4956 Type XI
Yellow	ASTM D4956 Type XI ²
Fluorescent Yellow-Green	ASTM D4956 Type XI ³
Green	ASTM D4956 Type XI
Black	ASTM D4956 Type XI
Purple	ASTM D4956 Type XI
Brown	ASTM D4956 Types IV, IX, or XI
Blue	ASTM D4956 Types IV, IX, or XI

¹The following signs may use ASTM D4956 Types IV, IX, or XI, regardless of color: Pushbutton education signs (R10-series signs mounted adjacent to pedestrian pushbuttons), Signs erected on bikeways physically separated from adjacent roads, R7- or R8-series parking restriction signs located on non-limited-access highways, D10-series Reference Location Signs (mile markers) and Intermediate Reference Location Signs, and Post-mounted street name signs.

²The yellow portions of all yellow W1-series (horizontal change of alignment) signs, W10-series (railroad warning) signs, and object markers, including supplemental plaques erected beneath those signs, shall be fluorescent. All other yellow sheeting on signs may be fluorescent or non-fluorescent.

³All temporary and permanent warning signs related to school zones, pedestrians, or bicyclists (including associated supplemental plaques) shall use fluorescent yellow-green sheeting where required by the VA Supplement to the MUTCD unless otherwise specified on the Plans.

(b) **Sign panel rivets** for overhead signs attached to cantilever, butterfly, or truss sign structures shall be powder coated to match the color of the portion of the sign sheeting from which the

rivets will protrude. The rivets shall be fabricated in accordance with Standard Drawing SPD-1.

- (c) **Sign panel substrates for permanent flat sheet signs** shall be in accordance with the below table, and shall be smooth, flat, and free of metal burrs and splinters.

Sign width¹	Allowable substrate
47 inches and less	0.080 or 0.100 inch aluminum
48 inches and more	0.100 inch aluminum
Overlay panel	0.063 inch aluminum

¹For diamond-shaped signs, width is measured along the sign's edge.

Aluminum substrates for permanent flat sheet signs and overlay panels shall be aluminum alloy in accordance with Section 229.02(a).

- (d) **Extruded sign panels** shall conform to the Standard Drawings and Section 229.02(c).

- (e) **Temporary signs** shall conform to Section 512.02.

Section 701.03(a)2 Sign Panels is deleted.

Section 701.03(a)3 Applying retroreflective background sheeting is replaced with the following:

Applying retroreflective background sheeting: Sheeting shall be applied according to the manufacturer's instructions and the detailed requirements herein.

The Contractor shall fabricate sign panels 16 square feet or less from a single piece of applied sheeting with no joints, splices, or laps, except that one factory splice from each roll is permitted..

When applying more than one width of reflective sheeting to a sign panel, sheeting edges shall form a clean vertical joint. Sheeting edges shall be applied in accordance with manufacturer's installation instructions to prevent edge lifting and allow for sheeting expansion under high temperature and humidity conditions.

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.

Section 701.03(a)4 Letters, numerals, arrows, symbols, borders, and other features of the sign message is amended to replace the first paragraph with the following:

Letters, numerals, arrows, symbols, borders, and other features of the sign message: Features of the sign message shall conform to the MUTCD and the Virginia Standard Highway Signs Book. Units of the sign message shall be formed to provide a continuous stroke width with smooth edges and a flat surface free from warps, blisters, wrinkles, burrs, and splinters. Features shall also conform to the following:

Section 701.03(b) Transportation and Storing Signs from the Fabricator is amended to replace the third paragraph with the following:

The Contractor may remove signs from storage and install them on their structural supports before the structure is erected; however signs and structural supports placed in the field prior to erection shall be supported and stored at a sufficient angle to facilitate water runoff from the sign while preventing the sign from coming in contact with the ground and preventing sign structure elements from sitting in standing water.

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

Erection: The Contractor shall install sign panels on overhead sign structures with the required minimum and maximum vertical clearances as shown on Standard Drawing OSS-1, and with the lateral and vertical placement shown on the Plans.

Section 701.03(d) Erection is amended to replace the fifth paragraph with the following:

Vertical and horizontal spacing between installed signs shall be approximately 1 inch where multiple signs are installed on the same structure, unless shown otherwise on the Plans.

Section 701.03(d) Erection is amended to replace the thirteenth paragraph with the following:

Overlay panels shall be erected with aluminum rivets no less than 3/16 inch in diameter and of such length as to fasten the panels securely and form a compressed head conforming to the manufacturer's recommendations. Rivets shall be located on 12-inch centers for 0.080 inch aluminum overlays and on 15-inch centers for 0.063 inch aluminum overlays, positioned 1 inch from each panel's edges, completely around the sign's perimeter. Where overlayment panels are 30 inches or greater in width, a column of rivets shall be installed on 12-inch centers for 0.080 inch aluminum overlays or 15-inch centers for 0.063 inch aluminum overlays down the centerline of the panel. Rivets shall be installed in such a sequence as to prevent buckling of the panels. When overlaying extruded aluminum signs, rivets shall be arranged to go through the flat part of the extrusion.

Section 701.03(f) Documentation Requirements is replaced with the following:

1. **Labels.** All new permanent signs shall include fabrication labels, and a VDOT Identification Label. Labels may be made of either a self-adhesive, permanent weather resistant material or permanent sign material, and shall be a minimum 4-inch by 4-inch in size.

All information on such signs shall be indicated with sign ink or other permanent means capable of resisting weathering for the full duration of the sign sheeting warranty period, except that dates may be indicated with punching out of appropriate squares. All new signs shall be indicated "new" on the VDOT Identification Label.

Prior to applying the labels, the area shall be thoroughly cleaned to ensure proper adhesion or application of ink. Labels shall be placed on the back side of the sign panel in a location where they will not be obscured by sign supports or mounting hardware.

- a. **Fabrication labels.** Labels provided by the sign fabricator that indicates sheeting manufacturer's name or logo, sheeting product designations, lot numbers, sign fabricator's name or logo, and month and year the sign was fabricated. All text and logos shall be at least 1 inch in height. For signs with multiple sheeting designations and/or multiple lot numbers, additional labels or supplemental labels are permitted.
 - b. **VDOT Identification Label.** VDOT's standard 4.5-inch by 4.5-inch label shall be affixed to all new permanent traffic control device signs, as per the Virginia Supplement to the MUTCD.
2. **Inventory Sheet.** The Contractor shall provide an .xlsx formatted file to the Engineer, using a sign inventory template provided by the Engineer. The file shall include the information required above for the label, as well as the following:
 - a. Route no.

- b. Project UPC no. (if applicable).
- c. Station or milepost information.
- d. Lane designation.
- e. *MUTCD*, if applicable and if denoted on the plans.
- f. Sign message.
- g. Sign width.
- h. Sign height.

The cost of preparing and submitting the .xlsx formatted file shall be included with the cost of the sign panel pay items.

Section 701.04 Measurement and Payment is amended to replace the first paragraph with the following:

Sign panels will be measured in square feet and will be paid for at the Contract square foot price. This price shall include sign substrate, background sheeting, sign messages, finishing, framing units, hanger assemblies, bracing, stiffeners, splicing, backing strips, post clips/post clamps, warranty, and labeling.

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