

(c100ov4-0211)

2011 VOLUME 2 PLANT MIX AMENDMENTS

The Supplemental Specifications (SSs), Special Provisions (SPs) and Special Provision Copied Notes (SPCNs) contained in the accompanying contract document assembly titled "Separate-Cover Contract Documents" are amended for this project. The provisions of this Special Provision Copied Note (SPCN) are written specifically to modify, by amendment, the "Separate-Cover Contract Documents" assembly for this project. Such amendments are as follows:

The Special Provision for **DIVISION I—GENERAL PROVISIONS (2011 PLANT MIX SCHEDULES)** dated August 17, 2010 is amended by adding the following:

Section 109.01(d)4 Asphalt is amended to replace the "formula...used in computing the volume of asphalt at temperatures other than 60 degrees F" with the following:

$$V' = V \times [1 - K(T - 60)]$$

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The Supplemental Specification for **SECTION 211—ASPHALT CONCRETE** dated October 13, 2010 is amended by replacing the sentence "**Section 211.09** is amended to delete the last three paragraphs." with the following:

**Section 211.09** is amended to replace the last three paragraphs with the following:

The unit bid price will be reduced by 0.5 percent for each adjustment point applied for standard deviation.

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The Special Provision for **NONTRACKING TACK COAT** dated October 5, 2010 is amended to include the following:

Nontracking Tack will be required only between May 1st and October 1st. Tack coat in accordance with Section 310 may be used at other times.

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The Special Provision for **ASPHALT CONCRETE OVERLAY TRANSITION** dated October 21, 2010 is deleted. Such includes deleting the drawing titled **Standard ACOT-1 of the 2008 Road and Bridge Standards**.

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The following Special Provision Copied Note for **MAINTAINING VERTICAL CLEARANCE UNDER BRIDGES** is added as follows:

No pavement overlay shall decrease the vertical clearance under a bridge. In situations where the pavement under the overpass cannot be milled in direct proportion to the overlay, the new pavement is to be tied down to the existing pavement under the overpass 75 feet from the outer edge of the overpass.

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The Special Provision for **SECTION 512—MAINTAINING TRAFFIC (ASPHALT SCHEDULES)** dated September 29, 2010 is amended as follows:

Note “17” in **Typical Traffic Control, (Figure TTC-56.0) “End of Day Signing for Partial Paving Operations on a Multi-Lane Highway”** is deleted.

Note “17” in **Typical Traffic Control, (Figure TTC-57.0) “End of Day Signing for Full Paving Operations on a Multi-Lane Highway”** is deleted.

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The Supplemental Specification for **SECTION 515—PLANING OR MILLING PAVEMENT** dated July 28, 2010 is replaced with the following:

SS51501-1209

December 13, 2009c

VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 515—PLANING OR MILLING PAVEMENT

SECTION 515—PLANING PAVEMENT of the Specifications is completely replaced with the following:

SECTION 515—PLANING OR MILLING PAVEMENT

515.01—Description

This work shall consist of planing (milling) of rigid or flexible pavement to the designated depth specified in the plans or other Contract documents in preparation for pavement repair or pavement overlay. For the purposes of this section, rigid pavement shall mean hydraulic cement concrete pavement or hydraulic cement concrete surfaced pavements and flexible pavement shall mean asphalt concrete or asphalt concrete surface pavements. Planing as used herein is also referred to as milling. Milled cuttings shall be removed and disposed of by the Contractor in accordance with the requirements of Section 106.04 of the Specifications or used in the work if so directed or permitted in the Contract or directed by the Engineer.

515.02—Equipment

Planing shall be performed with a pavement planing or pavement grinding machine of a type that has operated successfully on work comparable to that specified in the Contract. Milling and cold planing equipment shall be capable of accurately cutting to the length, width, depth and typical section specified in the Contract in flexible pavement or rigid pavement while leaving a uniformly cut or ground roadway surface capable of handling traffic prior to overlay placement. The milling equipment shall not damage the underlying pavement surface. The milling machine shall be equipped with an automatic grade control system that will control the longitudinal profile and cross slope of the existing pavement milled surface as the milling operations proceed. The ground speeds of the machine and the cutting equipment shall be independent. The machine shall have a self-contained water system for the control of dust and fine particles. The width of the machine shall allow for the passage of controlled public traffic. The machine shall have a dust collection system or have a system to minimize dust created by the planing (milling) operation from escaping into the atmosphere.

The Contractor shall continuously monitor the cutting or grinding head of the machine so as to ensure and maintain the creation of a uniformly textured milled surface. Equipment and

vehicles in use under traffic shall be equipped according to the requirements of the Work Area Protection Manual.

515.03—Procedures

Limitations of operations for planing operations shall be in accordance with the requirements of Section 108.02 of the Specifications and as specified in the Contract.

The Contractor may perform either regular planing or performance based planing at his option unless otherwise specified in the Contract. Unless otherwise directed by the Engineer, the finished surface for regular pavement planing and performance planing shall have a tolerance of plus or minus 1/4 inch per foot between any two contacts of the resultant surface and the testing edge of a 10-foot straightedge.

The finished surface macrotexture for performance planing shall have a pavement macrotexture MTD of less than 2.0 millimeters. Testing for performance pavement planing shall be as described herein

Irregularities and high spots shall be eliminated. The pavement surface shall be milled, ground or planed to the designated grade or gradient as specified on the plans, or where not specified as a grade, shall parallel that of the existing roadway. transversely, the cross slope shall be planed to approximately 1/4 inch per foot or as directed by the Engineer. Superelevated curves shall be planed as directed by the Engineer. Where the pavement is to be resurfaced, a 1-inch shoulder shall be cut along the gutter line to eliminate the necessity of feathering the edge of the new surface. Payment for providing the 1-inch shoulder shall be based on the total square yards of removed material regardless of the variable depth of the pass.

The finished planed surface shall be true to grade, free from gouges, grooves, ridges, soot, oil film, and other imperfections and shall have a uniformly textured appearance suitable as a riding surface.

Humps and depressions that exceed the specified tolerances and require additional grinding or planing shall be subject to correction or replacement as directed by the Engineer at no additional cost to the Department.

The Contractor shall ensure positive drainage is provided for all planed surfaces in accordance with the requirements of Section 315.05(c) of the Specifications. When planing curb and gutter sections the Contractor shall endeavor to work with existing drainage and grade to maintain positive flow. In the event of significant buildup of standing water the Contractor may be required to erect signage to warn motorists, sweep the roadway to vacate the water, or in extreme cases, close the lane to traffic until proper drainage of the planed surface can be restored.

Temporary transverse pavement-wedge tie-ins shall be constructed where planed existing pavement is to remain temporarily without overlay to the extent allowed or required herein, in Section 315 of the Specifications, elsewhere in the contract documents, or by the Engineer. Each tie-in shall be constructed no less than 10 feet in length for every inch of depth of pavement planing performed and shall consist of a mix that is suitable for a riding surface that provides a smooth transition between planed existing pavement and existing pavement or bridge decks. Such tie-ins shall be constructed prior to the planed surface being opened to traffic.

When planing to a depth of 2 inches or less at a bridge, the planed (milled) surface at the bridge may be left unpaved for up to 10 days.

Additional or other limitations and conditions to planning operations shall be as specified and applicable to the Contract.

515.04—Performance Pavement Planing Testing

This section gives testing procedures and criteria for opening a section of performance planed pavement on a limited access roadway as specified herein to public traffic. The test procedure performed by the Contractor will measure the mean texture depth (MTD) of the resultant macrotexture surface after planing operations have been performed. The measurement for performance planed surface texture shall be conducted in accordance with the requirements of ASTM E965 using a volumetric technique. The Contractor shall randomly select 10 locations at each site. Each individual location will be tested and the average MTD of the entire 10 locations per site determined. Prior to opening a lane or roadway to traffic the average MTD of the performance planed site shall be less than 2.0 millimeters and the upper limit for any one MTD measurement shall not exceed 3.10 millimeters in order for that section to be exposed to traffic.

515.05—Measurement and Payment

Where pavement is to be planed to a uniform depth, planing will be measured in square yards of removed pavement of the surface area to the depth(s) specified in the contract documents. The Engineer may direct the depth to be adjusted during the initial pass $\pm \frac{1}{2}$ inch due to field conditions at no additional cost, except where such adjustment constitutes a changed condition as explained herein. The planed area is defined as the actual length and width of the planed pavement surface visually verified and accepted by the Engineer for payment. If scabbing or laminations still exist after planing to the maximum potential depth of the initial pass, the Engineer may direct the Contractor to perform additional passes or to increase the depth beyond the maximum potential depth of the initial pass. Such additional passes or increased depth beyond the maximum potential depth of the initial pass will also be measured and paid for in square yards for the depth authorized by the Engineer. Such additional depth passes (beyond the maximum potential depth of the original pass) will not be adjusted, as in averaging or as a percentage of original depth or maximum potential depth of the initial pass, to achieve final measurement or payment. In the event the authorized adjustment of the $\frac{1}{2}$ inch for field conditions by the Engineer changes the requirements of the “square up” provisions (in excess of 2 inches), this will be considered a changed condition in accordance with the provisions of Section 104.02 of the Specifications.

Where planing is variable depth and used to tie into existing structures such as curbs and combination curb and gutters and at bridges, except in cases as mentioned below, such tie-in planing will be measured in square yards of removed pavement for the full surface area (the actual length and width of the planed pavement surface visually verified and accepted by the Engineer for payment) within the range of depth specified in the contract documents. **Note:** The Engineer may direct the depth to be adjusted during the initial pass $\pm \frac{1}{2}$ inch of the specified depth due to field conditions such as scabbing or delamination at no additional cost, except where such adjustment constitutes a changed condition as explained herein.

If scabbing or laminations still exist after planing to the maximum potential depth of the initial tie-in planing pass, the Engineer may direct the Contractor to perform additional passes or to increase the depth beyond the maximum potential depth of the initial **pass**. Additional passes or depths beyond the maximum potential depth of the initial **pass**, authorized by the Engineer, will also be measured and paid for in square yards of removed pavement of the additional surface area for the depth authorized by the Engineer. Areas of variable depth tie-in planing will not be adjusted, as in averaging or as a percentage of original depth, to achieve final measurement or payment. In the event

the authorized adjustment of the 1/2 inch for field conditions by the Engineer changes the requirements of the "square up" provisions, this will be considered a changed condition in accordance with Section 104.02 of the Specifications.

Planing performed to tie-in overlaid pavement to existing pavement or bridge decks that is determined by the Engineer to be a part of the mainline planing operations will not be measured for separate payment, the cost of which, shall be included in the price bid for the appropriate depth range of Flexible or rigid pavement planing.

This price shall include furnishing vehicles, labor, tools, materials, incidentals, safety equipment, warning devices, and removing and disposing of existing pavement.

Payment will be made under:

Pay Item	Pay Unit
Flexible pavement planing (0-2" depth)	Square yard
Flexible pavement planing (Above 2"-4" depth)	Square yard
Flexible pavement tie-in planing (0-2" depth)	Square yard
Flexible pavement tie-in planing (Above 2"-4" depth)	Square yard
Flexible pavement planing (over 4" depth)	Square yard
Rigid pavement planing (0-2" depth)	Square yard
Rigid pavement tie-in planing (0-2" depth))	Square yard

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The Special Provision for **PLACEMENT OF ASPHALT CONCRETE OVERLAYS PLACEMENT OF ASPHALT CONCRETE OVERLAYS** dated July 28, 2010 is replaced with the following:

**S315NM0-0609**

VIRGINIA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION FOR  
**PLACEMENT OF ASPHALT CONCRETE OVERLAYS**  
**(Asphalt Maintenance)**

October 21, 2008ccc

**I. DESCRIPTION**

This work shall consist of furnishing and placing asphalt concrete overlay pavement courses on existing roadway surfaces in accordance with the requirements herein and in conformity with the lines, grades, and thickness as established in the Contract or as directed by the Engineer. This work shall be performed in accordance with the requirements of 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 in accordance with the requirements of 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 in accordance with the requirements of the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications.

Limitations of operations for placing asphalt concrete overlay shall be in accordance with the requirements of Section 108.02 of the Specifications and as specified herein.

Prior to commencement of paving overlay operations the Contractor shall clean the existing pavement surface of all accumulated dust, mud, or other debris that may affect the bond of the new overlay to the satisfaction of the Engineer. The cost for cleaning and surface preparation shall be included in the bid price for 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 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 in accordance with the special provision for **SEALING CRACKS IN ASPHALT CONCRETE SURFACES OR HYDRAULIC CEMENT CONCRETE PAVEMENT**.

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

Utility structures shall be protected and referenced prior to paving. This is for the purpose of locating and adjusting the utility structures after paving, if necessary. Such work 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 documents, or by the Engineer. Each tie-in shall be no less than 10 feet in length for every inch of depth of overlaid pavement and shall consist of a mix that is suitable for a riding surface that provides a smooth transition between overlaid existing pavement and existing pavement or bridge decks. Such 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 new pavement and existing pavement or bridge decks. Such tie-ins shall conform to the requirements of Section 315.05(c) of the Specifications except that all joints at tie-in locations shall be tested using a 10-foot straightedge in accordance with the requirements of 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 in accordance with the requirements of the special provision mentioned herein.

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

#### **A. Limited Access Roadways**

The Contractor shall perform asphalt concrete overlays to the depths identified for the specific routes identified in the Contract. Where asphalt concrete is being overlaid to a depth 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, excluding shoulders, before the weekend. Shoulders must be squared up within 48 hours after the weekend 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 shall square up the overlay operation at the end of each workday. This requirement shall apply to both pavement and shoulders.

Asphalt concrete pavement overlay operations shall be performed in only one traffic 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 traffic control devices to inform the traveling public in accordance with the details provided in the plans for the scope of overlay operation he is performing. The cost for such warning devices, signage and temporary pavement markings shall be included in the cost of other appropriate items.

In the event an emergency or unforeseen circumstances such as equipment failure or breakdown develops due to the Contractor's operations that prevent the Contractor from squaring up the overlaid surface on adjacent lanes prior to a weekend or a holiday any additional signage required to protect the traveling public shall be the Contractor's expense.

Ramps and exits are to be paved so that a long longitudinal joint will not be left for vehicles to cross. Ramps and exits are to be paved to the extent that the joint crossed is transverse or the ramp is squared up with the adjacent mainline lane.

Only approved mixes that have been verified in accordance with the requirements of 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 in accordance with the requirements of Section 315.05(c) of the Specifications.

#### **B. All Other Roadways**

Where asphalt concrete is being overlaid to a depth 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 holidays or any temporary shutdowns.

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

Asphalt concrete pavement overlay operations shall be performed in only one traffic 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 traffic control devices at his expense to inform the traveling public in accordance with the details provided in the plans for the scope of overlay operation he is performing.

In the event an emergency or unforeseen circumstances such as equipment failure or breakdown develop due to the Contractor's operations that prevent the Contractor from squaring up the overlaid surface on adjacent lanes prior to a weekend or a holiday any additional signage required to protect the traveling public shall be the Contractor's expense.

Ramps and exits are to be paved so that a long longitudinal joint will not be left for vehicles to cross. Ramps and exits are to be paved to the extent that the joint crossed is transverse or the ramp is squared up with the adjacent mainline lane.

The Contractor shall ensure positive drainage is provided for all overlaid surfaces in accordance with the requirements of Section 315.05(c) of the Specifications.

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