

PROJECT SPECIAL PROVISIONS

ROADWAY

SHOULDER RECONSTRUCTION:

(1-18-00) (Rev.7-18-06)

RR 07

Description

The work covered by this provision consists of reconstructing earth shoulders, including median shoulder in accordance with the *Roadway Standard Drawing Nos. 560.01 and 560.02*, from the edge of pavement to the existing shoulder point as directed by the Engineer. Perform this work immediately after the resurfacing operations are completed as directed by the Engineer.

Materials

On any map that contains widening, use all suitable material generated from the widening operation to construct the shoulder. Furnish any other earth material necessary for the construction of the shoulders. Provide earth material meeting the approval of the Engineer. No testing will be necessary.

Perform shoulder reconstruction in the following order: scarify the existing shoulder to provide the proper bond; add the earth material to the shoulder; and compact the reconstructed shoulder to the satisfaction of the Engineer, immediately after the resurfacing operations are completed, as directed by the Engineer.

The Contractor shall dispose of any excess material generated by the shoulder reconstruction in an approved disposal site.

Measurement and Payment

Shoulder Reconstruction will be measured and paid for as the actual number of shoulder miles that have been constructed. Measurement will be made along the edge of each shoulder. Measurement will be made to the nearest 0.01 of a mile. Such price and payment will be full compensation for furnishing earth material, hauling, placing, compaction, **seeding and mulching**, and all incidentals necessary to complete construction of the shoulders.

Incidental Stone Base will be measured and paid for as provided in Article 545-6 of the *Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Shoulder Reconstruction	Shoulder Mile

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

(11-21-00)

RR 19

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *Standard Specifications* as modified herein.

The base price index for asphalt binder for plant mix is \$ 350.35 per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on November 1, 2006.

INCIDENTAL STONE BASE:

(7-1-95) (Rev.7-18-06)

RR 28

Description

Place incidental stone base on driveways, mailboxes, etc. immediately after paving and do not have the paving operations exceed stone base placement by more than one week without written permission of the Engineer.

Materials and Construction

Provide and place incidental stone base in accordance with the requirements of Section 545 of the *Standard Specifications*.

Measurement and Payment

Incidental Stone Base will be measured and paid for in accordance with Article 545-6 of the *Standard Specifications*.

ASPHALT PAVEMENTS - SUPERPAVE:

(7-18-06) (Rev 9-19-06)

RR 31

Revise the 2006 *Standard Specifications* as follows:

Page 6-2, Article 600-9 Measurement and Payment

Delete the second paragraph.

Page 6-12, 609-5(C)2(c) add after (AASHTO T 209):

or ASTM D 2041

Page 6-13, last line on page & Page 6-14, Subarticle 609-5(C)(2)(e), delete and substitute the following:

(e) Retained Tensile Strength (TSR) - (AASHTO T 283 Modified), add subarticle (1) Option 1 before the first paragraph.

(1) Option 1

Add subarticle (2) Option 2 and the following sentence as the first sentence of the second paragraph:

(2) Option 2

Mix sampled from truck at plant with one set of specimens prepared by the Contractor and then tested jointly by QA and QC at a mutually agreed upon lab site within the first 7 calendar days after beginning production of each new mix design.

Page 6-28, 610-3(A) Mix Design-General, third sentence of the fourth paragraph:

Substitute 20% for 15%

First, second and third sentences of the fifth paragraph:

Substitute 20% for 15%

Page 6-44, 610-8, third full paragraph, replace the first sentence with the following:

Use the 30 foot minimum length mobile grade reference system or the non-contacting laser or sonar type ski *with at least four referencing stations mounted on the paver at a minimum length of 24 feet* to control the longitudinal profile when placing the initial lanes and all adjacent lanes of all layers, including resurfacing and asphalt in-lays, unless otherwise specified or approved.

Page 6-54, Article 620-4, add the following pay item:

Pay Item	Pay Unit
Asphalt Binder for Plant Mix, Grade PG 70-28	Ton

Page 6-69, Table 660-1 **Material Application Rates and Temperatures**, add the following:

Type of Coat	Grade of Asphalt	Asphalt Rate gal/yd²	Application Temperature °F	Aggregate Size	Aggregate Rate lb./sq. yd. Total
Sand Seal	CRS-2 or CRS-2P	0.22-0.30	150-175	Blotting Sand	12-15

Page 6-75, 660-9(B), add the following as sub-item (5)

(5) Sand Seal

Place the fully required amount of asphalt material in one application and immediately cover with the seal coat aggregate. Uniformly spread the fully required amount of aggregate in one application and correct all non-uniform areas prior to rolling.

Immediately after the aggregate has been uniformly spread, perform rolling.

When directed, broom excess aggregate material from the surface of the seal coat.

When the sand seal is to be constructed for temporary sealing purposes only and will not be used by traffic, other grades of asphalt material meeting the requirements of Articles 1020-6 and 1020-7 may be used in lieu of the grade of asphalt required by Table 660-1 when approved.

Page 10-41, Table 1012-1, add the following:

Mix Type	Course Aggregate Angularity ^(b) ASTM D5821	Fine Aggregate Angularity % Minimum AASHTO T304 Method A	Sand Equivalent % Minimum AASHTO T176	Flat & Elongated 5:1 Ratio % Maximum ASTM D4791 Section 8.4
S 9.5 D	100/100	45	50	10

Page 10-45, Replace Table 1012-2 with the following:

TABLE 1012-2
NEW SOURCE RAP GRADATION and BINDER TOLERANCES
(Apply Tolerances to Mix Design Data)

Mix Type	0-20% RAP			21-25% RAP			26%+ RAP		
	Base	Inter.	Surf.	Base	Inter.	Surf.	Base	Inter.	Surf.
P _b , %		± 0.7%			± 0.4%			± 0.3%	
1 1/2" (37.5)	±10	-	-	±7	-	-	±5	-	-
3/4" (19.0)	±10	±10	-	±7	±7	-	±5	±5	-
1/2" (12.5)	-	±10	±6	-	±7	±3	-	±5	±2
3/8" (9.5)	-	-	±8	-	-	±5	-	-	±4
No. 4 (4.75)	±10	-	±10	±7	-	±7	±5	-	±5
No. 8 (2.36)	±8	±8	±8	±5	±5	±5	±4	±4	±4
No.16 (1.18)	±8	±8	±8	±5	±5	±5	±4	±4	±4
No. 30 (0.600)	±8	±8	±8	±5	±5	±5	±4	±4	±4
No. 50 (0.300)	-	-	±8	-	-	±5	-	-	±4
No. 200 (0.075)	±4	±4	±4	±2	±2	±2	±1.5	±1.5	±1.5

GLASS BEADS:

(7-18-06)

RR 35

Revise the *Standard Specifications* as follows:

Page 10-223, 1087-4(C) Gradation & Roundness

Replace the second sentence of the first paragraph with the following:

All Drop-On and Intermixed Glass Beads shall be tested in accordance with ASTM D1155.

Delete the last paragraph.

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:

(1-1-02)

RR 43

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course	Type B 25.0__	4.3%
Asphalt Concrete Intermediate Course	Type I 19.0__	4.7%
Asphalt Concrete Surface Course	Type S 4.75A	7.0%
Asphalt Concrete Surface Course	Type SF 9.5A	6.5%
Asphalt Concrete Surface Course	Type S 9.5__	6.0%
Asphalt Concrete Surface Course	Type S 12.5__	5.5%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the *Standard Specifications*.

ASPHALT PLANT MIXTURES:

(7-1-95)

RR 46

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

RESURFACING EXISTING BRIDGES:

(7-1-95)

RR 61

The Contractor's attention is directed to the fact that he will be required to resurface the bridges on this project if directed by the Engineer.

Place the surface so as to follow a grade line set by the Engineer with the minimum thickness as shown on the sketch herein or as directed by the Engineer (**See "Forsyth County 2007 Resurfacing Bridge Data Listing" in the Detail Drawings Section of the Contract.**) . State Forces will make all necessary repairs to the bridge floors prior to the time that the Contractor places the proposed surfacing. Give the Engineer at least 15 days notice prior to the expected time to begin operations so that State Forces will have sufficient time to complete their work.

At all bridges that are not to be resurfaced, taper out the proposed resurfacing layer adjacent to the bridges to insure a proper tie-in with the bridge surface.

TRENCHING FOR BASE COURSE:

(7-1-95)

RR 79

Perform all trenching necessary to place the asphalt concrete base course widening in accordance with the typical sections, at locations shown on the sketch maps, and as directed by the Engineer.

Perform the trenching for the base course on the same day that the base course is to be placed. If the base course cannot be placed on the same day the trench section is excavated, backfill the trench with earth material and compact it to the satisfaction of the Engineer. Once the trench is open, perform backfilling and re-opening of the trench at no cost to the Department.

The Contractor will be restricted to widening one side of the project at a time unless otherwise permitted by the Engineer. In widening, operate equipment and conduct operations in the same direction as the flow of traffic.

Density tests may be taken every 2000 feet in the widened areas as directed by the Engineer. Shape and compact the subgrade in the widened areas to the satisfaction of the Engineer. Compact the asphalt concrete base course in the widened areas in accordance with the provisions of Article 610-9 of the *Standard Specifications*.

Place the excavated material from trenching operation on the adjacent shoulder area as directed by the Engineer. Cut adequate weep holes in the excavated material to provide for adequate drainage as directed by the Engineer. Remove all excavated material from all drives to provide ingress and egress to abutting properties and from in front of mailboxes and paper boxes. Saw a neat edge and remove all asphalt and/or concrete driveways, and existing asphalt widening, as directed by the Engineer, to the width of the widening and dispose of any excavated concrete or asphalt materials. Properly reconnect driveways.

Upon completion of the paving operation, backfill the trench to the satisfaction of the Engineer. Properly dispose of any excess material remaining after this operation.

No direct payment will be made for trenching, sawing, and removal of driveways, depositing material on shoulder area, backfilling trench, or removal of spoil material, as the cost of this work shall be included in the contract unit price per ton for *Asphalt Concrete Base Course, Type ____*.

PATCHING EXISTING PAVEMENT:

(1-15-02) (Rev.7-18-06)

RR 88

Description

The Contractor's attention is directed to the fact that there are areas of existing pavement on this project that will require repair prior to resurfacing. Patch the areas that, in the opinion of the Engineer, need repairing. The areas to be patched will be delineated by the Engineer prior to the Contractor performing repairs.

Materials

The patching consists of Asphalt Concrete Base Course, Asphalt Concrete Intermediate Course, Asphalt Concrete Surface Course, or a combination of base, binder and surface course.

Construction Methods

Remove existing pavement at locations directed by the Engineer, **using a milling machine. This shall include, but is not limited to, the use of a milling machine to remove the existing pavement providing a neat vertical joint and uniform line; the removal and disposal of all pavement millings and sub-grade material as approved of or directed by the Engineer; the coating of the area to be repaired with a tack coat; and the replacement of the removed material with asphalt plant mix.**

Place Asphalt Concrete Base Course, in lifts not exceeding 5 1/2 inches. Utilize compaction equipment suitable for compacting patches as small as 3.5 feet by 6 feet on each lift. Use an approved compaction pattern to achieve proper compaction. If patched pavement is to be open to traffic for more than 48 hours prior to overlay, use Asphalt Surface Course in the top 1.25 inches of the patch.

Schedule operations so that all areas where pavement has been removed, will be repaired on the same day of the pavement removal and all lanes of traffic restored.

Measurement and Payment

Patching Existing Pavement will be measured and paid for as the actual number of tons of asphalt plant mix complete in place, that has been used to make completed and accepted repairs. The asphalt plant mixed material will be measured by being weighed in trucks on certified platform scales or other certified weighing devices. The above price and payment will be full compensation for all work covered by this provision, including but not limited **to the use of a milling machine for the removal of pavement, the disposal of pavement millings and any sub-grade material;** furnishing and applying tack coat; furnishing, placing, and compacting of asphalt plant mix; furnishing of asphalt binder for the asphalt plant mix; and furnishing scales.

Patching Existing Pavement will be considered a minor item. In the event that the item of Patching Existing Pavement overruns the original bid quantity by more than 100 percent, the provisions of Article 104-5 of the *Standard Specifications* pertaining to revised contract unit

price for overrunning minor items will not apply to this item. Any provisions included in the contract that provides for adjustments in compensation due to variations in the price of asphalt binder will not be applicable to payment for the work covered by this provision.

Payment will be made under:

Pay Item	Pay Unit
Patching Existing Pavement	Ton

ADJUSTMENT TO VALVE BOXES, MANHOLES, AND METER BOXES:

RR 100 revised

Valve boxes, manholes, and meter boxes shall be adjusted in accordance with Section 858 of the Standard Specifications. This item consists of raising or lowering existing manholes and valve boxes to match the finished grade surface grade. **The Contractor will be required to effectively mark the locations of existing manholes and/or valve boxes and meter boxes, to pave over those devices, return after paving operations are completed, and adjust same to finished surface grade.**

Adjustment to manholes, meter boxes, and valve boxes on this project shall be made by the use of an approved **Black Tinted Concrete that will take a full set and become load bearing within sixty minutes of placement.** A list approved materials will be furnished to the Contractor by the Resident Engineer **upon request.**

The Contractor shall replace worn manhole rings and covers, worn meter box frames and covers, and worn valve box frames and covers, as directed by the Engineer, with a new ring/frame and cover assembly. These assemblies will be furnished, at no cost to the Contractor, by the Department or utility owner.

Basis of payment will be under "Adjustment of Manholes", or "Adjustment of Meter Boxes or Valve Boxes", per each.

AGGREGATE PRODUCTION:

(11-20-01) (Rev. 11-21-06)

RR 109

Provide aggregate from a producer who uses the current Aggregate Quality Control/Quality Assurance Program which is in effect at the time of shipment.

No price adjustment is allowed to contractors or producers who use the program. Participation in the program does not relieve the producer of the responsibility of complying with all requirements of the *Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

CHANGEABLE MESSAGE SIGNS

(11-21-06)

RR 111

Revise the *2006 Standard Specifications* as follows:

Page 11-9, Article 1120-3, Replace the 3rd sentence with the following:

Sign operator will adjust flash rate so that no more than two messages will be displayed and be legible to a driver when approaching the sign at the posted speed.

CONCRETE BRICK AND BLOCK PRODUCTION:

(11-20-01) (Rev. 11-21-06)

RR 112

Provide concrete brick and block from a producer who uses the current Solid Concrete Masonry Brick/Unit Quality Control/Quality Assurance Program that is in effect on the date that material is received on the project.

No price adjustment is allowed to contractors or producers who use the program. Participation in the program does not relieve the producer of the responsibility of complying with all requirements of the *Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

PAVEMENT MARKING LINES MEASUREMENT AND PAYMENT:

(11-21-06)

RR 120

Revise the *2006 Standard Specifications* as follows:

Page 12-14, Subarticle 1205-10, delete the first sentence of the first paragraph and replace with the following:

Pavement Marking Lines will be measured and paid for as the actual number of linear feet of pavement marking lines per application that has been satisfactorily placed and accepted by the Engineer.