PROJECT SPECIAL PROVISIONS

ROADWAY

ASPHALT PAVEMENTS - SUPERPAVE:
(7-18-06) (Rev 9-19-06) R6 R01

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/yd^2	Application Temperature ^{0}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		
Sieve (mm)	**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

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:
(1-1-02) R6 R15

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 *2006 Standard Specifications.*

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:
(11-21-00) R6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2006 Standard Specifications.*

The base price index for asphalt binder for plant mix is **$340.71** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **August 1, 2007**.

RESURFACING EXISTING BRIDGES:
(7-1-95) R6 R61

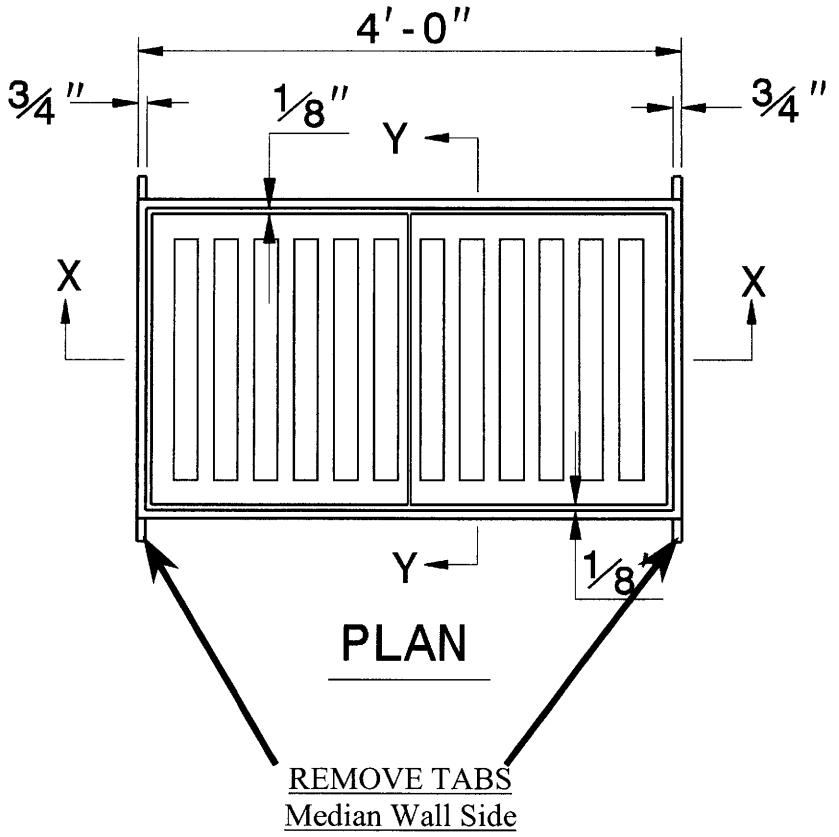
The Contractor's attention is directed to the fact that he will be required to resurface the bridges on this project if directed by the Engineer.

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. 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.

ADJUSTMENT OF GRATES AND/OR FRAMES ON DROP INLETS:

The adjustment of drop inlets shall be in accordance with Section 858 of the 2006 Standard Specifications. Additionally, the Contractor may be required to modify the frame by cutting off tabs as shown below when adjusting the frame in the direction of the wall.



The Engineer will determine if adjustments are necessary at each location. The Contractor may obtain a new Grate/Frame from the Maintenance Department if an existing Grate/Frame is broken.

"Adjustment of Grates and/or Frames on Drop Inlets" is a contingency item. It may be reduced or eliminated from the project at the sole discretion of the Engineer. The Contractor will have no claim against the NCDOT if "Adjustment of Grates and/or Frames on Drop Inlets" is reduced or eliminated.

PAYMENT WILL BE MADE UNDER:

PAY ITEM	PAY UNIT
ADJUSTMENT OF GRATES AND/OR FRAMES ON DROP INLETS	EACH

REPAIR OF DROP INLETS:

The repair of drop inlets shall be in accordance with Section 858 of the 2006 Standard Specifications except that the word "repair(s)" shall be substituted for the word "adjustment(s)" throughout the specification.

The Engineer will determine if repairs are necessary at each location.

The Contractor shall furnish all material and labor necessary to complete the repair(s) needed at each location.

"Repair of Drop Inlets" is a contingency item. It may be reduced or eliminated from the project at the sole discretion of the Engineer. The Contractor will have no claim against the NCDOT if "Repair of Drop Inlets" is reduced or eliminated.

Measurement will be made as noted in the 2006 Standard Specification, Section 858.

PAYMENT WILL BE MADE UNDER:

PAY ITEM	PAY UNIT
REPAIR OF DROP INLETS	EACH

ADJUSTMENT TO MANHOLES:
(7-1-95) R8 R96

The Contractor's attention is directed to Section 858-3 of the *2006 Standard Specifications*.

Make adjustments to manholes on this project by using rings or rapid set (grout, mortar, or concrete) as approved by the Engineer.

ADJUSTMENT OF MANHOLES, METER BOXES, AND VALVE BOXES:
(7-1-95) R8 R97

The Contractor's attention is directed to Article 858-3 of the *2006 Standard Specifications*. Cast iron or steel fittings will not be permitted for the adjustment of manholes, meter boxes, and valve boxes on this project.

AGGREGATE PRODUCTION:
(11-20-01) (Rev. 11-21-06) R10 R05

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 *2006 Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

CONCRETE BRICK AND BLOCK PRODUCTION:

(11-20-01) (Rev. 11-21-06) R10 R10

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 *2006 Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

PORTLAND CEMENT CONCRETE (Alkali-Silica Reaction):

2-20-07 R10 R16

Revise the *2006 Standard Specifications* as follows:

Article 1024-1(A), replace the 2nd paragraph with the following:

Certain combinations of cement and aggregate exhibit an adverse alkali-silica reaction. The alkalinity of any cement, expressed as sodium-oxide equivalent, shall not exceed 1.0 percent. For mix designs that contain non-reactive aggregates and cement with an alkali content less than 0.6%, straight cement or a combination of cement and fly ash, cement and ground granulated blast furnace slag or cement and microsilica may be used. The pozzolan quantity shall not exceed the amount shown in Table 1024-1. For mixes that contain cement with an alkali content between 0.6% and 1.0%, and for mixes that contain a reactive aggregate documented by the Department, regardless of the alkali content of the cement, use a pozzolan in the amount shown in Table 1024-1.

Obtain the list of reactive aggregates documented by the Department at:http://www.ncdot.org/doh/operations/materials/pdf/quarryasrprob.pdf

Table 1024-1
Pozzolans for Use in Portland Cement Concrete

Pozzolan	*Rate*
Class F Fly Ash	20% by weight of required cement content, with 1.2 lbs Class F fly ash per lb of cement replaced
Ground Granulated Blast Furnace Slag	35%-50% by weight of required cement content with 1 lb slag per lb of cement replaced
Microsilica	4%-8% by weight of required cement content, with 1 lb microsilica per lb of cement replaced

GLASS BEADS:
(7-18-06) R10 R35

Revise the *2006 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.

REPLACE EXISTING BARRIER DELINEATOR:
(04-25-07) SP

Page 11-20, Article 1170-4 Measurement and Payment, add the following as the fourth paragraph:

Replace Existing Barrier Delineator will be measured and paid for in units of each that have been completed and accepted.

Add the following pay item:

Pay Item	**Pay Unit**
Replace Existing Barrier Delineator	Each

FLASHING ARROW PANELS, TYPE C (SHORT TERM):
(08-07-07) SP

Revise the 2006 Standard Specifications as follows:

Page 11-09, Article 1115-4 Measurement and Payment, add the following as the second paragraph:

Flashing Arrow Panels, Type C (FAP) (Short Term) will be measured and paid for as the actual number of days the flashing arrow panel, type C (short term) is used on a project for a specific work operation, removed from the project after the specific operation is complete, and that remains in use on the project no longer than 1 month. The number of FAPs shall be as shown in the bid proposal item sheet.

Amend the following pay item as follows:

Pay Item	**Pay Unit**
Flashing Arrow Panels, Type C (Short Term) (XX Each)	Day

CHANGEABLE MESSAGE SIGNS
(11-21-06) R11 R11

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.

CHANGEABLE MESSAGE SIGNS (SHORT TERM):
(08-07-07) SP

Revise the 2006 Standard Specifications as follows:

Page 11-10, Article 1120-5 Measurement and Payment, add the following sentence to the second paragraph:

The number of CMSs shall be as shown in the bid proposal item sheet.

Amend the following pay item as follows:

Pay Item	Pay Unit
Changeable Message Signs (Short Term) (XX Each)	Day

PAVEMENT MARKING LINES:
(11-21-06) (Rev. 9-18-07) RR12R01

Revise the *2006 Standard Specifications* as follows:

Page 12-2, 1205-3(D) Time Limitations for Replacement, add the following at the beginning of the chart:

Facility Type	Marking Type	Replacement Deadline
Full-control-of-access multi-lane roadway (4 or more total lanes) and ramps, including Interstates	All markings including symbols	By the end of each workday's operation if the lane is opened to traffic

Page 12-14, Subarticle 1205-10, Measurement and Payment, 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.

INDUCTIVE DETECTION LOOPS AND LEAD – IN CABLE FOR DEEP CUT INSTALLATION DURING A MILLING OPERATION:

The installation of inductive detection loops and lead-in cable shall be in accordance with Section 1725 & 1726 of the 2006 Standard Specifications and the following provisions:

Loops are to be installed prior to the milling operation. Loops will be installed using the deep cut installation as shown on the detail in the sketch maps and in conjunction with Standard Drawing 1725. The Contractor should note that the details of loop wire at pavement edge as noted on Standard Drawing 1725.01 sheet 2 of 3 **must be followed**. If the loop is cut during the milling operation the Contractor will be required to reinstall the loop wire at his cost.

Compliance with the correct saw cut and correct installation of backer rod to hold the loop wire in the bottom of the saw cut is imperative to insure milling does not damage the loop wire. Avoid excessive use of backer rod as it may encapsulate the loop wires.

Loops shall be fully functional before and after the milling operation. All loops should be fully functional prior to the final layer of surface course and before final acceptance of the project.

Measurement and Payment

Measurement and payment will be made as noted in the 2006 Standard Specifications, Section 1725 and Section 1726.

Pay Item

Inductive Loop Sawcut	LF
Lead - In Cable ( )	LF