OPEN-GRADED ASPHALT FRICTION COURSE:

(08-15-17) 650 SP6 R65

Revise the *2012 Standard Specifications* as follows:

Page 6-40, Article 650-2, MATERIALS, line 16, replace "Asphalt Binder, Grade PG 64-22, PG 76-22" with the following item reference:

Item
Asphalt Binder, Performance Grade

Page 6-40, Subarticle 650-3(A), General, lines 22-29, replace the second paragraph with the following:

At least 20 days before start of asphalt mix production, submit the mix design and proposed JMF targets for each required mix type and combination of aggregates to the Engineer for review and approval. The mix design shall be prepared by a mix design technician approved by the Department in an approved mix design laboratory. Perform the mix design in accordance with Article 610-3 and the Department's mix design procedures. Copies of these procedures can be obtained through the Materials and Tests Unit.

Page 6-40, Subarticle 650-3(A), General, lines 31-37, delete the second sentence of the third paragraph.

Page 6-40, Subarticle 650-3(A), General, lines 38-39, delete the fourth paragraph.

Page 6-41, Subarticle 650-3(A), General, lines 1-7, delete the fifth, sixth and seventh paragraphs.

Page 6-41, Subarticle 650-3(B), Mix Design Criteria, line 17, add the following at the end of the third paragraph:

Add the anti-strip additive to the asphalt binder in accordance with Article 620-3.

Page 6-41, Subarticle 650-3(B), Mix Design Criteria, lines 20-32, replace with the following:

In addition to the required mix design submittal, the Contractor will prepare and deliver gyratory compactor specimens to the Department's Central Asphalt Laboratory for Cantabro durability testing. The Contractor will prepare these specimens using lab produced mix in accordance with NCDOT procedures. Provide the samples at least 20 days before the anticipated beginning placement of OGFC mixture.

Page 6-41, Table 650-1, OGAFC GRADATION CRITERIA, replace with the following:

TABLE 650-1 OGFC DESIGN CRITERIA	
Grading Requirements	**Total Percent Passing**
Sieve Size (mm)	*Type FC-1 Modified*
19.0	-
12.5	100
9.50	75 - 100
4.75	25 - 45
2.36	5 - 15
0.075	1.0 - 3.0
Asphalt Binder Grade	PG 76-22
Binder Content, %	5.5 - 8.0
Mixing Temperature at the Asphalt Plant[A]	300 – 325°F
Air Voids, % minimum	18.0
Cantabro Loss, % maximum	20.0
Draindown, % maximum	0.3

Page 6-42, Table 650-2, OGAFC MIX DESIGN CRITERIA, delete the table.

Page 6-42, Article 650-5, CONSTRUCTION METHODS, lines 20-24, replace the second paragraph with the following:

Do not place OGFC between October 31 and April 1 of the next year, unless otherwise approved. The minimum air and road surface temperature for placing Type FC-1 Modified mix will be 60°F.

Page 6-42, Article 650-5, CONSTRUCTION METHODS, line 27, delete the fourth paragraph.

Page 6-43, Article 650-5, CONSTRUCTION METHODS, lines 11-13, delete the twelfth paragraph.

Page 6-43, Article 650-6, QUALITY MANAGEMENT SYSTEM, line 21, replace with the following:

Produce the OGFC in accordance with Section 609, with the following exceptions.

Sample and test the completed mixture from each mix design per plant per year at the following minimum frequency during mix production:

Accumulative Production Increment	Number of Samples per Increment
500 tons	1

Record the following data on the standardized control charts and in accordance with the requirements of Section 7.4 of the *Asphalt QMS Manual*:

(a) Aggregate Gradation Test Results:
    1. 2.36 mm
    2. 0.075 mm Sieves

(b) Binder Content, %, P_b

Page 6-43, Article 650-6, MEASUREMENT AND PAYMENT, lines 23-26, replace the first paragraph with the following:

Open-Graded Asphalt Friction Course, Type FC-1 Modified will be measured and paid as the actual number of tons of friction course incorporated into the completed and accepted work. The friction course will be measured by being weighed in trucks on certified platform scales or other certified weighing devices.

Page 6-43, Article 650-6, MEASUREMENT AND PAYMENT, line 33, replace with the following:

Payment will be made under:

Pay Item	**Pay Unit**
Open-Graded Asphalt Friction Course, Type FC-1 Modified	Ton