

Section 620

1 **610-16 MEASUREMENT AND PAYMENT**

2 *Hot Mix Asphalt Pavement* will be paid at the contract unit price per ton that will be the actual
3 number of tons of each type of hot mix asphalt pavement incorporated into the completed and
4 accepted work in accordance with Article 106-7.

5 No direct payment will be made for providing and using the materials transfer vehicle or any
6 associated equipment, as the cost of providing same will be included in the contract unit bid
7 price per ton for the mix type to be placed.

8 Any reduction in pay due to failing density will be in addition to any reduction in pay due to
9 failing mix property test results on the same mix.

10 A high frequency of asphalt plant mix or density deficiencies may result in future deficient
11 asphalt being excluded from acceptance at an adjusted contract unit price in accordance with
12 Article 105-3. This acceptance process will apply to all asphalt produced or placed and will
13 continue until the Engineer determines a history of quality asphalt production and placement
14 is reestablished.

15 Furnishing asphalt binder will be paid as provided in Article 620-4 for *Asphalt Binder for*
16 *Plant Mix* for each grade required.

17 Provide the work and materials required in the correction of defective work or sand seal base
18 course as required at no cost to the Department. If the Engineer has such work performed
19 with Department forces and equipment, the cost of such work performed by Department
20 forces will be deducted from monies due or to become due to the Contractor.

21 No direct payment will be made for final surface testing covered by this section. Payment at
22 the contract unit prices for the various items covered by those sections of the *Standard*
23 *Specifications* directly applicable to the work constructed will be full compensation for all
24 work covered by Article 610-13 including, but not limited to, performing testing in
25 accordance with this Specification, any corrective work required as a result of this testing and
26 any additional traffic control as may be necessary.

27 Payment will be made under:

Pay Item	Pay Unit
Asphalt Concrete Base Course, Type B25.0B	Ton
Asphalt Concrete Base Course, Type B25.0C	Ton
Asphalt Concrete Intermediate Course, Type I19.0B	Ton
Asphalt Concrete Intermediate Course, Type I19.0C	Ton
Asphalt Concrete Intermediate Course, Type I19.0D	Ton
Asphalt Concrete Surface Course, Type S4.75A	Ton
Asphalt Concrete Surface Course, Type SF9.5A	Ton
Asphalt Concrete Surface Course, Type S9.5B	Ton
Asphalt Concrete Surface Course, Type S9.5C	Ton
Asphalt Concrete Surface Course, Type S9.5D	Ton

28 **SECTION 620**
29 **ASPHALT BINDER FOR PLANT MIX**

30 **620-1 DESCRIPTION**

31 Perform the work covered by this section including, but not limited to, furnishing of asphalt
32 binder, with anti-strip additive when required, at an asphalt plant and incorporating the asphalt
33 binder and anti-strip additive into the asphalt plant mix.

1 **620-2 MATERIALS**

2 Refer to Division 10.

Item	Section
Anti-strip Additives	1020-8
Asphalt Binder, All Grades	1020-2
Silicone	1020-9

3 The asphalt binder for the mixture will be accepted at the source subject to Article 1020-1.

4 Use additives from the NCDOT APL. Submit a sample and manufacturer's data to the
5 Engineer for approval before use, if proposing to use a brand not on the NCDOT APL.

6 **620-3 GENERAL REQUIREMENTS**

7 The requirements of Section 610 that pertain to handling of asphalt binder will be applicable
8 to the work covered by this section.

9 Add silicone to all asphalt binder used in surface courses and open-graded asphalt friction
10 course, unless otherwise directed. The amount of silicone added will range from one ounce
11 per 2,000 gal of asphalt binder to one ounce per 2,500 gal. Add silicone to the asphalt binder
12 at the plant site unless added at the source and it is so noted on the delivery ticket.

13 Do not heat the asphalt binder to a temperature in excess of the supplier's recommendation
14 while stored or when being used in production of mix at the asphalt plant.

15 Introduce the actual quantity of asphalt binder at the established percentage shown on the
16 applicable JMF into the mix by the plant weighing or metering system. No working tolerance
17 for asphalt binder percentage will be allowed during production.

18 When required, incorporate an anti-strip additive. It may be either chemical additive mixed
19 with the asphalt binder or hydrated lime added to the aggregate or a combination of both.
20 Furnish the brand name of the type (lime or chemical), supplier and shipping point of
21 anti-strip additive. Note on the asphalt binder delivery ticket the rate (or quantity), brand of
22 chemical additive when added at the supplier's terminal. Introduce and mix chemical anti-
23 strip additive into the asphalt binder at either the supplier's terminal or at the asphalt plant site
24 at the dosage required by the JMF. Use in-line blending equipment at either location. When
25 added at the asphalt plant, use equipment that meets Sections 5 and 6 of the *Asphalt QMS*
26 *Manual*. When added at the supplier's terminal, use equipment that in-line blends with a
27 constant flow of the additive for a minimum of 80% of the asphalt binder loading time. When
28 hydrated lime is used, use equipment to introduce the lime that meets Sections 5 and 6 of the
29 *Asphalt QMS Manual*. Thoroughly mix chemical anti-strip additive and asphalt binder
30 together before incorporating into the asphalt plant mix.

31 **620-4 MEASUREMENT AND PAYMENT**

32 *Asphalt Binder for Plant Mix* and *Polymer Modified Asphalt Binder for Plant Mix* will be
33 measured and paid as the theoretical number of tons required by the applicable JMF based on
34 the actual number of tons of plant mix completed and accepted on the job.

35 Such price and payment will be full compensation for all work covered by this section.

36 There will be no direct payment for anti-strip additive. Payment at the contract unit prices for
37 the various asphalt plant mix items will be full compensation for the work.

38 Adjustments will be made to the payments due the Contractor for each grade of asphalt binder
39 when it has been determined that the monthly average terminal F.O.B. Selling Price of asphalt
40 binder, Grade PG 64-22, has fluctuated from the Base Price Index for Asphalt Binder
41 included in the contract. The methods for calculating a base price index, for calculating the
42 monthly average terminal F.O.B. selling price and for determining the terminals used are in
43 accordance with procedures on file with the Construction Unit.

Section 650

1 When it is determined that the monthly selling price of asphalt binder on the first business day
2 of the calendar month during which the last day of the partial payment period occurs varies
3 either upward or downward from the base price index, the contract unit price for asphalt
4 binder for plant mix will be adjusted. The adjusted contract unit price will be determined by
5 adding the difference between the selling price and the base price index to the contract unit
6 bid price for asphalt binder.

7 The adjusted contract unit price will then be applied to the theoretical quantity of asphalt
8 binder authorized for use in the plant mix placed during the partial payment period involved,
9 except that where recycled plant mix is used, the adjusted unit price will be applied only to
10 the theoretical number of tons of additional asphalt binder materials required by the JMF.

11 Adjusted contract unit prices for all grades of asphalt binder, including additional asphalt
12 binder materials in recycled mixtures, will be based on the average selling price and base
13 price index for asphalt binder, Grade PG 64-22, regardless of the actual grade required by
14 the JMF.

15 In determining the adjusted contract unit price for any material specified in this section the
16 following formula will be used:

$$A = B + (D - C)$$

Where:

- A = Adjusted Contract Unit Price
- B = Contract Unit Price
- C = Base Price Index
- D = Monthly Average Terminal F.O.B. Selling Price

17 In the event the Department is unable to secure an F.O.B. selling price from at least
18 4 terminals in a given month, payment will be at the contract unit price for each ton of asphalt
19 binder used in the work during that month.

20 Payment will be made under:

Pay Item	Pay Unit
Asphalt Binder for Plant Mix	Ton
Polymer Modified Asphalt Binder for Plant Mix	Ton

SECTION 650

OPEN-GRADED ASPHALT FRICTION COURSE

650-1 DESCRIPTION

24 Perform the work covered by this section including, but not limited to, construction of a plant
25 mixed open-graded asphalt friction course (OGFC) properly laid upon a prepared surface in
26 accordance with these Specifications and in conformity with the lines, grades, thickness and
27 typical sections shown on the plans; producing, weighing, transporting, placing and rolling the
28 plant mix as specified in Section 610; furnishing the asphalt binder, anti-strip additive, fiber
29 stabilizing additive and all other materials for the plant mix; furnishing and applying tack coat
30 as specified; providing QC as specified in Section 609 as modified for OGFC; surface testing
31 of the completed pavement; furnishing scales; making any repairs or corrections to the friction
32 course that may become necessary and maintaining the friction course until final acceptance
33 of the project.