

1 Any density lot not meeting minimum density requirements detailed in Table 610-6 will be
 2 evaluated for acceptance in accordance with Article 105-3. If the lot is determined not to be
 3 acceptable, the mix will be removed and replaced with mix meeting and compacted to the
 4 requirement of these *Standard Specifications*.

5 **610-15 MAINTENANCE**

6 Maintain the plant mix pavement in an acceptable condition until final acceptance of the
 7 project. Immediately repair any defects or damage that may occur. Perform maintenance to
 8 damaged or defective pavement and repeat as often as may be necessary to keep the base or
 9 pavement in an acceptable condition.

10 **610-16 MEASUREMENT AND PAYMENT**

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

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

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

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

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

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

30 No direct payment will be made for final surface testing covered by this section. Payment at
 31 the contract unit prices for the various items covered by those sections of the *Standard*
 32 *Specifications* directly applicable to the work constructed will be full compensation for all
 33 work covered by Article 660-11 including, but not limited to, performing testing in
 34 accordance with this Specification, any corrective work required as a result of this testing and
 35 any additional traffic control as may be necessary.

36 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 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
Asphalt Concrete Surface Course, Type S12.5C	Ton
Asphalt Concrete Surface Course, Type S12.5D	Ton

Section 620

**SECTION 620
ASPHALT BINDER FOR PLANT MIX**

620-1 DESCRIPTION

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

620-2 MATERIALS

Refer to Division 10.

Item	Section
Anti-strip Additives	1012-1(G)
Asphalt Binder, All Grades	1020-2
Silicone	1012-1(H)

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

Use a brand of silicone from the NCDOT Approved Products List. Submit a sample and manufacturer's data to the Engineer for approval before use, if proposing to use a brand not on the NCDOT Approved Products List.

620-3 GENERAL REQUIREMENTS

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

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

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

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

When required, incorporate an anti-strip additive. It may be either chemical additive mixed with the asphalt binder or hydrated lime added to the aggregate or a combination of both. Furnish the brand name of the type (lime or chemical), supplier and shipping point of anti-strip additive. Note on the asphalt binder delivery ticket the rate (or quantity), brand of chemical additive when added at the supplier's terminal. Introduce and mix chemical anti-strip additive into the asphalt binder at either the supplier's terminal or at the asphalt plant site at the dosage required by the JMF. Use in-line blending equipment at either location. When added at the asphalt plant, use equipment that meets Subarticle 610-5(B). When added at the supplier's terminal, use equipment that in-line blends with a constant flow of the additive for a minimum of 80% of the asphalt binder loading time. When hydrated lime is used, use equipment to introduce the lime that meets Subarticle 610-5(B). Thoroughly mix chemical anti-strip additive and asphalt binder together before incorporating into the asphalt plant mix.

620-4 MEASUREMENT AND PAYMENT

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

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

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

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

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

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

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

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

$$\mathbf{A} = \mathbf{B} + (\mathbf{D} - \mathbf{C})$$

Where:

A = Adjusted Contract Unit Price

B = Contract Unit Price

C = Base Price Index

D = Monthly Average Terminal F.O.B. Selling Price

25 In the event the Department is unable to secure an F.O.B. selling price from at least
26 4 terminals in a given month, payment will be at the contract unit price for each ton of asphalt
27 binder used in the work during that month.

28 Payment will be made under:

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