

SECTION 02500  
PAVING AND RESURFACING

## PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. This Work shall consist of furnishing and placing one (1) or more courses of aggregates and additives if required on a prepared subgrade in accordance with TDOT Standard Specifications Section 303 and this Section and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown in the plans or established by the Engineer. Mineral aggregates base shall be type A or type B whichever is shown in the plans and called for in the bid schedule.
- B. This Work shall consist of a foundation composed of a hot mixture of aggregate and asphalt prepared in a hot bituminous mixing plant. It shall be constructed in one (1) or more layers on a prepared subgrade, granular subbase, or base in accordance with TDOT Standard Specifications Section 307 and this Section and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown in the plans or as directed by the Engineer.
- C. This Work shall consist of an application of bituminous material and cover material if required on a designated base in accordance with the requirements in TDOT Standard Specifications Section 402 and this Section and in reasonably close conformity with the lines shown in the plans or established by the Engineer.
- D. This Work shall consist of furnishing and applying bituminous material to a previously prepared base or surface to provide a bond for a superimposed course in accordance with the requirements in TDOT Standard Specifications Section 403 and this Section.
- E. This Work shall consist of a bituminous mat composed of mineral aggregate bonded with bituminous material. It shall be constructed on a designated surface in accordance with TDOT Standard Specifications Section 404 and this Section and in reasonably close conformity with the lines, grades, and cross sections indicated in the plans or established by the Engineer.
- F. This Work shall consist of an application of bituminous material followed by an application of cover material in accordance with TDOT Standard Specifications Section 405 and this Section and in reasonably close conformity with the lines, grades, and cross section shown in the plans or established by the Engineer.
- G. TDOT Standard Specifications Section 407 and this Section include general requirements that are applicable to all types of bituminous pavements of the plant mix type irrespective of gradation of aggregate, kind and amount of bituminous material, or pavement used. Deviations from these general requirements will be indicated in the specific requirements for each type.
- H. This Work shall consist of one (1) or more courses of bituminous mixture constructed on the prepared foundation in accordance with TDOT Standard Specifications Section 407 and this Section and the specific requirements of the type under CONTRACT and in reasonably close conformity with the lines, grades,

typical cross sections, and rate of application or thickness shown in the plans or established by the Engineer.

- I. This Work shall consist of an asphaltic concrete pavement composed of a mixture of coarse aggregate, fine aggregate, mineral filler if specified or required, and asphalt cement constructed on a prepared roadbed in accordance with TDOT Standard Specifications Section 411 and this Section and in reasonably close conformity with the lines, grades, typical cross section, and rate of application shown in the plans or established by the Engineer. The provisions in TDOT Standard Specifications Section 407 and this Section shall apply to this construction unless otherwise stipulated.
- J. This Work shall consist of cold planing an existing bituminous plant mix pavement in accordance with the requirements in TDOT Standards Specifications Section 415 and this Section and in reasonably close conformity with the lines and grades shown in the plans or established by the Engineer.

## 1.2 RELATED WORK SPECIFIED ELSEWHERE

Section 01340 - Shop Drawings, Product Data, and Samples  
Section 01410 - Testing Laboratory Services  
Section 01580 - Traffic Signals  
Section 02200 - Earthwork  
Section 02210 - Embankments  
Section 02225 - Earthwork for Structures and Pipelines  
Section 02520 - Cement Concrete Curb, Gutter, and Combined Curb and Gutter  
Section 02522 - Cement Concrete Sidewalks, Driveways, and Median Pavement  
Section 02580 - Pavement Markings  
Section 03300 - Cast-In-Place Concrete

## 1.3 APPLICABLE SPECIFICATIONS

"STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", Latest Revision, Tennessee Department of Transportation (TDOT)

"SUBDIVISION SPECIFICATIONS FOR STREETS AND ROADS", Latest Revision, Metropolitan Government of Nashville and Davidson County

## 1.4 APPLICABLE REFERENCES

"American Association of State Highway and Transportation Officials" (AASHTO), Latest Revision

"American Society for Testing and Materials" (ASTM), Latest Revision

## PART 2 - MATERIALS

### 2.1 MINERAL AGGREGATE BASE

- A. The mineral aggregate shall meet the requirements in TDOT Standard Specifications Subsection 903.05 for Class A or Class B aggregates depending upon whether type A or type B base is required in the construction. Type A base

will require the use of Class A aggregate grading D. Either Class A or Class B aggregate may be used for type B base.

1. When the stationary plant method for mixing is used the aggregate will be accepted for gradation immediately following mixing or immediately prior to mixing based on periodic samples taken from the pugmill output or from the belt feeding the pugmill.
  2. When two (2) or more materials are blended on the road by means of mechanical mixers the aggregate will be accepted for gradation after mixing and before compaction based on samples taken from each layer of base material. Aggregate that does not require blending will be accepted for gradation at the aggregate production plant based on samples taken from stockpiles of plant production immediately prior to delivery to the road.
- B. Calcium chloride shall meet the requirements in TDOT Standard Specifications Subsection 918.02 for type 1, type 2, or calcium chloride liquor.
- C. Sodium chloride shall meet the requirements in TDOT Standard Specifications Subsection 918.03.

## 2.2 BITUMINOUS PLANT MIX BASE (HOT MIX)

- A. The materials used in this construction shall conform to the requirements in TDOT Standard Specifications Subsections 903.06, 918.09 (B), and 904.01.
- B. The specific grading of aggregate to be used will be specified in the CONTRACT or shown in the plans. Mineral aggregate, bituminous material, and the plant mix will be accepted as provided for in TDOT Standard Specifications Subsection 407.02.

## 2.3 PRIME COAT

- A. Materials shall meet the requirements in TDOT Standard Specifications Subsections 903.13, 904.02, and 904.03.
- B. The ranges of application temperatures in degrees Fahrenheit shall be as shown in TDOT Standard Specifications Subsection 402.02.

## 2.4 TACK COAT

Bituminous materials shall conform to the requirements in TDOT Standard Specifications Subsections 904.01 through 904.03 and 918.09 (B).

- A. The ranges of application temperatures in degrees Fahrenheit shall be as shown in TDOT Standard Specifications Subsection 403.02.
- B. When emulsified asphalt is used water as approved by the Engineer may be added to the asphaltic emulsion and thoroughly mixed therewith in such proportion not to exceed thirty (30) percent by volume of added water that the resulting mixture will give the desired cover of residual bitumen. The exact quantity of added water will be established by the Engineer.

## 2.5 DOUBLE BITUMINOUS SURFACE TREATMENT

- A. Materials used in this construction shall meet the requirements in TDOT Standard Specifications Subsections 903.14, 904.02, and 904.03.
- B. The ranges of application temperatures in degrees Fahrenheit shall be as shown in TDOT Standard Specifications Subsection 404.02.

## 2.6 BITUMINOUS SEAL COAT

- A. Materials used in this construction shall meet the requirements in TDOT Standard Specifications Subsections 903.13 and 904.01 through 904.03.
- B. Application temperatures for bituminous materials in degrees Fahrenheit shall be as shown in TDOT Standard Specifications Subsection 405.02.

## 2.7 BITUMINOUS PLANT MIX PAVEMENTS (GENERAL)

The individual materials shall meet the applicable requirements in TDOT Standard Specifications.

- A. Aggregates shall meet the applicable requirements in TDOT Standard Specifications Section 903.
- B. Mineral filler shall meet the requirements in TDOT Standard Specifications Subsection 903.16.
- C. Bituminous materials shall meet the applicable requirements in TDOT Standard Specifications Section 904.
- D. Chemical additive shall meet the requirements in TDOT Standard Specifications Subsection 918.09 (B).
- E. Aggregate shall be separated into coarse and fine aggregate stockpiles. When coarse aggregate is stockpiled by means causing segregation it shall be separated into coarse and medium coarse stockpiles.
- F. Each size and type of aggregate shall be stocked in a separate pile, bin, or stall. The storage yard shall be maintained in an orderly condition with a walkway between stockpiles that are not separated by partitions. The stockpiles shall be readily accessible for sampling.
- G. The mineral aggregate will be conditionally accepted for quality in the stockpile at the producer's site. The bituminous material may be conditionally accepted at the asphalt terminal. Acceptance of the aggregate gradation and asphalt cement content shall be determined from hot bin samples or sample(s) taken from the completed mix at the asphalt plant after it has been loaded onto the trucks for transport to the project as specified herein.
- H. Where anti-stripping additive other than hydrated lime as described in TDOT Standard Specifications Subsection 918.09 (B) and this Section is required it shall be added by approved on line blending equipment at the Contractor's mixing plant.

The dispenser shall be capable of adding heat stable anti-stripping additive within a tolerance of ten (10) percent of the specified rate.

## 2.8 ASPHALTIC CONCRETE SURFACE (HOT MIX)

- A. Materials used in this construction shall meet the requirements in TDOT Standard Specifications Subsections 903.11, 903.16, 904.01, and 918.09 (B).
- B. The mineral aggregate, bituminous material, and plant mix will be accepted as provided for in TDOT Standard Specifications Subsection 407.02.

## PART 3 - EQUIPMENT

All equipment necessary for the satisfactory performance of this construction shall be on the project and approved before Work will be permitted to begin. The equipment used for this construction shall meet the requirements specified in TDOT Standard Specifications Subsections 303.05, 307.04, 402.03, 403.03, 404.03, 405.03, 407.04 through 407.08, 411.04, and 415.02.

## PART 4 - EXECUTION

### 4.1 MINERAL AGGREGATE BASE

Mineral aggregate base shall conform in general construction requirements, mixing, spreading, shaping and compaction, maintenance, thickness requirements, and surface requirements to the requirements in TDOT Standard Specifications Subsections 303.06 through 303.12.

### 4.2 BITUMINOUS PLANT MIX BASE (HOT MIX)

Bituminous plant mix base (hot mix) shall conform in composition of mixtures, general construction requirements, preparation of subgrade, subbase, or surface, and thickness and surface requirement to the requirements in TDOT Standard Specifications Subsections 307.03 and 307.05 through 307.07.

### 4.3 PRIME COAT

Prime coat shall conform in limitations, preparation of surface, application of prime, application of cover material, and maintenance and protection to the requirements in TDOT Standard Specifications Subsections 402.04 through 402.08.

### 4.4 TACK COAT

Tack coat shall conform in preparation of surface and application of bituminous material to the requirements in TDOT Standard Specifications Subsections 403.04 and 403.05.

### 4.5 DOUBLE BITUMINOUS SURFACE TREATMENT

Double bituminous surface treatment shall conform in limitations, preparing designated surface, applications of bituminous material and mineral aggregate, rolling and curing, shoulders, and maintenance and protection to the requirements in TDOT Standard Specifications Subsections 404.04 through 404.09.

#### 4.6 BITUMINOUS SEAL COAT

Bituminous seal coat shall conform in limitations, preparing the designated surface, application of bituminous material, spreading and rolling aggregate, shoulders, and maintenance and protection to the requirements in TDOT Standard Specifications Subsections 405.04 through 405.09.

#### 4.7 BITUMINOUS PLANT MIX PAVEMENT (GENERAL)

Bituminous plant mix base (hot mix) shall conform in composition of mixtures (includes Contractor's quality control system), weather limitations, conditioning of existing surface, preparation of bituminous material, preparation of aggregates, mixing, spreading and finishing, compaction (includes density requirements and test strips), joints, pavement samples, and surface requirements to the requirements in TDOT Standard Specifications Subsections 407.03 and 407.09 through 407.18.

#### 4.8 ASPHALTIC CONCRETE SURFACE (HOT MIX)

Asphaltic concrete surface (hot mix) shall conform in composition of mixtures, general construction requirements, preparing the designated surface, mixing, and surface requirements to the requirements in TDOT Standard Specifications Subsections 411.03 and 411.05 through 411.08.

#### 4.9 COLD PLANING OF BITUMINOUS PLANT MIX PAVEMENTS

Cold planing of bituminous plant mix pavements shall conform in general requirements and surface requirements to the requirements in TDOT Standard Specifications Subsections 415.03 and 415.04.

#### 4.10 PAVEMENT REPAIR

Where trenches have been opened in any roadway or street that is a part of the State highway system surfaces shall be restored in accordance with the requirements of the Tennessee Department of Transportation. All other restoration shall be done in accordance with this Section and Public Works details.

- A. Excavation in the pavement area shall require that pavement surfaces be cut and brought to a neat line by use of an air hammer, saw, or other suitable equipment.
- B. Upon completion of installation of utility backfill fill the trench with mineral aggregate type A, grading D (crusher run stone) and temporary asphalt patch with two (2) inches of cold mix or hot bituminous seal coat until such time that the permanent pavement patch is constructed.
- C. Complete the pavement restoration for the various types of roadway typical sections in conformance with Public Works details and this Section.
- D. Concrete curb or combined curb and gutter, driveways, median pavement, and sidewalks shall be restored as required to match existing construction. Replace damaged sections with complete new sections or squares. Patching of damaged sections will not be permitted.

- E. Maintain restored sections and surfaces as part of this CONTRACT for a period of one (1) year following the date of final acceptance.
- F. The minimum width to be trimmed on each side of the trench line as seen in the section may be waived or amended upon approval of the Inspector however a minimum width of replacement shall be four (4) feet to allow for a roller.
- G. All excavations made within public right-of-way will require excavation and street closure permits from the Department of Public Works prior to commencing Work.
- H. Flowable fill shall meet the requirements in TDOT Standard Specifications Section 204 except as modified in Pubic Works Technical Specifications Section 02225 latest revision.
- I. When a manhole top or other utility casting requires adjustment to an elevation one (1) inch or more above the existing pavement grade and is exposed to traffic before final paving is completed a temporary ramp shall be constructed by feathering bituminous concrete for three hundred sixty (360) degrees around the manhole or utility casting. A taper slope of not less than two (2) feet per one (1) inch shall be used. During the paving operation but prior to the placement of the topping course the bituminous concrete taper shall be removed from around the manhole to a minimum depth of one (1) inch below the top of manhole.

#### 4.11 CASTING ADJUSTMENTS

Manholes, catch basins, inlets, valve boxes and all other utility structures shall be constructed in accordance with Section 611.10 of the TDOT "Standard Specifications for Road and Bridge Construction". All castings and fittings shall be placed in the positions indicated on the Plans or as directed by the Engineer, and shall be set true to line and grade.

- A. Drainage grates located within the right of way shall be bicycle friendly as shown on Metro Public Works Standard Drawings ST- 506, ST- 506a or ST-506b. Exceptions to these standards require prior written approval of the Metro Engineer.
- B. Backfill of the new adjusted casting shall be accomplished using an asphalt binder as defined in Section 307 of the TDOT "Standard Specifications for Road and Bridge Construction" and shall be placed in accordance with Section 407.09, 407.11, and 407.15 with regard to Weather Limitations, Material Temperature, and Compaction requirements. Binder shall be placed in no more than 3 inch lifts and compacted using a compaction process to achieve required density..

## PART 5 - MEASUREMENT AND PAYMENT

5.1 METHOD OF MEASUREMENT

## A. Mineral Aggregate Base.

Mineral aggregate for mineral aggregate base, type A or type B will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109.

1. When mixing is performed in a stationary plant the weight of all surface moisture on the aggregate at the time of weighing in excess of eight (8) percent will be deducted. No direct payment for water will be made.
2. When mixing is performed on the road the weight of surface moisture on the aggregate at the time of weighing in excess of eight (8) percent will be deducted. Water added to the materials on the road at the direction of the Engineer will be measured for payment.
3. Water measured for payment as provided in TDOT Standard Specifications Subsection 303.13 and above will be measured by the M.G. (1000 gallons) by means of calibrated tanks or distributors or by means of accurate water meters.
4. Sodium chloride will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109.
5. Calcium chloride will be measured by the ton.
6. Calcium chloride received in liquid form will be weighed as provided for in TDOT Standard Specifications Section 109. The weight of liquid calcium chloride will be converted to tons by using the following formulae:

32% solution:

$$\frac{((\text{total tons of 32\% solution}) \times 0.32)}{(0.94)} = \text{tons}$$

38% solution:

$$\frac{((\text{total tons of 38\% solution}) \times 0.38)}{(0.94)} = \text{tons}$$

7. When calcium chloride liquor in a solution of 32% or more but less than 38% is used it will be paid for as a 32% solution. A solution of 38% or greater will be paid for as a 38% solution.

## B. Bituminous Plant Mix Base (hot mix).

Aggregate and asphalt cement for bituminous plant mix base (hot mix) will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Subsection 407.19 and subparagraph 5.1 G below. Materials for



prime or tack coat if specified will be measured as prescribed in TDOT Standard Specifications Sections 402 or 403 and subparagraphs 5.1 C and D below.

1. If recycled mix is used the completed mix including new mineral aggregate, planings, asphalt cement, and additive shall be measured by the ton in accordance with TDOT Standard Specifications Section 109. For bidding purposes the asphalt cement content of the specified mixes shall be as shown in the Contract Documents. In the event that the Engineer sets an asphalt content other than that stated in the Contract Documents a price adjustment will be made based on the asphalt content set by the Engineer and the invoice price of the asphalt cement F.O.B. the asphalt plant. The price adjustment will be calculated according to the formula in the Contract Documents.
2. The liquid anti-strip additive will be measured by the gallon and paid as outlined in TDOT Standard Specifications Subsection 307.09 and subparagraph 5.2 B below. Hydrated lime will be measured by the ton and paid as outlined in TDOT Standard Specifications Subsection 307.09 and subparagraph 5.2 B below.
3. No direct payment will be made for polymer or latex additives and cost thereof shall be included in the Contract Unit Bid Price for the modified asphalt cement or modified mixture.

C. Prime Coat.

Bituminous material and cover material will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109. Net certified weights may be used as a basis of measurement for cover material aggregate subject to correction for aggregate that is lost, wasted, or otherwise not incorporated in the Work. Water used at the direction of the Engineer to dampen the base prior to applying bituminous materials shall be measured by the M.G. (1000 gallons) by means of calibrated tanks or distributors or by means of accurate water meters.

D. Tack Coat.

Bituminous material for tack coat will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109. Water used for dilution of asphalt emulsion will not be measured for payment.

E. Double Bituminous Surface Treatment.

Mineral aggregate and bituminous material will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109. Net certified weights may be used as a basis of measurement for mineral aggregate subject to correction for aggregate that is lost, wasted, or otherwise not incorporated in the Work.

## F. Bituminous Seal Coat.

Mineral aggregate and bituminous material will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109. Net certified weights may be used as a basis of measurement for mineral aggregate subject to correction for aggregate that is lost, wasted, or otherwise not incorporated in the Work.

## G. Bituminous Plant Mix Pavements (general).

Chemical additives or modifiers when required will not be measured for payment but will be considered as part of the asphalt cement.

1. Mineral filler will not be measured separately for payment but will be included in mineral aggregates.
2. Asphalt cement and mineral aggregate including mineral filler when required will be measured by the ton.
3. Where the mix is loaded from a storage or surge bin the quantities will be determined by weighing the completed mix on truck scales meeting the requirements in TDOT Standard Specifications Section 109 and calculating the weight of asphalt cement and mineral aggregate based on percentages measured into the mix by the appropriate scales or meters described in TDOT Standard Specifications Subsection 407.04.
4. Where the mix is loaded directly into the hauling equipment from a batch plant asphalt cement and mineral aggregate will be measured in batch quantities by scales or scales and meters as described in TDOT Standard Specifications Subsection 407.04 (b).
5. Where a continuous mix plant is used bituminous material for bituminous plant mix pavement will be measured by the ton in accordance with the provisions in TDOT Standard Specifications Section 109. The mineral aggregate including mineral filler when required will be determined by weighing the bituminous pavement mixture on truck scales meeting the requirements in TDOT Standard Specifications Section 109 and deducting the weight of the bituminous material from the weight of total mixture accepted.
6. When the Work described under TDOT Standard Specifications Subsection 407.10 is required the removal and disposal of existing surface (concrete) will be measured by the square yard in accordance with the provisions in TDOT Standard Specifications Section 109. Such measurement shall include the removal of bituminous overlay.
7. The removal and disposal of existing surface (bituminous) will be measured by the cubic yard in accordance with the provisions in TDOT Standard Specifications Section 109. Such measurement shall include the removal of base material except concrete as directed by the Engineer.

8. Removal of unsatisfactory subgrade material where existing pavement has been removed will be measured by the cubic yard in accordance with the provisions in TDOT Standard Specifications Subsection 203.09 and Section 02200 - Earthwork. Material used to replace such undercutting will be measured and paid for in accordance with the specification for the type of material used.
9. Bituminous mixtures used to fill openings left by pavement removal will be measured for payment in accordance with the provisions in TDOT Standard Specifications Subsection 407.19 and subparagraph 5.2 G. Base materials used to fill openings left by base removal will be measured as provided for in the respective TDOT Standard Specifications sections for each type specified.
10. Adjustment of catch basin grates and frames, water valve boxes, gas valve boxes, and manhole covers and frames shall be measured per each when required.

H. Asphaltic Concrete Surface (hot mix).

Mineral aggregate including mineral filler when required and asphalt cement for asphaltic concrete surface (hot mix) will be measured as prescribed in TDOT Standard Specifications Subsection 407.19 and subparagraph 5.1 G above. Mineral filler when required will not be measured for payment separately but will be included as mineral aggregate.

1. Asphaltic concrete surface (hot mix) (shoulders) including new mineral aggregate, plantings, asphalt cement, and additive shall be measured by the ton in accordance with TDOT Standard Specifications 109. For bidding purposed the asphalt cement content of the specified mix shall be as shown in the Contract Documents for 411 E used as a surface on the shoulders. In the event that the Engineer sets an asphalt content other than that stated in the Contract Documents a price adjustment will be made based on the asphalt content set by the Engineer and the invoice price of the asphalt cement F.O.B. the asphalt plant. The price adjustment will be calculated according to the formula shown in the Contract Documents.
2. The liquid anti-strip additive will be measured by the gallon and paid as outlined in TDOT Standard Specifications Subsection 411.10 and subparagraph 5.2 G below. Hydrated lime will be measured by the ton and paid as outlined in TDOT Standard Specifications Subsection 411.10 and subparagraph 5.2 G below.
3. No direct payment will be made for polymer or latex additives and cost thereof shall be included in the Contract Unit Bid Price for the modified asphalt cement or modified mixture.

## I. Cold Planing of Bituminous Plant Mix Pavements.

Cold planing of bituminous pavement will be measured by the ton of material removed, by the cubic yard of material removed, or by the square yard of planed pavement. The method of measurement will depend upon the pay item designated in the proposal.

1. Where payment is by the ton the material removed from areas acceptably planed will be measured by the ton in accordance with TDOT Standard Specifications Section 109.
2. Where payment is by the cubic yard the material removed from areas acceptably planed will be measured by the cubic yard in accordance with TDOT Standard Specifications Section 109.
3. Where payment is by the square yard the pavement acceptably planed will be measured by the square yard in accordance with TDOT Standard Specifications Section 109.
4. Unless otherwise specified water used to control dust will not be measured for separate payment but will be considered incidental to the planing operation.
5. Salvage value of cold planings will be measured in the same units and by the same method as cold planing of bituminous pavement.

5.2 BASIS OF PAYMENT

## A. Mineral Aggregate Base.

1. The accepted quantities of mineral aggregate base of the type specified will be paid for at the Contract Unit Bid Price per ton for mineral aggregate, per ton for calcium chloride, per ton for sodium chloride and per M.G. (1000 gallons) for water complete in place.
2. The Work required for preparation of subgrade as provided for under TDOT Standard Specifications Subsection 303.06 and this Section will be measured and paid for in accordance with the provisions in the applicable TDOT Standard Specifications Sections or Subsections and Public Works Technical Specifications Section under which the Work is performed.

## B. Bituminous Plant Mix Base (hot mix).

The accepted quantities of bituminous plant mix base (hot mix) complete in place will be paid for at the Contract Unit Bid Price per ton for the aggregate and/or the asphalt cement. Accepted quantities of prime coat or tack coat will be paid for in accordance with the provisions in TDOT Standard Specifications Sections 402 or 403 respectively and this Section.

1. In cases where the combined specific gravity of the mineral aggregate exceeds two and eighty-hundredths (2.80) the tonnage of mineral aggregate will be adjusted for payment by multiplying the tonnage of mineral aggregate used by a specific gravity of two and eighty-hundredths (2.80) and dividing by the higher specific gravity.
  2. The Work required for preparation of subgrade, subbase, base, or surface as provided for under TDOT Standard Specifications Subsection 307.06 and this Section will be measured and paid for in accordance with the provisions in the applicable TDOT Standard Specifications Sections or Subsections and Public Works Technical Specifications Section under which the Work is performed.
  3. If recycled mix is used the accepted quantities of bituminous plant mix base (hot mix) complete in place will be paid for at the Contract Unit Bid Price per ton of the total mix which will include mineral aggregate, planings, asphalt cement, and additive. Payment will be made to the Contractor for additional asphalt cement as provided for in TDOT Standard Specifications Section 307 and this Section at the purchase price F.O.B. the asphalt mixing plant as verified by invoice and no compensation will be allowed for further handling or processing. The Department of Public Works will be reimbursed from monies due the Contractor for a decrease in asphalt cement content in the amount equal to the purchase price F.O.B. the asphalt plant.
  4. The liquid anti-strip additive will be paid for based on certified invoices of material cost not to exceed fifteen (15) dollars per gallon. Hydrated lime anti-strip additive will be paid for based on certified invoices of material cost not to exceed ninety (90) dollars per ton. This payment shall be full compensation for all labor, materials, equipment, and other incidentals incurred in utilizing the anti-strip additive.
- C. Prime Coat.
- The accepted quantities of prime coat will be paid for at the Contract Unit Bid Price per ton for bituminous material, per ton for cover material, and per M.G. (1000 gallons) for water complete in place.
- D. Tack Coat.
1. The accepted quantities of tack coat will be paid for at the Contract Unit Bid Price per ton for bituminous material complete in place.
  2. The Work required for preparing the designated surface as provided for under TDOT Standard Specifications Subsection 403.04 and this Section will be measured and paid for in accordance with the provisions in the applicable TDOT Standard Specifications Sections or Subsections and Public Works Technical Specifications Section under which the Work is performed.

## E. Double Bituminous Surface Treatment.

1. The accepted quantities of double bituminous surface treatment will be paid for at the Contract Unit Bid Price per ton for bituminous material and per ton for mineral aggregate complete in place.
2. The Work required for preparing the designated surface as provided for under TDOT Standard Specifications Subsection 404.05 and this Section will be measured and paid for in accordance with the provisions in the applicable TDOT Standard Specifications Sections or Subsections and Public Works Technical Specifications Section under which the Work is performed.

## F. Bituminous Seal Coat.

1. The accepted quantities of bituminous seal coat will be paid for at the Contract Unit Bid Price per ton for bituminous material and per ton for mineral aggregate complete in place.
2. The Work required for preparing the designated surface as provided for under TDOT Standard Specifications Subsection 405.05 and this Section will be measured and paid for in accordance with the provisions in the applicable TDOT Standard Specifications Sections or Subsections and Public Works Technical Specifications Section under which the Work is performed.

## G. Bituminous Plant Mix Pavements (general).

All Work performed and measured as prescribed in TDOT Standard Specifications Section 407 and this Section will be paid for as provided in the respective TDOT Standard Specifications sections for each type specified. Acceptance of the mixture, defective materials, acceptance procedures, additional tests, and acceptance for mix density on the roadway will be paid for as described in TDOT Standard Specifications Subsection 407.20.

## H. Asphaltic Concrete Surface (hot mix).

The accepted quantities of asphaltic concrete surface (hot mix) will be paid for at the respective Contract Unit Bid Price per ton for mineral aggregate and asphalt cement.

1. Asphaltic concrete surface (hot mix) (shoulders) containing recycled material complete in place will be paid for at the Contract Unit Bid Price per ton of the total mix which will include mineral aggregate, planings, asphalt cement, and additive. Payment will be made to the Contractor for additional asphalt cement as provided for in TDOT Standard Specifications Section 411 and this Section at the purchase price F.O.B. the asphalt mixing plant as verified by invoice and no compensation will be allowed for further handling or processing. The Department of Public Works will be reimbursed from monies due the Contractor for a decrease in asphalt cement content in the amount equal to the purchase price F.O.B. the asphalt plant.

2. The liquid anti-strip additive will be paid for based on certified invoices of material cost not to exceed fifteen (15) dollars per gallon. Hydrated lime anti-strip additive will be paid for based on certified invoices of material cost not to exceed ninety (90) dollars per ton. This payment shall be full compensation for all labor, materials, equipment, and other incidentals incurred in utilizing the anti-strip additive.
3. In cases where the combined specific gravity of mineral aggregate exceeds two and eighty-hundredths (2.80) the tonnage of mineral aggregate will be adjusted for payment by multiplying the tonnage of mineral aggregate used by a specific gravity of two and eighty-hundredths (2.80) and dividing by the higher specific gravity.
4. The Work required for preparing the designated surface as provided for under TDOT Standard Specifications Subsection 411.06 and this Section will be measured and paid for in accordance with the provisions in the applicable TDOT Standard Specifications Sections or Subsections and Public Works Technical Specifications Section under which the Work is performed.
5. When the approved job mix formula includes a mixture of limestone with gravel, granite, slag, quartzite, or gneiss tests for the percent loss on ignition of the limestone aggregate in the asphalt paving mix shall be performed according to the provisions in TDOT Standard Specifications Subsection 407.03.
6. In the event the percent of loss on ignition in the aggregate differs by more than plus or minus two ( $\pm 2$ ) percent from the loss on ignition indicated in the job mix formula a deduction in payment in the Contract Unit Bid Price for the mix shall be made not as a penalty but as liquidated damages. The percent of total payment to be deducted shall be five (5) times the percent that the loss on ignition exceeds the job mix formula tolerance of plus or minus two ( $\pm 2$ ) percent.
7. All mix produced with aggregate tested and found to have a loss on ignition that differs more than plus or minus six ( $\pm 6$ ) percent from the loss on ignition indicated in the job mix formula shall be replaced or overlaid at the expense of the Contractor.
8. For the purpose of determining the deduction lots of approximately five thousand (5000) square yards will be used. The sampling and testing to establish the loss on ignition will be performed in accordance with the Department of Public Works sampling and testing procedures. In event the initial tests indicates a variation in the loss on ignition of greater than plus or minus two ( $\pm 2$ ) percent than the value shown on the mix design the additional sampling necessary to establish the loss on ignition of the aggregate in each lot shall be performed by the Contractor with the cost of the sampling being included in the Contract Unit Bid Price for the paving items.
9. Any deduction for excess variation in loss on ignition shall be made under item 411-03.40.

- I. Cold Planing of Bituminous Plant Mix Pavements.
  1. The accepted quantity of cold planed bituminous pavement will be paid for at the Contract Unit Bid Price which payment shall be full compensation for all labor, materials, equipment, hauling, and incidentals necessary to plane the pavement, control dust, and dispose of the cuttings.
  2. The Contract Unit Bid Price for salvage value of cold planing will be deducted from monies due the Contractor to compensate the Department of Public Works for the removed material.

**END OF SECTION - 02500**