

TECHNICAL SPECIFICATIONS
FOR
BITUMINOUS PLANT MIX BASE

1. Description

This work shall consist of a foundation composed of hot mixture of aggregate and asphalt prepared in a hot bituminous mixing plant. It shall be constructed in one or more layers, on a prepared subgrade, subbase, or base, in accordance with these Specifications and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the Plans or as directed by the Engineer. Each course shall have a thickness after compaction of not more than 4 inches. This construction shall include a leveling course if specified on the Plans.

2. Materials

- (a) Asphalt Cement shall conform to the requirements of AASHTO Designation M 226 for Viscosity Grade AC-20.
- (b) Aggregates shall conform to Subsection 903.06 of TDOTSS, January 1, 2021, and all Supplemental Specifications through the date of the advertisement for this Contract. Grading B and B-M shall be used for base placed upon subgrade or base, and Grading C shall be used on existing pavement for leveling courses, Grading C-S and C-W shall be used for surface unless otherwise specified in the Contract or Plans.

3. Composition of Mixtures

- (a) The bituminous base shall be composed of aggregate and bituminous material. The mix shall comply with the applicable requirements of Subsection 407.03 of TDOTSS, January 1, 2021.
- (b) The proportions by weight of the total mixture shall be as follows:

<u>Mixtures</u>	<u>Combined Mineral Aggregate</u>	<u>Asphalt Cement</u>
Grading "B" and "B-M"	93.8 - 95.8	4.2 - 6.2
Grading "C" and "C-W"	93.8 - 95.8	4.2 - 6.2
Grading "C-S"	92.3 - 94.7	5.3 - 7.7

4. Equipment

All equipment necessary for the construction shall be approved before the work will be permitted to begin. The equipment shall meet the requirements of Subsections 407.04 through 407.08 of TDOTSS, January 1, 2021, and as revised by all Supplemental Specifications dated through the date of the advertisement for this Contract.

5. (a) The construction requirements shall be as prescribed in Subsection 407.09 and Subsections 407.11 through 407.16 TDOTSS, January 1, 2021, and as revised by all Supplemental Specifications dated through the date of this advertisement, and the requirements listed below.
- (b) The Plans will indicate whether the bituminous pavement is to be constructed on a subbase, mineral aggregate base, asphalt base, or an existing surface. The surface of the base or subbase upon which the construction is to be placed shall meet the requirements of the applicable Sections of the Grading, Mineral Aggregate Base, and Bituminous Plant Mix Base Specifications.
- (c) When bituminous mixes are placed upon existing concrete pavement, with or without bituminous overlay, all excess bituminous material shall be removed from joints and cracks.

When bituminous mixes are placed upon existing bituminous pavement, any areas containing excess bitumen and any failures in existing pavement shall be removed to a depth up to 3 feet and backfilled with crushed stone base up to the bottom of the surrounding pavement structure and with appropriate asphaltic base, leveling or surface material to the existing surface, all as directed by the Engineer. Crushed stone base material, asphaltic base, leveling, and surface materials to be paid at the Contract Unit Price for those items. Pavement removal and undercut up to 3 feet will be measured and paid in accordance with subparagraph 6(c) and 7(b) of this Section.

The existing pavement surface shall be thoroughly cleaned of all dirt and loose particles prior to the application of tack coat or prime coat as specified in Specifications for Tack Coat and Prime Coat.

- (d) Thickness shall be controlled during the spreading operation by frequent measurements taken of the freshly spread mixture to establish relationship between the uncompacted mixture and the completed course. Thickness or pounds per square yard shall be within reasonably close conformity with that specified on the Plans.
- (e) Under Subsection 407.18 of TDOTSS, January 1, 2021, the surface of the bases meet the requirements specified and when tested in accordance with the provisions of that Subsection, the deviation of the surfaces from the testing edge of the straight-edge shall not exceed the amounts shown below for the several types of mixtures.

Grading B and B-M Mixture	3/8 inch
Grading C Mixture	3/8 inch
Grading C-W Mixture	3/8 inch
Grading C-S Mixture	3/8 inch

- (f) Subsection 307.03(B) (1), Recycled Asphalt Pavement, will be accepted for Grading B, Grading B-M and Grading C with the following exception: The Contractor shall be responsible for providing a fully coated and workable mixture that shall have a Marshall Stability of not less than 1,000 pounds when tested in accordance with AASHTO - T-245, and the compactive effort for all specimens shall be 75 blows of the hammer on each end. No adjustments for asphalt content increases or decreases shall be provided under these Specifications.

6. Method of Measurement

- (a) Bituminous plant mix base, including the mineral aggregate and asphalt cement as specified or required by these Specifications, will be measured by the ton of 2,000 pounds, accepted and placed as indicated or directed.
- (b) Materials for prime or tack coat will be measured for payment as prescribed in their Specifications.
- (c) The surface measurements of any pavement, base or subbase removal shall be made in square yards by the Engineer prior to backfilling.
- (d) Bituminous mixtures used to fill openings left by pavement removal will be measured for payment. Base materials used to fill openings left by base removal will be measured as provided for in the respective Sections for each type specified.
- (e) Adjustment of sewer manholes and castings will be measured for payment as prescribed in its Specification.
- (f) No allowance will be made for unacceptable material; for material used in replacing defective or condemned construction; or for material wasted in handling, hauling or otherwise.

7. Basis of Payment

- a) The accepted quantity of bituminous plant mix base, complete in place, will be paid for at the Contract Unit Price per ton for each "Grading" listed in the Bid Schedule and constructed in accordance with the Plans and Specifications.
- b) The accepted quantity of pavement, base and subbase removal up to 3 feet in depth will be paid for at the Contract Unit Price per square yard listed in the Bid Schedule and performed in accordance with the Plans, Specifications, and under the direction of the Engineer.