

SECTION 32 12 16
ASPHALT PAVING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This work shall cover the composition, mixing, construction upon the prepared subgrade, and the protection of hot asphalt concrete pavement. The hot asphalt concrete pavement shall consist of an aggregate base course and asphalt concrete pavement courses constructed in conformity with the lines, grades, thickness, and cross sections as shown. Each course shall be constructed to the depth, section, or elevation required by the Drawings and shall be rolled, finished, and approved before the placement of the next course.

1.2 RELATED WORK

- A. Laboratory and field testing requirements: Section 01 45 29, TESTING LABORATORY SERVICES.
- B. Subgrade Preparation: Subsection 3.2 and Section 31 20 00, EARTH MOVING.
- C. Curbs and Gutters and Sidewalks: Section 32 05 23, CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS
- D. Pavement Markings: Section 32 17 23, PAVEMENT MARKINGS.

1.3 INSPECTION OF PLANT AND EQUIPMENT

- A. The COTR shall have access at all times to all parts of the material producing plants for checking the mixing operations and materials and the adequacy of the equipment in use.

1.4 ALIGNMENT AND GRADE CONTROL

- A. The Contractor's Registered Professional Land Surveyor shall establish and control the pavement (aggregate base course and asphalt concrete courses) alignments, grades, elevations, and cross sections as shown on the Drawings.

1.5 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES, submit the documentation listed in the following paragraphs.
- B. Data and Test Reports:
 - 1. Aggregate Base Course: Sources, gradation, liquid limit, plasticity index, percentage of wear, and other tests required by the Texas Department of Transportation (TDOT).
 - 2. Asphalt Concrete Base and Wearing (Surface) Courses: Aggregate source, gradation, soundness loss, percentage of wear, and other tests required by TDOT.
 - 3. Job-mix formula for each asphalt concrete pavement course.
- C. Certifications:
 - 1. Asphalt prime and tack coat material certificate of conformance to TDOT requirements.
 - 2. Asphalt material certificate of conformance to TDOT requirements.
 - 3. Job-mix certification - Submit plant mix certification that mix equals or exceeds the referenced TDOT Standard Specifications.
- D. Provide MSDS (Material Safety Data Sheets) for all chemicals used on the ground.

1.6 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. Texas Department of Transportation - TDOT Standard Specifications.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Aggregate base and asphalt concrete materials shall conform to the requirements of this Section and the referenced TDOT Standard Specifications, including amendments, addenda and errata. Where the terms "Engineer", "Commissioner" or "Department" are referenced in the TDOT Standard Specifications, they shall mean the Department of Veterans Affairs (VA) COTR or VA Contracting Officer.

2.2 AGGREGATES

- A. Provide aggregates consisting of crushed stone, gravel, sand, or other sound, durable mineral materials processed and blended, and naturally combined.
- B. Aggregate Base Course Material: Conform to the requirements of Section 208 of the TDOT Standard Specifications.
- C. Aggregates for Asphalt Concrete Base and Surface Courses: Conform to the requirements of Section 211.02 of the TDOT Standard Specifications.

2.3 ASPHALT PAVING MIXTURES

- A. Asphalt Concrete Base Course: Provide a mixture of mineral aggregate and asphalt material conforming to the requirements of Section 211 of the TDOT Standard Specifications for BM-25.0 A mix type.
- B. Asphalt Concrete Surface Course: Provide a mixture of mineral aggregate and asphalt material conforming to the requirements of Section 211 of the TDOT Standard Specifications for SM-9.0 A or SM-9.5 A mix type

2.4 ASPHALT TACK AND PRIME COATS

- A. Asphalt tack and prime coat materials shall conform to Sections 310 and 311, respectively, of the TDOT Standard Specifications.

PART 3 - EXECUTION

3.1 GENERAL

- A. The asphalt concrete paving equipment, weather limitations, job-mix formulas, mixing, construction methods, compaction, finishing, tolerance, and protection shall conform to the requirements of the appropriate sections of the TDOT Standard Specifications for the type of material specified.

3.2 SUBGRADE

- A. Conform to the applicable requirements of Section 305 of the TDOT Standard Specifications and as specified in the following paragraphs.
- B. Excavate and grade subgrade for asphalt paving as specified in Section 31 20 00, EARTHMOVING.
- C. Shape to line and grade and compact with self-propelled rollers.
- D. All depressions that develop under rolling shall be filled with acceptable material and the area re-rolled.
- E. Soft areas shall be removed and filled with acceptable materials and the area re-rolled.
- F. Should the subgrade become rutted or displaced prior to the placing of the aggregate base course, it shall be reworked to bring to line and grade.
- G. Proof-roll the subgrade with maximum 50 ton gross weight dump truck, unless otherwise directed by the VA COTR. If pumping, pushing, or other movement is observed, rework the area to provide a stable and compacted subgrade.

3.3 AGGREGATE BASE COURSE

- A. Conform to the applicable requirements of Section 305 of the TDOT Standard Specifications and as specified in the following paragraphs.
- B. Spread and compact to the thickness shown on the Drawings.
- C. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement ahead of the roller.
- D. The aggregate base course shall be compacted as specified in Section 309.05 of the TDOT Standard Specifications.
- E. After completion of the base rolling there shall be no hauling over the base other than the delivery of material for the top course.
- F. Thickness tolerance: Provide the compacted thicknesses shown on the Drawings within a tolerance conforming to the requirements Section 308.04 of the TDOT Standard Specifications.
- G. Moisture content: Use only the amount of moisture needed to achieve the specified compaction.

3.4 CURBS AND GUTTERS

- A. Construct combination curb and gutter on completed prepared aggregate base course surface to the required alignment and grades prior to construction of asphalt concrete pavement courses as shown on the Drawings and specified in Section 32 05 23.

3.5 PLACEMENT OF ASPHALT CONCRETE COURSES

- A. Conform to the applicable requirements of Section 315 of the TDOT Standard Specifications and as specified in the following paragraphs.
- B. Remove all loose materials from the compacted aggregate base course.
- C. Apply the specified tack coat to all contact surfaces of adjacent pavement edges, curbs, gutters, and other structures immediately prior to placement of asphalt concrete pavement in conformance with Sections 310 and 315.05 of the TDOT Standard Specifications.
- D. Prime coat will not be required if total thickness of asphalt concrete will be 4 inches or more.
- E. Receipt of asphalt concrete materials:
 - 1. Conform to the requirements of Section 315 of the TDOT Standard Specifications for equipment requirements and limitations on weather and surface conditions for asphalt concrete pavement construction.
- F. Spreading and Rolling:
 - 1. Place, finish, and compact asphalt concrete in conformance with the requirements of Sections 315.05(c) and 315.05(d) of the TDOT Standard Specifications and as specified in the following paragraphs.
 - 2. Spread material in a manner that requires the least handling.
 - 3. After the material has been spread to the proper depth for each course, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations shown on the Drawings.
 - 4. Roll in at least two directions until no roller marks are visible.
- G. Finished paving smoothness tolerance: As specified in Section 315.07 of the TDOT Standard Specifications.

3.6 PROTECTION

- A. Protect the asphalt concrete pavement areas from traffic until acceptance of the construction work by the VA COTR and VA Contracting Officer.

3.8 FINAL CLEAN-UP

- A. Remove all debris, rubbish, and excess material from the work area.

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