

SECTION 321216 - ASPHALT PAVING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Aggregate base course.
 - 2. Asphalt concrete binder and surface course.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 SUBMITTALS

- A. Submittals for Review:
 - 1. Mix Designs: Indicate composition of each type asphaltic concrete.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 2 years experience in work of this Section.
- B. Perform work in accordance with AI MS-8.
- C. Mixing Plant: AI MS-3.
- D. Obtain materials from same source throughout work.

1.4 PROJECT CONDITIONS

- A. Do not place asphalt when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Base Course: Crushed stone or pit run gravel, free of shale, clay, friable material, and debris, graded in accordance with ASTM C136 within following limits:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
2-1/2 inch	100
2 inch	90 to 100
1-1/2 inch	35 to 70
1 inch	0 to 15
1/2 inch	0 to 5

- B. Asphalt Cement: ASTM D946.
- C. Aggregate: Crushed stone or washed gravel and sand, graded in accordance with AI MS-2.
- D. Primer: AI MS-19, homogenous, medium curing, cut back liquid asphalt.
- E. Tack Coat: AI MS-19, homogenous, rapid curing, cut back liquid asphalt.

2.2 MIXES

- A. Asphaltic Concrete:

1. Uniform mixture of coarse and fine aggregate, mineral filler, and asphalt cement, accurately proportioned by weight in accordance with AI MS-2.
2. Binder course: Coarse graded aggregate, 4.5 to 6.0 percent asphalt cement by weight.
3. Surface course: Fine graded aggregate, 5.0 to 7.0 percent asphalt cement by weight.

PART 3 EXECUTION

3.1 CONSTRUCTION

- A. Aggregate Base Course:
1. Place to depth indicated in Drawings after compaction.
 2. Roller compact to minimum 95 percent. Add small quantities of fine aggregate if necessary to aid compaction.
 3. Uniformly grade areas to smooth surface at required grades and elevations. Make grade changes gradually. Blend slopes into level grades.
 4. Tolerances: Within plus or minus 1 inch of required elevation.
- B. Primer: Apply to base course and contact surfaces of curbs and abutments at minimum rate of 1/3 gallon per square yard.
- C. Asphaltic Concrete:
1. Place within 24 hours after applying primer.
 2. Minimum compacted thicknesses: Refer to Drawings.
 3. Apply tack coat to binder course at minimum rate of 1/3 gallon per square yard.
 4. Compact with pneumatic roller, then with steel roller. Do not displace or extrude asphaltic concrete from position. Hand compact in areas inaccessible to rolling equipment.
 5. Roll with consecutive passes to achieve uniform, smooth surface, free from roller marks.
 6. Construction joints:
 - a. Place mixture as nearly continuous as possible. Roll unprotected edge of freshly laid mixture only when laying is discontinued for such length of time as will allow cooling of mixture.
 - b. When resuming work, cut back previously laid material to produce slightly beveled edge for full depth of course; place fresh mixture against fresh cut.
 - c. Hot smoothing irons may be used for sealing joints; use care to avoid burning surface.
 - d. Construct joints either parallel to or at right angles to longitudinal axis of work.
- D. Installation Tolerances:
1. Maximum surface deviation: Plus or minus 1/4 inch in 10 feet, measured parallel to line of drainage.
 2. Maximum deviation from specified thickness: Plus or minus 1/4 inch.

3.2 FIELD QUALITY CONTROL

- A. Testing and Inspection Services:
1. Aggregate base course: Perform field in place density tests, ASTM D1557 or D2922, one test for each 500 square feet.
 2. Asphaltic concrete:
 - a. Perform one laboratory density and stability test for each day's operation.
 - b. Perform one field in place density test, ASTM D1188, on each type of asphaltic concrete for each day's operation.
 - c. Perform one extraction and gradation test, ASTM D2172, on each type of asphaltic concrete for each day's operation.
 - d. Examine pavement to determine whether specified total thickness of asphaltic concrete has been placed, minimum of one core test for each 500 square feet of paving.

END OF SECTION