

**SECTION 02743
ASPHALT CONCRETE PAVING**

PART 1 - GENERAL

1.01 DESCRIPTION.

This section includes materials, testing, and installation of aggregate base course, prime coat, tack coat, asphalt concrete pavement, seal coat, striping and markers.

1.02 RELATED WORK SPECIFIED ELSEWHERE.

- A. Record Drawings and Submittals: STD SPEC 01300.
- B. Trenching, Backfilling, and Compacting: STD SPEC 02221

1.03 DEFINITIONS.

Whenever the term "Public Works Specifications" is used in this Section, the meaning shall be interpreted as Standard Specifications for Public Works Construction by APWA/AGC the "GREENBOOK" latest edition with Regional Supplement Amendments.

1.04 SUBMITTALS.

- A. Submit submittal packages in accordance with Standard Specification Section 01300.
- B. Submit report from a testing laboratory verifying that aggregate material is asbestos-free and conforms to the specified gradations or characteristics.

1.05 TESTING FOR COMPACTION.

- A. The District or the agency having jurisdiction over the area of the work will require the Contractor to test for compaction as described below.
- B. Determine the density of soil in place by the sand cone method, ASTM D 1556, or by nuclear methods, ASTM D 2922 and D 3017.
- C. Determine laboratory moisture-density relations of soils by ASTM D 1557.
- D. Determine relative density of cohesionless soils by ASTM D 4253 and D 4254.
- E. Sample backfill materials by ASTM D 75.
- F. "Relative compaction" is the ratio, expressed as a percentage, of the in-place dry density to the laboratory maximum dry density.
- G. Compaction shall be deemed to comply with the Specifications when no more than one test of any three consecutive tests falls below the specified relative compaction. The one test shall be no more than three percentage points below the specified compaction. The Contractor shall pay the costs of any retesting of work not conforming to the Specifications.

PART 2 - MATERIALS

2.01 ASPHALT CONCRETE PAVING.

Asphalt concrete paving shall conform to III- C2-PG 64-10 as listed in Section 203-6 of the Public Works Specifications “GREENBOOK.”

2.02 ASPHALT.

Asphalt shall be viscosity grade PG 64-10. Asphalt content in the pavement shall be 5.5% to 6.0%.

2.03 AGGREGATE FOR ASPHALT CONCRETE.

Aggregate shall be in accordance with Section 203-6.2.2 of the Public Works Specifications “GREENBOOK.” Aggregate shall be asbestos-free.

2.04 AGGREGATE BASE COURSE.

Aggregate base shall be crushed aggregate base as specified in Section 200-2.2 of the Public Works Specifications “GREENBOOK.” Aggregate shall be asbestos-free.

2.05 PRIME COAT.

All areas to be paved shall receive prime coat. Prime coat shall be slow curing (SC-70) in accordance with Section 203-2 of the Public Works Specifications “GREENBOOK.”

2.06 TACK COAT.

Tack coat shall be slow setting (CSS-1h) in accordance with Section 203-3 of the Public Works Specifications “GREENBOOK.”

2.07 SEAL COAT.

Seal coat shall conform with Section 203-9 in the Public Works Specifications “GREENBOOK.” For miscellaneous areas such as asphalt parking lots, private roads, low traveled roads, playgrounds and similar areas. Slurry seal coat shall conform with section 203-5.4 in the Public Works Specifications “GREENBOOK” for all heavily traveled roads.

2.08 PAINT FOR TRAFFIC STRIPING AND MARKINGS.

Provide rapid dry or fast dry paint per Section 214 of the Public Works Specifications “GREENBOOK.” Provide a color to match the existing traffic striping and markings.

2.09 REFLECTIVE PAVEMENT MARKERS.

Markers shall be of the reflective type and colored to match the existing pavement markers. Markers shall conform to Section 85 of the State Standard Specifications, State of California, Department of Transportation, Caltrans, latest editions.

PART 3 - EXECUTION

3.01 PERMIT REQUIREMENTS.

Comply with the ordinances, directives, and regulations of the respective agencies having jurisdiction over the area of the work. Pavement removal and replacement shall be in accordance with these Specifications and the issued permit.

3.02 PAVEMENT REMOVAL.

- A. Initially cut asphalt concrete pavement with a pavement saw, hydrohammer, or pneumatic pavement cutter at the limits of the excavation and remove the pavement regardless of the thickness. After backfilling the excavation, saw cut asphalt concrete pavement to a minimum depth of 2 inches at a point not less than 9 inches outside the limits of the excavation or the previous pavement cut, whichever is greater, and remove the additional pavement.
- B. Saw cut concrete pavement, including cross gutters, curbs and gutters, sidewalks, and driveways, to a minimum depth of 1-1/2 inches at a point 1-foot beyond the edge of the excavation and remove the pavement. The concrete pavement may initially be cut at the limits of the excavation by other methods prior to removal and then saw cut after backfilling the excavation. If the saw cut falls within 3 feet of a concrete joint or pavement edge, remove the concrete to the joint or edge.
- C. Make arrangements for and dispose of the removed pavement.
- D. Final pavement saw cuts shall be straight along both sides of trenches, parallel to the pipeline alignment, and provide clean, solid, vertical faces free from loose material. Saw cut and remove damaged or disturbed adjoining pavement. Saw cuts shall be parallel to the pipeline alignment or the roadway centerline or perpendicular to same.

3.03 PAVEMENT REPLACEMENT.

Backfill, compaction, and the permanent paving, except for the final asphalt surface course, shall be complete at all times to a point not to exceed 420 feet behind pipe laying. The final asphalt surface course shall be 1-inch thick. Do not place final surface course until all pipelines and appurtenances have been installed within the roadway or as directed by the District's Representative to maintain traffic safety. After the base course of asphalt concrete pavement has been completed, place temporary striping in the same configuration as the existing permanent striping so that traffic can be returned to normal patterns. This striping shall be considered temporary and is the Contractor's responsibility to place and maintain.

3.04 INSTALLATION.

Producing, hauling, placing, compacting, and finishing of asphalt concrete shall conform to Section 302-5 of the Public Works Specifications "GREENBOOK." Apply seal coat to all paving.

3.05 PREPARATION OF SUBGRADE.

Compact the top 6 inches of subgrade to 95% relative compaction. Remove all soft material disclosed by the compacting and replace with suitable material and recompact. The finished subgrade shall be within a tolerance of +/-0.08 of a foot and shall be smooth and free from irregularities and at the specified relative compaction. The subgrade shall be considered to extend over the full width of the base course.

3.06 PLACING AGGREGATE BASE COURSE.

Place aggregate base course to a thickness of 6 inches or to the standards of the agency having jurisdiction over the area of the work. Compact to 95% relative compaction. Install in accordance with Section 301-2 of the Public Works Specifications "GREENBOOK."

3.07 COMPACTION OF AGGREGATE BASE AND LEVELING COURSES.

Compaction of aggregate base shall conform to Section 301-2.3 of the Public Works Specifications "GREENBOOK".

3.08 PLACING PRIME COAT.

Apply prime coat to the surface of the leveling course of aggregate base at the rate of 0.25 gallon per square yard per Section 302-5.3 of the Public Works Specifications "GREENBOOK."

3.09 PLACING TACK COAT.

Apply tack coat on both horizontal and vertical surfaces to receive finish pavement per Section 302-5.4 of the Public Works Specifications "GREENBOOK." Apply tack coat to concrete surfaces that will be in contact with the asphalt concrete paving.

3.10 PLACING ASPHALT PAVING.

Place asphalt paving to a total thickness of 4 inches or 1-inch thicker than adjacent pavement section, whichever is greater or to the standards of the agency having jurisdiction over the area of the work. Install in accordance with Section 302-5.5 of the Public Works Specifications "GREENBOOK."

3.11 COMPACTION OF ASPHALT CONCRETE PAVING.

Compact until roller marks are eliminated and a minimum density of 95% has been attained per ASTM D 2041. Rolling shall follow Section 302-5.6 of the Public Works Specifications "GREENBOOK".

3.12 DENSITY AND SMOOTHNESS.

Density and smoothness shall conform to Section 302-5.6.2 of the Public Works Specifications "GREENBOOK".

3.13 APPLYING SEAL COAT.

Apply seal coat at the rate of 0.10 to 0.15 gallon per square yard and spread a cover coat of sand

at the rate of 6 to 12 pounds per square yard. Remove excess sand after 5 days. Apply per Section 302-8 of the Public Works Specifications "GREENBOOK."

3.14 APPLYING PAVEMENT STRIPING AND MARKINGS.

Apply traffic striping, markings, and all other directional information to new paved surfaces and existing surfaces that were damaged by the construction. Use traffic paint that matches the color of the existing traffic striping and markings. Apply per Section 214 of the Public Works Specifications "GREENBOOK." Wait a minimum of 10 days between the seal coat application and permanent traffic striping and markings. Apply a second coat of paint to all areas where the first coat of paint bled, curled, or discolored.

3.15 INSTALLING REFLECTIVE PAVEMENT MARKERS.

After the application of all pavement striping and markings, install markers on new paved surfaces and existing surfaces that were damaged by the construction. Use markers that are reflective and match the color or combination of colors of the existing markers within the area of work. Install markers along the alignment and match spacing of the existing, as directed by the District's Representative, and in accordance with Section 85 of the State Standard Specifications.

3.16 INSTALLING FIRE HYDRANT MARKERS.

Install a blue reflective marker opposite each new or relocated fire hydrant. Place the marker on the pavement and locate 6 inches off the centerline of the traffic striping or reflective pavement markers towards the hydrant. Install markers in accordance with Section 85 of the State Standard Specifications. Where existing fire hydrants have been relocated or removed from service, dislodge the existing blue marker from the pavement and dispose.

END OF SECTION 02743