

SECTION 32 12 16

ASPHALT PAVING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section includes provisions for constructing new asphalt concrete wearing surface, 1/2-inch nominal maximum aggregate size grading at the locations and to the dimensions shown on the Drawings, in accordance with the Project Manual and as directed by the City.
- B. Hot Mix Asphalt Paving shall conform to the provisions in Section 39-2, "Hot Mix Asphalt" of the 2018 Caltrans Standard Specifications and these provisions.
- C. Any conflicts between the 2018 Caltrans Standard Specifications and these provisions shall be brought to the attention of the City Representative prior to ordering any materials or construction.

1.2 REFERENCE STANDARDS

- A. DPW Standard Specifications (SSDPWSF), revised November, 2000.
- B. 2018 Caltrans Standard Specifications (CTSS).
- C. 2018 Caltrans Standard Special Provisions (SSP).
- D. 2018 Caltrans Revised Standard Specifications (RSS).

1.3 PERFORMANCE QUALITY CONTROL

- A. Compaction: In accordance with the requirements of Section 39-2.02B(2) of the Caltrans Standard Specifications, dated 20182018
- B. Quality characteristic Test method Requirement 39-2.02(B)(2)

Hamburg wheel track (min number of passes at 0.5-inch rut depth) Binder grade: PG 58 PG 64 PG 70 PG 76 or higher	AASHTO T 324 (Modified) ^c	10,000 15,000 20,000 25,000
Hamburg wheel track (min number of passes at the inflection point) Binder grade: PG 58 PG 64 PG 70 PG 76 or higher	AASHTO T 324 (Modified) ^c	10,000 10,000 12,500 15,000

C. Pavement Finish Irregularity Requirements

1. The Contractor shall spread and compact the asphalt concrete wearing surface such that when a City furnished 10-foot rolling straight edge is rolled over the finished pavement surface, it will disclose no more than the following irregularities per lane mile:

Irregularity Range Per Lane Mile	Maximum Allowable Irregularities Per Lane Mile
3/16 inch to less than 1/4 inch	200 irregularities
1/4 inch to less than 5/16 inch	100 irregularities
5/16 inch or greater	0 irregularities

2. In addition, the above criteria will be used as a basis for calculating the maximum allowable amount of irregularities for each lane for each block throughout the Work limits. The maximum allowable amount of irregularities per lane block will be calculated by multiplying the maximum allowable number of irregularities per lane mile by the length of the block in feet and dividing by 5,280 feet.
3. The Contractor shall give the City 24 hours advance notice for the rolling straight edge tests.
4. The Contractor shall transport the said City-furnished straight edge from 2027 Newcomb Avenue, San Francisco, 94124, 415-641-4028 or other place of storage, to the site and return said equipment to the place of storage when the need has ended.
5. Contractor's Testing Agency will perform the rolling straight edge operation. As Contractor's Testing Agency performs the rolling straight edge operation, the City Representative will observe same and the Contractor shall provide the necessary or required labor, flagman and equipment to complete said operation.
6. The Contractor shall furnish the City Representative with all the necessary or required labor, flagman and equipment, other than the 10-foot rolling straight edge, to complete the inspection of the finished pavement.

- D. The City will have the option of requiring correction of pavement irregularities in excess of the maximum allowable or a reduction of payment due to the Contractor, based on the official rolling straight edge report. The reduction of payment will be as follows:

Irregularity Range	Payment Reduction Per Each Excess Irregularity
3/16 inch to less than 1/4 inch	\$ 20.00
1/4 inch to less than 5/16 inch	\$ 100.00
5/16 inch or greater	\$ 200.00

1.4 SUBMITTALS

- A. Prior to starting construction, the Contractor shall submit the asphalt concrete mix design, including the amount of asphalt binder to be mixed with the dry aggregate to the City Representative for approval. No resurfacing work will be allowed prior to the approval of the mix design. Asphalt concrete mix design will conform to Section 39 of the 2018

Caltrans Standard Specifications and as modified below under Article "Materials".

- B. The Contractor shall submit (8) copies of the manufacturer's literature, Specifications, applications and installations for filler and/or sealer material to the City Representative for approval at least five (5) calendar days in advance of performing the filling and/or sealing work.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The Contractor is encouraged to use Reclaimed Asphalt Pavement (RAP) in accordance with the 2018 Caltrans Standard Specifications and Standard Special Provision (SSP) 39-010. Specifically, refer to 2018 CTSS Section 39-2.02B(5) outlining current maximum RAP substitution rate. Minimum RAP substitution rate shall be 15% of the aggregate blend.
- B. Asphalt: In accordance with the requirements of Section 39 of the 2018 Caltrans Standard Specifications, except that asphalt will be either PG 64–10.
- C. Aggregate: In accordance with the requirements of Section 39-2.02B(4)(b)–of the 2018 Caltrans Standard Specifications, except that aggregate grading will be as follows:

Sieve size	Target value limit	Allowable tolerance
3/4"	100	--
1/2"	95–98	TV ± 5
3/8"	72–95	TV ± 5
No. 4	52–69	TV ± 5
No. 8	35–55	TV ± 5
No. 30	15–30	TV ± 4
No. 200	2.0–8.0	TV ± 2.0

- D. Paint Binder: In accordance with the requirements of Section 212.06 of the DPW Standard Specifications, except that paint binder shall be emulsified asphalt Type SS-1 or SS-1h.
- E. Sealer: It will be a combination of polymeric compounds, cures to a soft, highly flexible, rubber like material that is capable of maintaining a sealed joint or crack over a wide temperature range. Sealer will be cold applied SOF–SEAL, low modulus horizontal sealant, manufactured by:

W.R. Meadows, Inc.
865 Teal Drive
Benicia, CA 94510
Phone (707) 745-6666

or approved equal.

2.2 EQUIPMENT

- A. Spreading Equipment: In accordance with the requirements of Section 39 of the 2018 Caltrans Standard Specifications.

- B. Compacting Equipment: In accordance with the requirements of Section 39 of the 2018 Caltrans Standard Specifications.

PART 3 – EXECUTION

3.1 SURFACE PREPARATION

- A. Immediately before resurfacing, the Contractor shall, as Incidental Work, clean, repair cracks and apply paint binder in areas to be paved.
- B. Cracks larger than one inch will be filled or sealed with hot asphalt concrete as directed by the City.
- C. All cracks equal to or smaller than one inch and not smaller than 1/4 inches will be filled or sealed with approved sealer.
- D. Placement of asphalt concrete wearing surface is to be completed within 120 hours after asphalt planing or placement of concrete base.
- E. The Contractor shall not proceed with paving work until given written approval from the City.
- F. The temporary asphalt concrete fill or wedges on the concrete base repair areas will be removed by the Contractor before placing asphalt concrete wearing surface.

3.2 INSTALLATION

- A. Tack Coat: In accordance with the requirements of Section 39 of the 2018 Caltrans Standard Specs
- B. Conform Areas: In accordance with the requirements of Section 212.10 of the DPW Standard Specifications.
- C. Spreading: In accordance with the requirements of Section 39 of the 2018 Caltrans Standard Specifications.
- D. Compaction: In accordance with the requirements of Section 39 of the 2018 Caltrans Standard Specifications.

3.3 SURFACE CONDITIONS

- A. The Contractor shall examine the areas and conditions under which Work of this Section will be performed. Conditions detrimental to the timely and proper completion of the Work will be corrected. The Contractor shall not proceed until unsatisfactory conditions have been corrected.
- B. The Contractor shall notify the County Surveyor at (415) 554-5833 to report any monuments in danger of disturbance, destruction or removal. All City monuments are to be protected per State Land Surveyors Act and Section 01 71 33 – Protection of Adjacent Construction. The Contractor shall not disturb, destroy or remove any survey monuments without the approval from the County Surveyor. The Contractor shall salvage any monuments removed during construction and deliver these monuments to the Survey Department at 1155 Market Street, 3rd Floor, San Francisco.

3.4 FIELD QUALITY CONTROL

- A. The Contractor may be required to perform water tests to satisfactorily demonstrate the proper drainage of the constructed asphalt pavement. The Contractor shall flush with water approximately 50 feet of the upstream end of each gutter for 2 minutes with minimum flow rate of 0.02 cubic feet per second or approximately 20 gallons equivalence. After 5 minutes, the City Representative and the Contractor shall make visual inspection of the gutter to demonstrate proper drainage and no ponding. All water tests will be considered Incidental Work.
- B. The Contractor shall make corrections necessary to demonstrate proper drainage with no ponding, and no separate payment will be made. The Contractor's correction method will be approved by the City. The City's approval does not release the Contractor from the successful execution of the remedy and the requirement to demonstrate proper drainage of the constructed gutter.

END OF SECTION