



## SUBSTITUTION OF ASPHALT SHINGLES MSP03-01B

**1.0 Description.** This specification covers the use of asphalt shingles in Secs 401, 402, and 403 bituminous mixtures requiring PG 64-22 binder.

**2.0 Shingles.** Up to 5.0 percent of asphalt shingles may be substituted in lieu of mineral aggregate. Asphalt shingles will be included in the total amount of recycled asphalt pavement (RAP) when RAP is added to the mixture.

**3.0 Material Requirements.** Asphalt shingles may contain a maximum of 3.0 percent deleterious material by weight consisting of plastic, wood, metal, soil or other contaminating substances as might routinely be included with used shingles. A maximum of 1.5 percent wood shall be allowed. Shingles containing asbestos shall be handled in accordance with applicable regulations.

**4.0 Mix Design Requirements.** Bituminous mixes utilizing asphalt shingles may require binder testing of the shingle asphalt to determine the appropriate grade of virgin binder. The combined binders shall meet the grade specified in the contract. The virgin binder grade for mixtures containing shingles shall be PG 58-28. Other grades combining to meet the specified grade may be used by providing test results of the binder blends and virgin binder with the job mix formula.

**5.0 Testing Requirements.** Tests and testing frequencies shall be in accordance with applicable sections of Secs 401, 402 and 403 for RAP.

**6.0 Basis of Payment.** The contract unit price for asphalt binder and aggregate will be full compensation for asphalt shingles.

