

### 3.3-22 Pavement Section Thickness

**Replace** this section in its entirety with the following:

The minimum asphalt and crushed surfacing thickness shall be in accordance with Standard Plan W-101A. As noted in W-101A, the Engineer may require a pavement design for local access (residential or commercial) streets. This will be evaluated on a case-by-case basis. All arterials require a pavement design, which shall be approved by the Engineer.

The minimum asphalt thickness shown on Standard Plan W-101A applies to the following soil types per the Unified Soil Classification System (USC): GW, GP,GM,GC,SW, and SP. Soil types SM, SC, ML, CL, OL, MH, CH, OH, and Pt are considered unsuitable sub grade soils, and shall require one of the following two options:

1. 12" of gravel borrow meeting the requirements of WSDOT 9-03.14(1) can be placed beneath the minimum asphalt and crushed surfacing thickness. A geotextile fabric conforming to WSDOT 9-33 shall be used to provide separation between the unsuitable sub grade soil and the gravel borrow, or,
2. A 12" minimum thickness of cement treated base can be placed beneath the minimum asphalt and crushed surfacing thickness.

Whichever option is selected, paving must be done between June 15 and September 15.

A rational Pavement design for either arterials or residential street must contain the following:

1. Traffic loading - an estimate of the number and types of loadings that roadway will carry for the design life. This estimate of loading must be established by a procedure accepted by the Engineer and be expressed in 18-Kip Equivalent Single Axle Loads (ESAL's).
2. Sub grade Support - a representative value for the stiffness of the native material on which the road will be built. This value will be established by a procedure accepted by the Engineer and be expressed as resilient modulus (MR). When determining MR, soil sampling is to include:
  - a) Obtaining a sufficient number of soil samples in March or April which adequately represents the sub grade MR, and where significant changes in MR occur;
  - b) MR values shall be determined at the in situ moisture content;
  - c) Constructing a soil log to a minimum of five foot depth below proposed sub grade and classify the soil per USC; and
  - d) Recording the location of where the samples were obtained, normally by station and offset; and

- e) Soil types SM, SC, ML, CL, OL, MH, CH, OH, and Pt are considered unsuitable soils, and shall also require recording of depth to groundwater, moisture content of soil, and ambient temperature. This information shall be included on the plans adjacent to the typical section. These conditions shall be checked immediately prior to paving. Paving shall not begin until depth to groundwater, moisture content of soil, and ambient temperature are equal to or better than these same conditions when the MR was determined. This information shall be included in all cases, no matter if the 12" of gravel borrow and geotextile separation fabric option, or the cement treated base option is selected.