

SECTION 1019
SHOULDER AND SLOPE MATERIAL

1019-1 GENERAL

Use shoulder and slope material to construct shoulders and plate slopes with materials capable of supporting vegetation. Material that contains roots, root mats, stumps or other unsatisfactory material will not be acceptable.

1019-2 SHOULDER AND SLOPE BORROW

Use borrow sources in accordance with Article 1018-2.

Use soil consisting of loose, friable, sandy material with a PI greater than 6 and less than 25 and a pH ranging from 5.5 to 7.0. Remove stones and other foreign material 2 inches or larger in diameter.

Soil consisting of a pH ranging from 4.0 to 5.5 may be accepted if the following limestone application used. Substitute listed limestone application rates when performing seeding and mulching operations. Standard lime application rate is 4000 lbs. per acre. Soil type should be identified during the soil analysis. Soils with a pH below 4.0 should not be used. Soils with a pH above 7.0 require acidic amendments to be added. Contract the Roadside Environmental Unit for recommendations to lower pH below 7.0.

pH Test Result	TABLE 1019-1 LIMESTONE APPLICATION RATE (lbs / acre) TO RAISE pH		
	Sandy Soils	Silt Loam Soils	Clay Loam Soils
4.0 to 4.4	4000 + 1000	4000 + 4000	4000 + 6000
4.5 to 4.9	4000 + 500	4000 + 3000	4000 + 5000
5.0 to 5.4	4000	4000 + 2000	4000 + 4000

1019-3 AGGREGATE SHOULDER BORROW

Use aggregate shoulder borrow (ASB) that meets the following gradation in Table 1019-2.

TABLE 1019-2 GRADATION OF AGGREGATE SHOULDER BORROW	
Sieve	Percentage Passing
1 1/2"	100
1/2"	55-95
#4	35-74

SECTION 1020
ASPHALT MATERIALS AND ADDITIVES

1020-1 DELIVERY AND ACCEPTANCE OF ASPHALT MATERIALS

Asphalt materials are accepted at the source of shipment subject to the conditions herein.

All asphalt transport tankers, including rail and truck tankers, shall have a sampling valve in accordance with Asphalt Institute Publication MS-18, AASHTO R66, ASTM D140 or a comparable device acceptable to the Engineer.

Each transport tanker delivering asphalt materials to the project or rail siding shall keep a running log showing the date, destination and type and grade of material hauled on each trip. Print, stamp, or write in ink information appearing in the log and have available for examination upon request.