



Figure 4-3. Relationship Between Equivalent Cracked Section Modulus and Unconfined Compressive Strength.

soil reaction k . It is to be noted that the relationship shown in figure 4-4 is established based on limited data. The modulus of soil reaction k can be determined using the plate-bearing test in the field or from table 4-2 when field test results are not available.

Table 4-2. Modulus of Soil Reaction.*

Type of material	Moisture content percentage							
	1 to 4	5 to 8	9 to 12	13 to 16	17 to 20	21 to 24	25 to 28	Over 28
Silts and clays, LL greater than 50 (OH, CH, MH)	-	175	150	125	100	75	50	25
Silts and clays, LL less than 50 (OL, CL, ML)	-	200	175	150	125	100	75	50
Silty and clayey sands (SM and SC)	300	250	225	200	150	-	-	-
Sand and gravelly sands (SW and SP)	350	300	250	-	-	-	-	-
Silty and clayey gravels (GM and GC)	400	350	300	250	-	-	-	-
Gravel and sandy gravels (GW and GP)	500	450	-	-	-	-	-	-

Notes:

1. Values of k shown are typical for materials having dry densities equal to 90 to 95 percent of the maximum. For materials having dry densities less than 90 percent of the maximum, except that a k of 25 pci will be the minimum used for design.

2. Values shown may be increased slightly if density is greater than 95 percent of the maximum except that a k of 500 pci will be the maximum used for design.

3. Frost-melting-period k values are given in TM 5-822-5/AFM 88-7, Chap. 3.

*Typical values k in pci for rigid pavement design.