

COMPATTAZIONE, PORTANZA E MISCELAZIONE

LE PROVE DI COMPATTAZIONE E DI PORTANZA

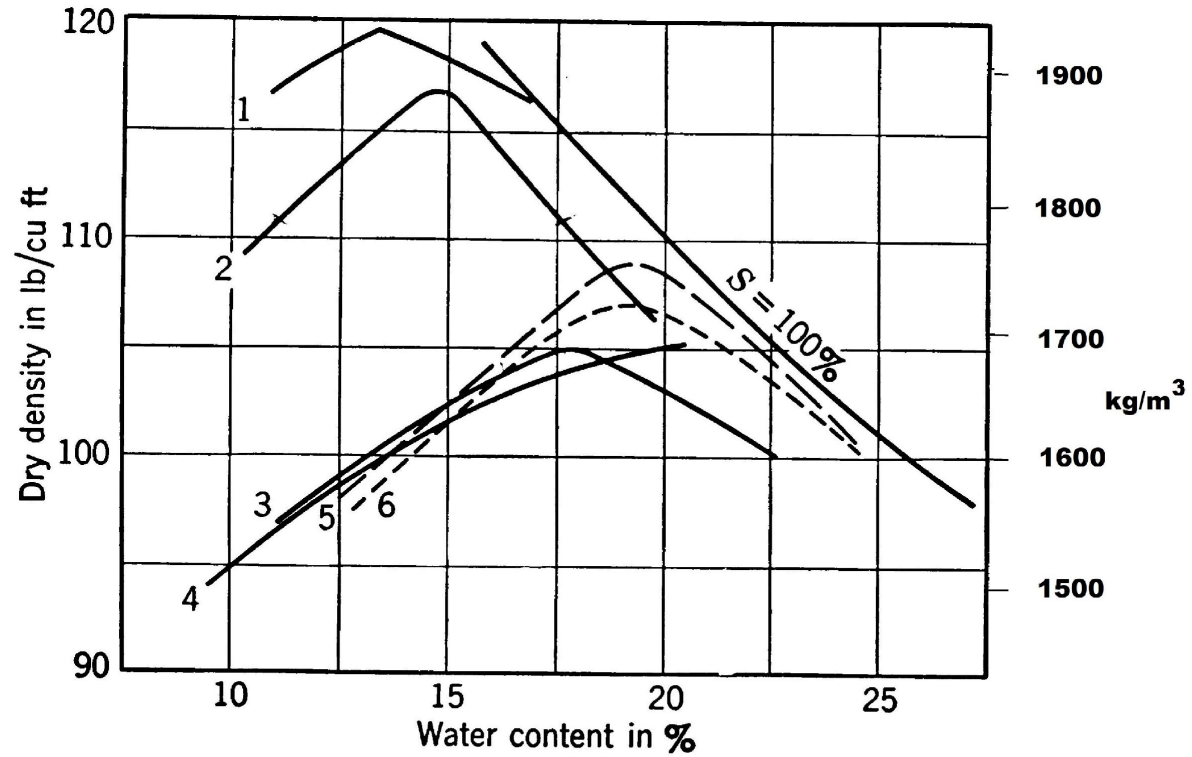


FIGURE V-1. Comparison of field and laboratory compaction.
(From reference V-11.)

- (1) Laboratory static compaction, 2000 psi [14 MPa]
- (2) Modified AASHO
- (3) Standard AASHO
- (4) Laboratory static compaction, 200 psi [1.4 MPa]
- (5) Field compaction, rubber-tired load, 6 coverages
- (6) Field compaction, sheep's-foot roller, 6 passes

Note: Static compaction from top and bottom of soil sample.

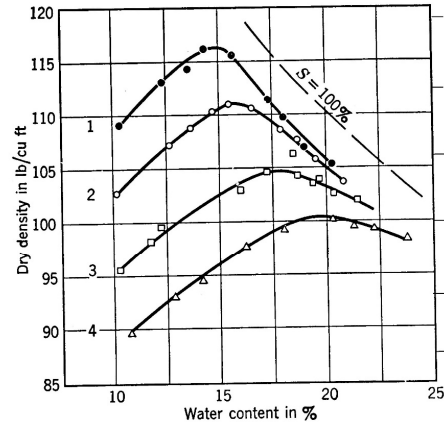


FIGURE V-3. Dynamic compaction curves for a silty clay.
(From reference V-11.)

No.	Layers	Blows per Layer	Hammer Weight	Hammer Drop
(1)	5	55	10 lb	18 in. (mod. AASHO)
(2)	5	26	10	18
(3)	5	12	10	18 (std. AASHO)
(4)	3	25	5½	12

Note: 6 in. dia. mold used for all tests.

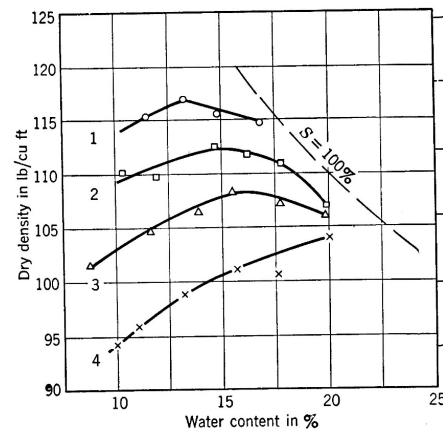


FIGURE V-4. Static compaction curves for a silty clay.
(From reference V-11.)

	MPa
(1) 2000-psi static load	14
(2) 1000-psi static load	7
(3) 500-psi static load	3.5
(4) 200-psi static load	1.4

Note: Compaction on top of soil sample.

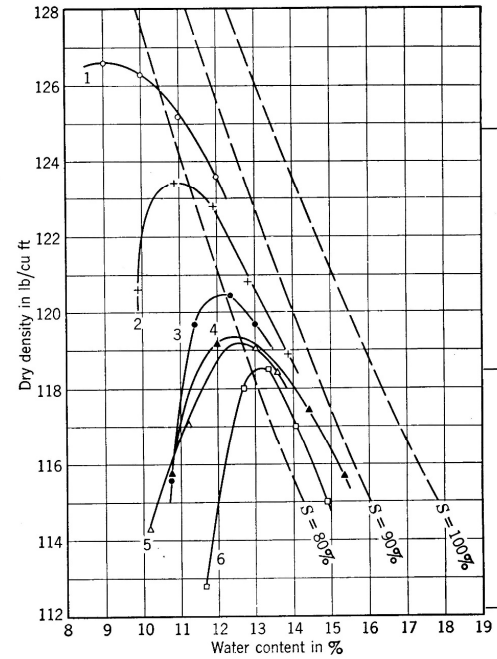
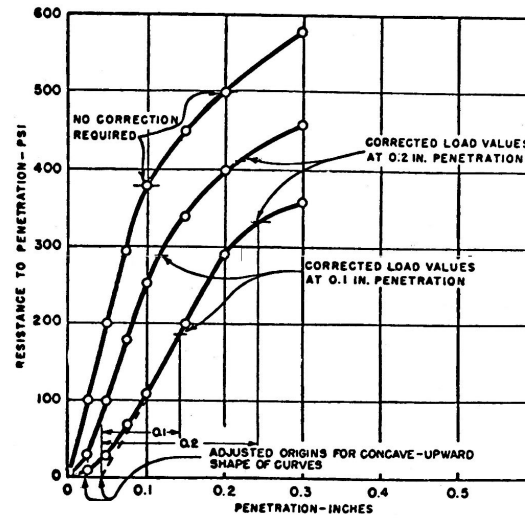


FIGURE V-5. Effect of maximum grain size on compaction.
(From reference V-2.)

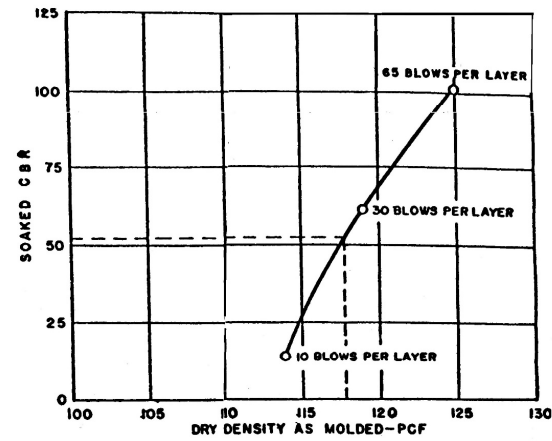
- (1) Passing ½ in.
- (2) Passing ¾ in.
- (3) Passing No. 4 sieve
- (4) Passing No. 10 sieve
- (5) Passing No. 20 sieve
- (6) Passing No. 40 sieve



REFERENCE STRESS-STRAIN CURVE

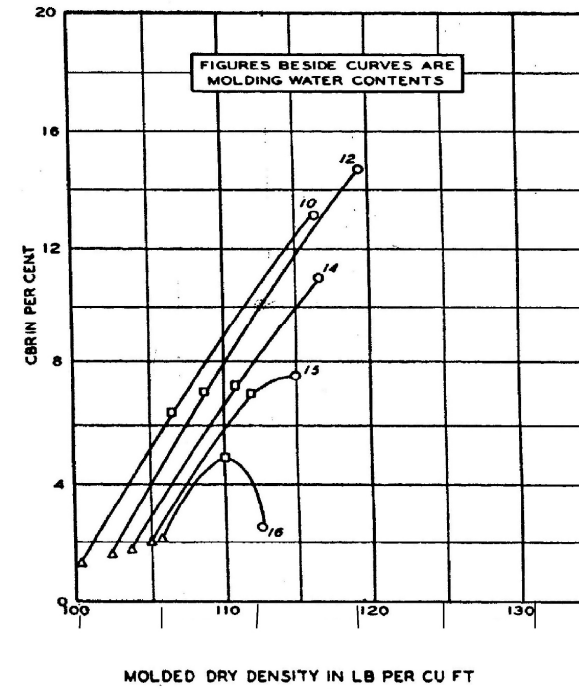
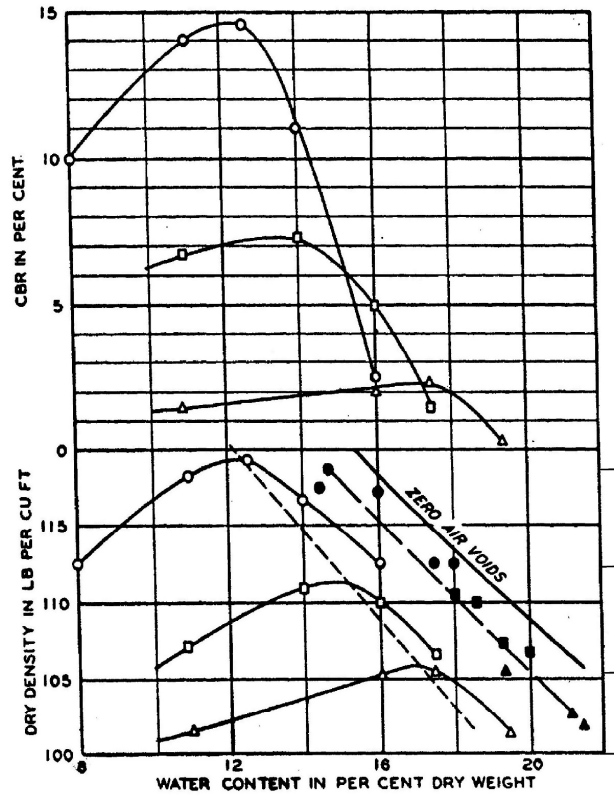
PENETRATION		STRESS	
in	mm	psi	MPa
0.1	2.54	1000	6.9
0.2	5.08	1500	10.3
0.3	7.62	1900	13.1
0.4	10.16	2300	15.9
0.5	12.70	2600	17.9

FIGURE 2 Correction of Stress-Strain Curves



EXAMPLE
 GIVEN: MAXIMUM DRY DENSITY BY T99-57 (METHOD D1) = 124 P.C.F.
 FIND: THE CBR AT 95 PERCENT OF THE ABOVE MAXIMUM DRY DENSITY
 SOLUTION: 95 PERCENT OF 124 P.C.F. = 117.8 P.C.F.
 AT 117.8 P.C.F., THE CBR IS 50

FIGURE 3 Dry Density Versus CBR



○—55 blows per layer (modified ASTM Method D 698).
 □—25 blows per layer.
 △—12 blows per layer (equivalent in compaction energy to ASTM Method D 698).
 Solid symbols represent water content and dry density after soaking.
 NOTE.—All specimens compacted in five layers in CBR mold using 10-lb hammer, 18-in. drop.
 Lean clay, CL; PI = 11; LL = 32.

FIG. 1.—Typical Family of Curves for California Bearing Ratio (CBR) for Soaked Samples.