AVERAGE VALUE OF PHYSICA - MECHANICAL PROPERTIES

Layer 4 : Stiff, low plasticity yellowish grey CLAY (CL)

Table : 2

No	Properties		Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing						
	3/4" (19 mm)						
	1/2" (12.5 mm)						
	3/8" (9.5 mm)						
	#4 (4.75 mm)						
	#8 (2.36 mm)			100.0			1
	#16 (1.18 mm)			99.6			1
	#30 (0.6 mm)			99.0			1
	#50 (0.3 mm)			97.3			1
	#100 (0.15 mm)			93.7			1
	#200 (0.075 mm)			81.4			1
	< 0.005 mm			37.9			1
2	Natural moisture content	(%)	w	16.00			1
3	Natural unit weight	(g/cm^3)	γ	2.086			1
4	Dry unit weight	(g/cm^3)	γ_d	1.798			1
5	Specific gravity		Gs	2.694			1
6	Porosity		n	0.330			1
7	Void ratio		e_o	0.498			1
8	Degree saturation	(%)	S	86.50			1
9	Liquid limit	(%)	LL	26.9			1
10	Plastic limit	(%)	LP	16.2			1
11	Plastic index	(%)	PI	10.7			1
12	Water plasticity ratio	(%)	B	-0.02			1
13	Unconfined compression	(Kg/cm^2)	qu				
14	Compression index	(cm^2/kg)	Cc				
15	Coefficient of consolidation	(cm^2/s)	Cv				
16	Preconsolidation pressure	(kg/cm^2)	Pc				
17	Coefficient of volunm compressibility	(cm^2/g)	Mv				
18	Permeability	(cm/sec)	k20				

AVERAGE VALUE OF PHYSICA - MECHANICAL PROPERTIES

Layer 4a : Very stiff, high plasticity yellowish grey CLAY (CH)

Table : 3

No	Properties		Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing						
	3/4" (19 mm)						
	1/2" (12.5 mm)						
	3/8" (9.5 mm)						
	#4 (4.75 mm)						
	#8 (2.36 mm)			100.0			1
	#16 (1.18 mm)			99.7			1
	#30 (0.6 mm)			99.2			1
	#50 (0.3 mm)			97.8			1
	#100 (0.15 mm)			94.5			1
	#200 (0.075 mm)			92.3			1
	< 0.005 mm			78.1			1
2	Natural moisture content	(%)	w	32.77			1
3	Natural unit weight	(g/cm^3)	γ	1.899			1
4	Dry unit weight	(g/cm^3)	γ_d	1.430			1
5	Specific gravity		Gs	2.697			1
6	Porosity		n	0.470			1
7	Void ratio		e_o	0.886			1
8	Degree saturation	(%)	S	99.80			1
9	Liquid limit	(%)	LL	55.5			1
10	Plastic limit	(%)	LP	29.4			1
11	Plastic index	(%)	PI	26.1			1
12	Water plasticity ratio	(%)	B	0.13			1
13	Unconfined compression	(Kg/cm^2)	qu				
14	Compression index	(cm^2/kg)	Cc				
15	Coefficient of consolidation	(cm^2/s)	Cv				
16	Preconsolidation pressure	(kg/cm^2)	Pc				
17	Coefficient of volunm compressibility	(cm^2/g)	Mv				
18	Permeability	(cm/sec)	k20				

AVERAGE VALUE OF PHYSICA - MECHANICAL PROPERTIES

Layer 4b : Medium dense, yellowish whitish grey CLAYEY SAND (SC)

Table : 4

No	Properties	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)					
	3/8" (9.5 mm)					
	#4 (4.75 mm)					
	#8 (2.36 mm)		100.0	100.0	100.0	11
	#16 (1.18 mm)		97.3	99.9	92.8	11
	#30 (0.6 mm)		89.5	99.6	58.1	11
	#50 (0.3 mm)		68.7	97.6	30.3	11
	#100 (0.15 mm)		40.2	70.6	17.2	11
	#200 (0.075 mm)		30.2	40.9	12.1	11
	< 0.005 mm		15.0	26.7	4.2	11
2	Natural moisture content (%)	w	17.82	21.53	13.96	11
3	Natural unit weight (g/cm^3)	γ	2.098	2.193	1.992	11
4	Dry unit weight (g/cm^3)	γ_d	1.782	1.924	1.650	11
5	Specific gravity	Gs	2.643	2.675	2.633	11
6	Porosity	n	0.330	0.380	0.270	11
7	Void ratio	e_o	0.486	0.603	0.376	11
8	Degree saturation (%)	S	97.00	99.70	90.90	11
9	Liquid limit (%)	LL	22.1	28.0	14.6	11
10	Plastic limit (%)	LP	14.9	18.4	10.6	11
11	Plastic index (%)	PI	7.1	10.7	4.0	11
12	Water plasticity ratio (%)	B	0.48	1.38	0.02	11
13	Unconfined compression (Kg/cm^2)	qu	0.542	0.752	0.401	6
14	Compression index (cm^2/kg)	Cc	0.0970	0.1920	0.0480	7
15	Coefficient of consolidation (cm^2/s)	Cv	7.65E-04	1.02E-03	4.24E-04	7
16	Preconsolidation pressure (kg/cm^2)	Pc	0.937	1.724	0.174	7
17	Coefficient of volunm compressibility (cm^2/g)	Mv	1.29E-04	5.75E-04	1.03E-05	7
18	Permeability (cm/sec)	k20	2.17E-08	6.22E-08	9.14E-09	7

AVERAGE VALUE OF PHYSICA - MECHANICAL PROPERTIES

Layer 4~~b~~ 4c : Medium dense, yellowish brownish grey SILTY SAND (SM)

Table : 5

No	Properties	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analisis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)		100.0	100.0	100.0	35
	3/8" (9.5 mm)		99.9	100.0	98.1	35
	#4 (4.75 mm)		99.8	100.0	94.2	35
	#8 (2.36 mm)		99.4	100.0	84.3	35
	#16 (1.18 mm)		95.3	100.0	72.8	35
	#30 (0.6 mm)		85.2	100.0	18.7	35
	#50 (0.3 mm)		50.6	96.0	12.1	35
	#100 (0.15 mm)		24.1	40.6	7.8	35
	#200 (0.075 mm)		17.8	27.7	5.6	35
	< 0.005 mm		8.0	17.1	2.4	35
2	Natural moisture content (%)	w	16.81	21.81	10.58	35
3	Natural unit weight (g/cm^3)	γ	2.031	2.168	1.771	35
4	Dry unit weight (g/cm^3)	γ_d	1.738	1.886	1.586	35
5	Specific gravity	Gs	2.642	2.681	2.629	35
6	Porosity	n	0.340	0.410	0.280	35
7	Void ratio	e_o	0.523	0.690	0.397	35
8	Degree saturation (%)	S	86.20	99.50	43.20	35
9	Liquid limit (%)	LL	19.8	33.1	16.3	25
10	Plastic limit (%)	LP	15.1	18.3	12.0	25
11	Plastic index (%)	PI	4.7	15.6	2.5	25
12	Water plasticity ratio (%)	B	0.64	1.91	-0.41	25
13	Unconfined compression (Kg/cm^2)	qu				
14	Compression index (cm^2/kg)	Cc	0.0910	0.1140	0.0670	2
15	Coefficient of consolidation (cm^2/s)	Cv	6.51E-04	6.76E-04	6.26E-04	2
16	Preconsolidation pressure (kg/cm^2)	Pc	0.882	1.552	0.212	2
17	Coefficient of volunm compressibility (cm^2/g)	Mv	2.86E-05	3.73E-05	1.99E-05	2
18	Permeability (cm/sec)	k20	2.07E-08	3.10E-08	1.03E-08	2