

4 . PHYSICO - MECHANICAL CHARACTERISTIC

Determination the physico-mechanical characteristic of the soil samples was carried out in the laboratory for all of soil samples were taken at the boreholes:

+ The physical characteristics include grain size, natural water content, natural unit weight, dry unit weight, specific gravity, porosity, void ratio, degree saturation, liquid limit, plastic limit, plastic index and liquidity inedx.

+ The mechanical characteristics include unconfined compression strenght, compression index, coefficient of consolidation, preconsolidation presure, coefficient of compressibility and coefficient of permeability.

4.1 . Summary of laboratory test on borings.

4.2 . Bearing capacity of foundation.

4.3 . Obstacle during drilling.

4 . 1 SUMMARY OF LABORATORY TEST ON BORINGS

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SUMMARY OF LABORATORY TEST ON BORING

DRAINAGE PUMP STATION

Scale (m)	Boring number	Sample number	Depth (m)	Symbol	Soil class.	SAMPLE DESCRIPTION	SPT (N)	SIEVE ANALYSIS, % PASSING												Natural water content w (%)	Unit weight		Specific gravity
								Inch													Natural γ (g/cm ³)	Dry γ _d (g/cm ³)	
								3/4"	1/2"	3/8"	#4	#8	#16	#30	#50	#100	#200						
								19	12.5	9.5	4.75	2.36	1.18	0.6	0.3	0.15	0.075	0.005					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
1	UB(1)-01						0																
2		01-1-0	1.1 - 1.5		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0									100	95.3	48.2	80.19	1.501	0.833	2.6	
3		01-1	2.0-2.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0									100	98.3	46.7	79.52	1.519	0.846	2.5	
4		01-1-1	3.1 - 3.5		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0									100	97.2	30.8	60.41	1.561	0.973	2.6	
5		01-2	4.0-4.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0									100	96.0	27.9	52.56	1.506	0.987	2.6	
6		01-2-1	5.1 - 5.5		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0								100	95.7	90.1	40.1	70.12	1.462	0.859	2.5	
7		01-3	6.0-6.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0					100	99.3	99.2	97.8	94.4	89.8	39.3	87.53	1.455	0.776	2.5	
8		01-3-1	7.1 - 7.5		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0					100	97.3	90.1	80.2	80.2	76.2	40.3	82.94	1.497	0.818	2.5	
9		01-4	8.0-8.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0					100	95.1	87.4	79.1	76.9	75.9	49.5	78.38	1.509	0.846	2.5	
10							0																
11		01-5	10.0-10.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0									100	98.5	62.4	85.38	1.475	0.796	2.5	
12		01-5-1	11.1 - 11.5		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	0								100	99.2	93.1	59.7	81.69	1.499	0.825	2.6	
13		01-6	12.0-12.6		OH	Very soft, high plasticity blackish grey SANDY ORGANIC CLAY	0					100	99.8	97.1	76.8	66.2	61.3	49.0	84.87	1.486	0.804	2.5	
14							1																
15		01-7	14.0-14.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	1									100	94.6	60.2	84.36	1.478	0.802	2.5	
16		01-7-1	15.1 - 15.5		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	1									100	95.3	70.2	80.14	1.498	0.832	2.5	
17		01-8	16.0-16.6		OH	Very soft, high plasticity blackish grey ORGANIC CLAY.	1									100	96.1	76.6	76.75	1.483	0.839	2.6	
18							2																
19		01-9	18.0-18.6		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	2					100	99.3	97.5	87.8	79.8	76.0	59.5	66.53	1.500	0.901	2.6	
20		01-9-1	19.1 - 19.5		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	3					100	97.4	96.2	91.3	80.4	71.6	50.2	60.22	1.559	0.973	2.6	
21		01-10	20.0-20.6		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	3					100	98.78	98.21	96.94	87.3	68.1	40.1	48.63	1.647	1.108	2.6	
22							3																
23		01-11	22.0-22.6		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	2					100	98.2	97.9	96.9	93.4	68.7	42.5	45.83	1.695	1.162	2.6	
24							3																
25		01-12	24.0-24.6		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	3					100	98.6	98.4	97.7	90.3	68.9	43.6	50.49	1.401	0.931	2.6	
26							2																
27		01-13	26.0-26.6		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	3					100	99.3	99	98.2	92.1	81.1	44.2	47.95	1.610	1.088	2.6	
28							3																
29		01-14	28.0-28.6		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.	3					100	98.4	98	96.5	92.7	74.6	44.7	54.41	1.590	1.030	2.6	
30		01-15	29.4-30.0		OH	Soft, high plasticity blackish grey SANDY ORGANIC CLAY.						100	98.5	96.1	94.2	87.3	65.6	40.0	51.11	1.526	1.010	2.6	