NAME :-

NAVEED AHMAD

I.D : 7880

SECTION :

4B

SEMESTER :

6th

INSTRUTOR :-

SIR LIAQAT

SUBJECT :-

GEOTECHNICAL ENGG

ASSIG :- 1st

Write a geotech report on any civil engg project.

The geotechnical report is ~~base~~ of Secondry Section High School kambat.

INTRODUTION:-

Report is carried out for geotechnical investigation of Secondry Section of high School kambat. The purpose of investigation was to evolute the surface condition of site Proposed.

PROJECT DISCRIPTION:-

The 8 kanal site is located in kambat., Samarbagh Project include whole infrastucture of Secondry Section.

GEOLOGIC OVERVIEW:-

Project is located near Pak-Afghan border at lower dir at northern KP. which is a Hilly valley.

The mountain boundring boundring The alluvial places are mostly composed of late terretory age hood, assumed that these rocks extents as basement rocks. Saiwalk group. During the upper Plestocenece and holocence the basin has been filled with silty clay sand and gravel.

SUB-SURFACE:

Four examplary borings and three pits were escavated in area of proposed site. In general our exploring encountered predominantly silt upto 5ft depth and after clay soil upto 15" depth.

SESMICITY:

[redacted] Dir distrct lies in sesmically active zone, which is evident from the earth quacke catolog maps indicating the magnitude side belong to sesmic zone with peak horizinaly acceleration. 0.08 to 0.20 g.

LAB- TEST:-

Consolidation test, Direct Shear test and unconfined compression test were performed on undisturbed soil Speciman obtain from boring holes and test pit using shelby tube and block sampler additionally atterberg limit test moisture, content. Seive analysis tests were conducted on disturbed samples for classification purpose.

GROUND WATER:-

Ground water table was encountered in bore hole NO 2 and 3 at 11' depth from ground table.

CONCLUSION:-

The conclusion of tests conducted of the field that bearing capacity of 0.660 TSF may be adopted for contruction of site. since the shrinkage value of foundation lies in 18 to 25. which shows soil class of poor quality. it recomended to replace soil.

In case of missconary provided RCC column at 10 ft interval and strap beam at the top of foundation RCC slab to reduce differential settlment.

RESULT.

TERZAGHI'S & SPT VALUE:

S.NO	Marking	Bulk density	M.C %	L.L %	P.L %	Classification of soil	Safe bearing capacity & SPT.	
1	B.H1	105.7	11.3	23.9	20.8	MC	0.42	0.8
2	BH2	105.3	10.4	23.6	20.7	ML	0.48	1.0
3	BH3	103.2	11.7	24.9	19.4	ML	0.48	0.6
4	BH4	104.9	8.6	24.8	21.5	ML	0.44	0.43
5	BH5	105.3	1.25	22.6	20.2	ML	0.46	0.33

BH/TPID	BH1	BH2	BH3	BH4	BH5	TP1	TP2	TP-3
W_1 = wt of core cutter + soil	1.949	1.945	1.893	1.930	1.912	0.485	0.480	0.481
W_2 = wt of core cutter	0.970	0.969	0.939	0.968	0.943	0.186	0.187	0.184
W_3 = wt of soil ($W_1 - W_2$)	0.979	0.974	0.953	0.947	0.962	0.299	0.290	0.293
Vol of core cutter	0.0091	0.009	0.0092	0.0092	0.0092	0.0028	0.0028	0.0025
Density = W_3/W_1	106.5	10.58	103.7	104.1	108.7	10.66	104.5	10.5.4.

FIELD DENSITY:

BH ID.	BH1	BH2	BH3	BH4	BH5
W_1 = wt of wet soil + Cont	37.89	47.00	33.18	42.17	27.58
W_2 = wt of dry soil + Cont	35.19	43.68	31.08	39.00	25.88
W_3 = wt of container	11.08	12.28	13.00	1.38	12.28
W_w = wt of dry soil	2.69	3.28	2.08	3.17	1.68
W_s = wt of dry soil	24.07	31.37	18.08	37.58	13.60
$C = W_w / W_s \times 100\%$	11.02	10.4	11.5	8.4	12.4.

NATURAL MOISTUR CONTENT:

BH/TP ID	TP.1	TP-2	BH-02
Shrinkage Limit	20.06	22.21	17.155
Shrinkage Ration	1.6	1.8	1.4.

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QUIZ = 1st

Write a note on different software which are used in geotechnical engg.

17 ALP - Lateral load Piles Analysis Software:

ALP enables you to analyse laterally loaded piles producing out put such as comparasion graph in mins. the software predects pressure horizintal moment. Shear force and bending moment included in a piles when subjected to lateral load, bending moment and impose soil displacement lateral load and bending moment can be applied at any point down the piles as well as partial or full lateral or bending moment restraints.

ACCECELL :-

This programe analyses the behaviour of the rock slopes under sesmic conditions. It evaluates the displacement of rock block subjet to dynamic forces on the basis of siven accelerogram. This use of calculation method is based on siven accelerogram.

③ AM retain Software :.

It is used for checking singles or doubles retaining wall made for arcidor metal, sheet metal and its based on commertial software.

It - Rea. AM retain is based on subgrade ~~reaction~~ calculation method, but also include three checks according to French Standard.

NF - P94 - 282.

① Failure on the passive side.
② Balance on vertical forces.
③ Krans.

④ Deep Virtual Reality :.

This is first software fully integrated with a designe software package for automatic model generation. For the first time you can easily demonstrate to your decients what is all about before putting a single shovel in ground

→ unlimited wall and no of escavations.
→ Multiple stage integration form Deep 2008.
→ Multiple support type.
→ views walls and footings.