

OLKA MÜHENDİSLİK

5 CONCLUSION and SUGGESTIONS

In this study, the following results were obtained and the suggestions related to the topic were summarized.

- In this study, preparation of "Soil and Basic Study Report" based on sounding which will constitute the basis of "Static Projects" in Van City Erciş County Tekevler district J50-C-24-D-4-C Sheet, 143 Islands, 1 Nolu Parcel Targeted.
- For this purpose, in order to determine the distribution of geological units and the level of groundwater in the scope of the project, vegetable soil between 0.00-0.10 meters and basalt rock units between 0.10-3.00 meters were generally passed in SK-1, SK-2, SK-3. The values obtained are indicated in the annexes. Underground water was not encountered during drilling work.
- Van City Erciş County Tekevler District J50-C-24-D-4-C Sheet, 143 Island, 1 Parcel Area By the results of geological and geotechnical ground survey studies on the construction site of the Static Projects, The floor safe stress value to be used in the static projects of the existing building project; $Q_{emn} = 2,50 \text{ kg / cm}^2$.
- Van City Erciş County Tekevler District For the static projects to be prepared for the building of J50-C-24-D-4-C Sheet, 143 Island, 1 Nolu Parcel, the floor safety stress should be taken as $q_{emn} = 2,50 \text{ kg / cm}^2$.
- Liquefaction is not expected due to the presence of rocks in the study area.
- As Erciş District is located in the dangerous earthquake zone at 1st degree, it is a necessity to comply with the provisions of the "Regulation on Buildings to be Performed in Earthquake Regions" by the engineer who will do the static project.
- As a result of calculations made (Bowles 1988), the coefficient of soil reaction $A_{ks} = 4000 \text{ t / m}^3$ has been reached.
- The survey area should include B as the ground group and Z2 type ground as the local ground class. In this case it is recommended to use the soil characteristic periods $T_A (s) = 0.15$ $T_B (s) = 0.40$ for earthquake analyzes.

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Sheet No	Vs	Vp	Vs30	depth	Density	Gmax	E _{max}	Bulk Module	Poisson ratio	Vp/Vs
1	345	820	650	1,50	1.76	2140	5960	9237	0.39	2.38
2	500	1200		5,50	1.84	4689	13082	20757	0.39	2.40
3	725	1550		∞	1.91	10234	27836	33131	0.36	2.14

- When the maximum slip module (G) values are examined in the working area; According to Kramer (1996) predominantly; 1. From the surface level to the "Medium Sturdy Ground" classes 0.00 m to 1.50 m depth, to the "Sturdy Ground" classes up to 1.50 m 5.50 m depth from the surface level in the 2nd Layer Stratum, from 5.50 M to a depth of 30.00 m, "Very Solid Ground or Rock Unit".
- When the dynamic elasticity modulus (Ed) values are examined; In parallel with the change of G value, Bowles (1988) mainly; 1. From the surface level to the "Medium Sturdy Ground" classes 0.00 m to 1.50 m depth, to the "Sturdy Ground" classes up to 1.50 m 5.50 m depth from the surface level in the 2nd Layer Stratum, from 5.50 M to a depth of 30.00 m into the "Solid Ground or Soft Rock Unit" classes.
- Seismic velocities measured at the survey area consist of the Rough Soil units from the top to the second level, usually from the surface at medium velocities. The ground dominant vibration period (To) was calculated as 0,18 at 650 m / s (Vs30) obtained by MASW method, where the average shear wave velocity for the survey area is 30 meters depth.
- Periodically dominant vibration periods in the study area; In the pebble sandy clay unit "0,24 < T < 0,54 sec" varies in range. Calculated ground prevailing vibration period values have a general purpose of forecasting the swing conditions of the units in the project area. According to Ansal et al. (2004), the dominant vibration period value changes according to the scale are mainly in the class "B" for the general of the study area.

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