10. CONCLUSION AND SUGGESTIONS

10.1. CONCLUSION

a. The study was launched for Muş province Central district Konukbekler subdistrict Block (106) Plot No (9) construction on 06.11.2018 with land studies and observational studies were made in the area where the construction will be made and in the environs. On 18.11.2018, the report was prepared upon desk review as a result of the assessment of the results.

b. Muş province Central district Konukbekler subdistrict Block (106) Plot No (9). This 'Geotechnical Soil Study Report' has been prepared for accommodation purposes of the building originally constructed as warehouse.

Geotechnical Data of the Studied Area:

Geotechnical data of the studied area:	
Soil group	***-ZD-***
Local soil classification	***-Z_3***
Ao (Effective ground acceleration coefficient)	***-0.40-***
ks (Bedding coefficient)	***2000***
I (Building importance coefficient)	***1.0***
Qs	***2,61* kg/cm^2**

Earthquake parameters:

S_S = 1.994 **S_1 = 0.542** **S_{DS} = 1.994** **S_{D1} = 0.953**
***PGA* = 0.790** ***PGV* = 49.304**

c. The soil cover unit is Clay. Underneath the soil cover, low pebbly-sandy clay is present with close-to-horizontal packing. Materials in the foundation of the construction must be removed and foundation depth must be below the frost line and procedures under the Suggestions heading must be performed.

d. The geological structure in the study area and geotechnical characteristics of the units constituting the soil are suitable for settlement.

e. Surface water and underground water have not been observed in the study area. However, as the underground water level in the construction area is close to the surface, it would be proper to lay dreflex to surround the sides of the building to prevent possible leaks and reinforced concrete-

underground water encounters. In a likely situation, the contact of the foundation with the water must be intercepted as far as possible.

f. As a result of geological and geotechnical research, it was seen that the values of the foundation units are as follows: q_{em} = 1,22 kg/cm^2, strength class symbol = 'S_3', degree of distortion = 'W_2' and local soil classification = 'Z_3'.

h. The study area is located within the first degree seismic zone according to the Earthquake Map prepared by the Ministry of Public Works and Settlement of the Republic of Turkey. Accordingly, the principles of the 'Regulations for the structures to be built in disaster areas' must be respected.

10.2. SUGGESTIONS

a. Of the foundation units, allowable bearing value must be taken as q_{em} = 1,22 kg/cm^2 and local soil classification as 'Z_3'.

b. Due to existence of clayey and silty units in the foundation soil, for the purpose of protecting the building from possible effects that would affect the building negatively (rising of underground water level, ground subsidence, swell, etc.), necessary measures must be taken and these effects must be taken into consideration in calculations in the making of the project, during construction and afterwards.

c. In order for the soft units in the foundation of the construction not to affect the building negatively, standard penetration and shear box values and geotechnical calculations must be taken into consideration in the selection of foundation type and dimensions.

d. Units that might pose negativity for the building such as soft units in the foundation of the construction (vegetable soil, filling material, etc.) must not be left in the foundation.

e. In case that materials taken out of the foundation, particularly of soft nature, are used in any filling, the engineering characteristics of the material must be identified and taken into consideration.

f. The foundation's earthworks must be removed without harming the environment in accordance with its project.

g. The seismicity coefficient of the region must be taken into consideration.

h. In all relevant projects and calculations, construction of the foundation and following sections, care must be taken to comply with earthquake and building regulations published in the Official Journal no 26511 dated 3 May 2007, general and technical specifications.