



Soil Information System of Canakkale City Centre (NW Turkey)

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Soil exploration reports prepared for various aims in cities indicate differences as format and content. However, the preparation of these reports in specific standards will facilitate to interpret and control in integrity. The purpose of this study is to compile soil survey reports prepared by relevant foundation gathering data related to engineering properties of soils in Canakkale city centre, and also to form associated by using Geographical Information System (GIS) document with raising the data. Canakkale is located in the Biga Peninsula (the northwest extremity of Turkey). From a geological point of view, the Biga Peninsula is located in the western end of the Sakarya Zone and is bordered by the Thrace Basin in the north, to the south by the İzmir-Ankara Suture Zone.

Many destructive earthquakes occurred in Canakkale and its surroundings during historical period. The main reason is that more than one active fault exists around the settlement areas of the city. Moreover, thought that groundwater level of tectonically active region ranges from 1 to 12 m, the basement of region should be known in detail and these data need to be brought together orderly.

There are many soil survey offices doing separate studies but disconnected from each other in Canakkale. Therefore, same studies are being repeated. In this study, "Soil Information System" of Canakkale city centre has been generated by compiling the studies all offices made. In this case, 1/5000-scaled development map of Canakkale city centre has been digitized by using ArcGIS 9.3.1 version. The database including soil data belong to drillings (SPT-N, groundwater level, percentages of gravel, sand, silt and clay in the soil) has been prepared. So, scatter data in distinct soil survey offices were gathered under the common database. These compiled data are not only in unity but also being updated. This reduces money, staff and time loss for researchers on similar subject.

In conclusion, this prepared map showed that soils in Canakkale settlement area located in first degree earthquake region have liquefaction potential. Because of this, an elaborate liquefaction potential analysis is needed for this area.