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Foundation Settlement Determination: A Simplified Approach

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Abstract:

The heterogeneous nature of the subsurface requires the use of factual information to deal with rather than assumptions or generalized equations. Therefore, there is need to determine the actual rate of settlement possible in the soil before structures are built on it. This information will help in determining the type of foundation design and the kind of reinforcement that will be necessary in constructions. This paper presents a simplified and a faster approach for determining foundation settlement in any type of soil using real field data acquired from seismic refraction techniques and cone penetration tests. This approach was also able to determine the depth of settlement of each strata of soil. The results obtained revealed the different settlement time and depth of settlement possible.

Keywords: heterogeneous, settlement, foundation, seismic, technique

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