Abstract

The effect of soil-structure interaction on a four storeyed, two bay frame resting on pile and embedded in the cohesive soil is examined in this paper. For the purpose of the analysis,
simplified idealizations made in the theory of finite elements are used. The slab provided for all storeys are idealized as three dimensional four noded shell elements. Beams and columns of the superstructure frame are idealized as three dimensional two noded beam elements. Pile of the sub-structure is idealized as three dimensional two noded beam elements. The finite element based software program ANSYS is used for the purpose of analysis. The effect of different pile diameters on the response of superstructure is evaluated. The responses of the superstructure considered include storey displacements at respective storeys.

References

Analysis of Soil Structure Interaction in Framed Structure


**Index Terms**

Computer Science  
Applied Sciences

**Keywords**

Foundation - Frame; Piles  
Soil-structure Interaction  
Superstructure