

DESIGN OF SELF DRILLED MICROPILE FOUNDATION USING FHWA-NHI-05-039-(2005)

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Abstract

Micro pile foundation construction is always a tedious and time consuming job and construction industry is looking for solution for fast and easy construction of Micro-pile construction. Conventional Micro-piles are replaced by Self Drilled and grouted Micropile foundation it is developed in Italy in 1952. In 1997 FHWA publish state of practice review and major efforts have been made quest for “unified” design approach. In this paper step by step design procedure is explained with design of pile group for monopole telecom tower. Monopole is predominantly subjected with wind load and rest on pile cap supported by four micro pile foundations. The required soil investigation is conducted for foundation design inputs. The SDMF design is done using FHWA-NHI-05-039 (2005). The same foundation is to be tested for vertical load, lateral load & pullout load for design validation.

Keywords: Design approach of SDM, FHWA, Micropile, and Self drilled micropile.