

LRFD FOR SETTLEMENT ANALYSES OF SHALLOW FOUNDATIONS AND  
EMBANKMENTS --- DEVELOPED RESISTANCE FACTORS FOR  
CONSOLIDATION SETTLEMENT ANALYSES

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ABSTRACT

The objective of this research is to develop resistance factors for use in the load and resistance factor design (LRFD) method for consolidation settlements of shallow foundations and embankments on cohesive soil. Probabilistic analysis of settlements is used to represent the uncertainty of the compression index,  $C_c$ , the recompression index,  $C_r$  and the uncertainty of the maximum past pressure,  $P'_c$ . The probabilistic analysis is based on the Monte Carlo simulation for five different probabilities of failure: 1/25, 1/50, 1/75, 1/100, 1/150 for foundation soils and 1/150, 1/2000 for embankment fill.