SOIL DATA

REINFORCED SOIL

Unit weight,	γ	140.0 lb/ft ^{3}
Design value of internal angle of friction,	ϕ	34.0 °

RETAINED SOIL

Unit weight,	γ	135.0 lb/ft ^{3}
Design value of internal angle of friction,	ϕ	34.0 °

FOUNDATION SOIL (Considered as an equivalent uniform soil)

Equivalent unit weight,	$\gamma_{equiv.}$	135.0 lb/ft ^{3}
Equivalent internal angle of friction,	$\phi_{equiv.}$	34.0 °
Equivalent cohesion,	$c_{equiv.}$	0.0 lb/ft ^{2}

Factored bearing capacity resistance of foundation is given.

LATERAL EARTH PRESSURE COEFFICIENTS

Ka (internal stability) = 0.2827 (if batter is less than 10°, Ka is calculated from eq. 15. Otherwise, eq. 38 is utilized)
Inclination of internal slip plane, ψ = 62.00° (see Fig. 28 in DEMO 82).
Ka (external stability) = 0.3979 (if batter is less than 10°, Ka is calculated from eq. 16. Otherwise, eq. 17 is utilized)

BEARING CAPACITY

Bearing capacity coefficients (calculated by MSEW): Nc = 42.16 N γ= 41.06

SEISMICITY

Maximum ground acceleration coefficient, A = 0.080
Design acceleration coefficient in Internal Stability: Kh = Am = 0.110
Design acceleration coefficient in External Stability: Kh_d = 0.110 => Kh = Am = 0.110

Kae (Kh > 0) = 0.5734 Kae (Kh = 0) = 0.3383 Δ Kae = 0.2351
Seismic soil-geogrid friction coefficient, F* is 100.0% of its specified static value.

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