



PIN FOUNDATIONS INC.



Calculation Software for Pin Foundation System

PROJECT INFORMATION:

Project Name: Foothills Trail
 Product: DP-200E
 Location: Pierce County, WA
 Engineer: Soils - GeoEngineers / Foundations - TAN
 Date: 3/1/2016

SOIL INFORMATION:

	Soil 1 - Thickness (ft), D1:0.25	Soil 2
Description:	Loose Silty Sand	Med Dense Silty Sand
Phi (degree):	28.00	35.00
Unit Weight (pcf):	115.00	125.00
Cohesion (psf):	0.00	0.00
Ground Water Table:	At Grade	
Neglected Depth (ft):	0.00	

PILE INFORMATION:

Pile Type: Diamond Pier (4 pins)
 Pin Length (ft): **4.20**
 Angle (degree): 40.00
 Pin Diameter (in): 2.375
 Wall Thickness (in): 0.154
 Pin Type and Grade: Pipe, 36ksi
 Effective Depth (ft), D: 2.74
 Effective Length (ft), B: 4.60
 Effective Pile Width (ft): 0.40

Program automatically corrects Dry Unit Weight for Buoyant Weight when Ground Water Table "At Grade" is indicated.

Program corrects total Pin length indicated for actual active length.

PILE CAPACITY:

Compression: C_ultim (kip)= 24.41
 F.S.=2: C_allow (kip)= **12.21**
 Uplift: U_ultim (kip)= 2.69
 F.S.=1.5: U_allow (kip)= **1.80**
 Lateral:
 Parallel to Pins: L1_allow (kip)= **1.75**
 Perpendicular to Pins: L2_allow (kip)= **1.75**

All capacities are calculated separately.

CALCULATION DATA:

Bearing Capacity Factors:
 Nc=54.48
 Nq=38.27
 Nr=42.38
 Pressure at Base (psf)=168.94
 Arching Factor=2
 Allowable Deflection (in)=1
 Allowable Bending Strength (ksi)=24

