



# PIN FOUNDATIONS INC.



## Calculation Software for Pin Foundation System

### PROJECT INFORMATION:

Project Name: Strangel Cabin  
 Product: DP-100, Large Diamond Pier  
 Location: Winnipeg, CN  
 Engineer: local soil survey  
 Date: 9/22/2006

### SOIL INFORMATION:

**Soil 1**  
 Description: Saturated sand with organics  
 Phi (degree): 28.00  
 Unit Weight (pcf): 110.00  
 Cohesion (psf): 0.00  
 Ground Water Table: At Grade  
 Neglected Depth (ft): 0.50

### PILE INFORMATION:

Pile Type: Diamond Pier (4 pins)  
 Pin Length (ft): 5.25  
 Angle (degree): 40.00  
 Pin Diameter (in): 1.900  
 Wall Thickness (in): 0.145  
 Pin Type and Grade: Pipe, 36ksi  
 Effective Depth (ft), D: 3.04  
 Effective Length (ft), B: 5.95  
 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.

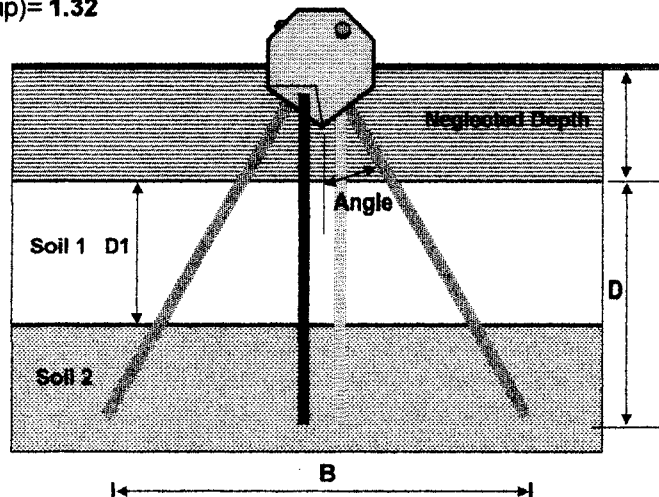
### PILE CAPACITY:

Compression: C\_ultim (kip)= 11.97  
 F.S.=2: C\_allow (kip)= 5.99  
 Uplift: U\_ultim (kip)= 2.57  
 F.S.=1.5: U\_allow (kip)= 1.71  
 Lateral:  
 Parallel to Pins: L1\_allow (kip)= 1.32  
 Perpendicular to Pins: L2\_allow (kip)= 1.32

All capacities are calculated separately.

### CALCULATION DATA:

Bearing Capacity Factors:  
 Nc=31.60  
 Nq=17.80  
 Nr=14.60  
 Pressure at Base (psf)=144.84  
 Arching Factor=2.5  
 Allowable Deflection (in)=1  
 Allowable Bending Strength (ksi)=24



\* Soil 2 - Not Used