



# PIN FOUNDATIONS INC.



## Calculation Software for Pin Foundation System

### PROJECT INFORMATION:

Project Name: Brooklyn Naval Cemetery Boardwalk  
 Product: DP-75E  
 Location: Brooklyn, NY  
 Engineer:  
 Date: 5/27/2014

### SOIL INFORMATION:

**Soil 1**  
 Description: Medium Dense Sand  
 Phi (degree): 34.00  
 Unit Weight (pcf): 114.00  
 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): **4.20**  
 Angle (degree): 40.00  
 Pin Diameter (in): 1.670  
 Wall Thickness (in): 0.140  
 Pin Type and Grade: Pipe, 36ksi  
 Effective Depth (ft), D: 2.24  
 Effective Length (ft), B: 4.60  
 Effective Pile Width (ft): 0.28

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.

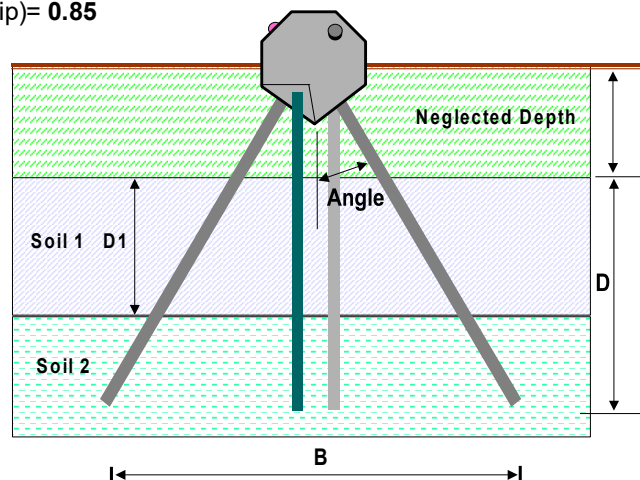
### PILE CAPACITY:

Compression: C\_ultim (kip)= 11.07  
 F.S.=2: C\_allow (kip)= **5.54**  
 Uplift: U\_ultim (kip)= 1.06  
 F.S.=1.5: U\_allow (kip)= **0.71**  
 Lateral:  
 Parallel to Pins: L1\_allow (kip)= **0.85**  
 Perpendicular to Pins: L2\_allow (kip)= **0.85**

All capacities are calculated separately.

### CALCULATION DATA:

Bearing Capacity Factors:  
 Nc=52.60  
 Nq=36.50  
 Nr=39.60  
 Pressure at Base (psf)=115.51  
 Arching Factor=2  
 Allowable Deflection (in)=1  
 Allowable Bending Strength (ksi)=24



\* Soil 2 - Not Used