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Lateral Resistance of Piles Near Vertical MSE Abutment Walls

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A thesis submitted to the faculty of
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Master of Science

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ABSTRACT

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Full scale lateral load tests were performed on five piles located at various distances behind MSE walls. Three of the five test piles were production piles used to support bridges, and the other two piles were located behind a MSE wing walls adjacent to the bridge abutment. The objective of the testing was to determine the effect of spacing from the wall on the lateral resistance of the piles and on the force resisted by the MSE reinforcement.

Tentative curves have been developed showing p-multiplier vs. normalized spacing behind wall for a length to height ratio of 1.1 and 1.6. The data suggest that with a L/H ratio of 1.6, a p-multiplier of 1 can be used when the normalized distance from the back face of the MSE wall to the center of the pile is at least 3.8 pile diameters. When the L/H ratio decreases to 1.1 a p-multiplier of 1 can be used when the pile is at least 5.2 pile diameters behind the wall.

A plot showing the induced load in the reinforcement as a function of distance from the pile has been developed. The data in the plot is normalized to the maximum lateral load and to the spacing from the wall to the pile. The best fit curve is capped at a normalized induced force of approximately 0.15. The data show that the induced force on the reinforcement when a lateral load is applied to the piles decreases exponentially as the normalized distance from the pile increases. The plot is limited to the conditions tested, i.e. for the reinforcement in the upper 6 ft. of the wall with L/H values ranging from 1.1 to 1.6.

Keywords: Jacob S. Price, laterally loaded pile, MSE wall, p-y curve

ACKNOWLEDGMENTS

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I would like to thank Dr. Norman L. Jones and Dr. Kevin W. Franke for their help on my committee, and Dr. Kyle M. Rollins as my Committee Chair for all the time and effort he has put into helping me complete this.

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1 INTRODUCTION

Pile foundations for bridges with integral abutments must resist lateral loads produced by earthquakes and thermal expansion or contraction. Increasingly, space constraints are also leading to vertical mechanically stabilized earth (MSE) walls at abutment faces. Presently, there is relatively little guidance for engineers in assessing the lateral resistance of piles located close to these MSE walls. As a result, some designers locate the abutment piles six to eight pile diameters behind a wall face to minimize the interaction and use conventional design approaches. However, this approach increases the bridge span and the cost of the bridge structure. In contrast, others position the pile close to the wall face and reduce the lateral resistance using engineering judgment. Of course, this approach could also increase the number of piles if lateral loading controls the design, and thereby increase the foundation cost. The Utah Department of Transportation (UDOT) specifies a minimum spacing of three feet from the back face of the MSE wall to the front face of the abutment piles (UDOT Standard Drawing DD8). Still other Departments of Transportation neglect any lateral resistance provided by the soil adjacent to the piles for these cases which would lead to higher foundation costs.

Pierson et al. (2009) conducted a series of full-scale lateral load tests on 36 in. diameter drilled shafts located at four distances behind a 20 ft. high block masonry wall reinforced with extensible geogrids. These tests showed that the lateral resistance of the shaft spaced 2 pile diameters behind the wall was less than 50% of the resistance provided by the shaft located 4

pile diameters behind the wall. Although these shafts only extended to the base of the wall and acted like short piles, these results clearly indicate that the presence of an MSE wall face can lead to significant reductions in the lateral pile resistance. Unfortunately, generally applicable design methods are not presently available to allow engineers to account for the effects observed in these tests. Because the lateral resistance provided by the MSE wall would be a function of the reinforcement used, one might expect that the lateral pile resistance would be connected to the factor of safety against pull-out for the reinforcement. It is conceivable that piles near a wall with a high factor of safety against pull-out would experience less reduction in lateral resistance than a pile near a wall with minimum pull-out resistance.

To improve our understanding of pile-MSE wall interaction, lateral load tests were performed on five piles located behind MSE walls. Two piles are located at the site of a new overpass structure for U.S. Highway 89 above a railroad line in Pleasant Grove, Utah. The other three piles are located at the site of a new overpass structure for Pioneer Crossing above a railroad in Lehi, Utah. Pleasant Grove and Lehi are approximately 30 miles south of Salt Lake City as shown in Figure 1.1. The two piles in Pleasant Grove and one of the piles in Lehi are production piles used to support the bridges. The remaining two piles in Lehi are piles located outside of the bridge abutment and were driven specifically for lateral load testing. All five piles extend well below the bottom of the MSE wall and are considered to be elastic piles in the lateral load analysis. The piles are 12.75 in. and 16 in. open ended pipe piles in Pleasant Grove and Lehi respectively. The MSE walls at both locations use welded wire grids as the soil reinforcement.

The objectives of the lateral load tests are to determine the effect of spacing from the wall on the lateral resistance of the piles and on the force resisted by the MSE reinforcement.

Because of the geometry and the testing sequence, the factor of safety against pull-out for three of the five tests was unusually high at the time of testing. Therefore, the results provide insight on the potential benefit of increasing the factor of safety against pullout to increase the lateral pile resistance. The test procedures, results and analysis are described herein.

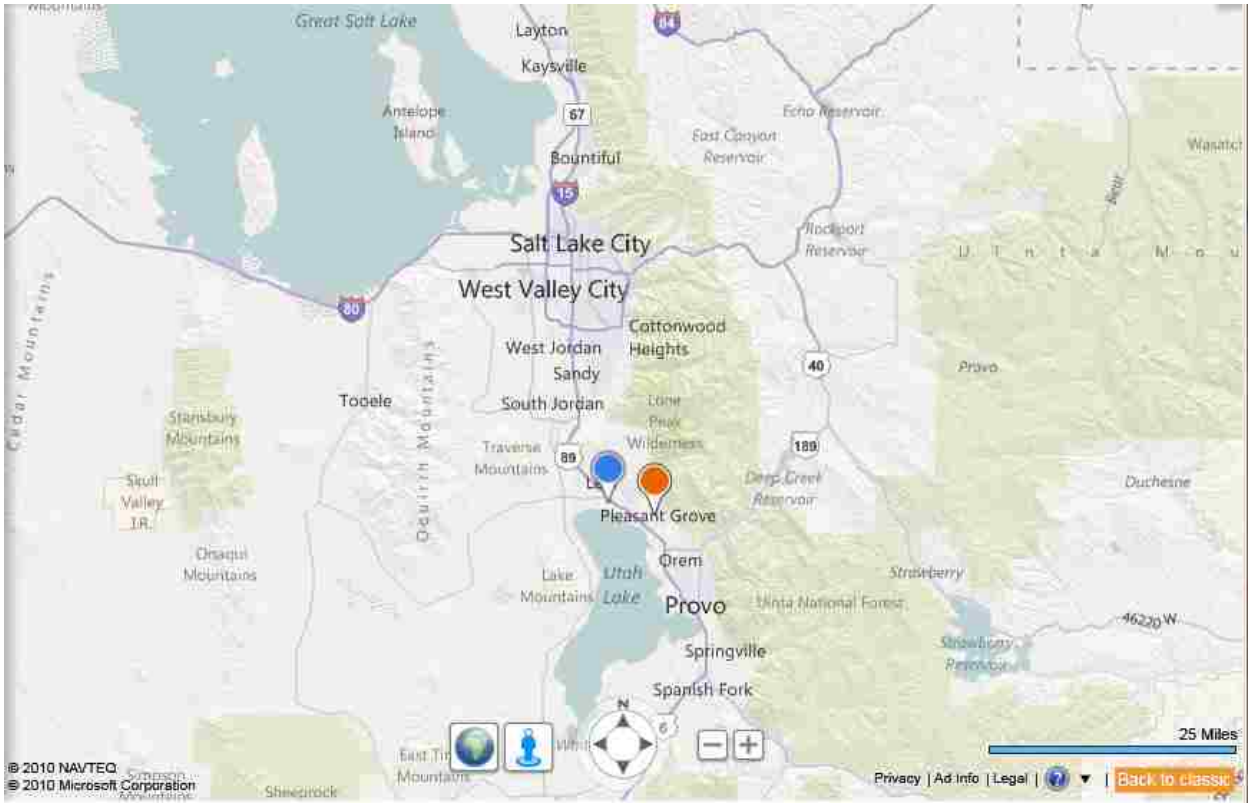

Figure 1.1: Location of test sites shown with blue and orange markings.

2 LITERATURE REVIEW

There is relatively little guidance available to design engineers for determining the lateral load capacity of piles behind MSE walls. The literature review contained herein consists of a review of MSE wall design, analysis of laterally loaded piles and testing of laterally loaded drilled shafts behind MSE walls.

2.1 MSE Walls

MSE walls have been in use in the United States since the early 1970s (Elias and Christopher, 1997). These walls can be divided into two general categories based on the type of inclusion (reinforcement) used, i.e. extensible or inextensible reinforcement. Extensible reinforcements are made from non metallic material that will deform as much as or more than the surrounding soil at failure. Inextensible reinforcements are made from metallic material and deform significantly less than the soil at failure.

MSE wall design includes analysis of internal and external stability. For external stability, the reinforced mass formed by the inclusions and soil is considered to be a homogeneous soil mass. The mass is then evaluated for its resistance to sliding, overturning, bearing and global shear failure using the same guidelines as gravity retaining walls. The same analysis is used for the external stability for MSE walls utilizing extensible as for inextensible reinforcement.

The analysis for internal stability of an MSE wall is performed by evaluating the tensile forces in the reinforcement and comparing these forces to the allowable tensile strength of the reinforcement as well as the pullout resistance of the reinforcement. If the tensile force in any of the inclusions in the wall is greater than the allowable tensile strength of the inclusion an elongation or breakage failure occurs. If the tensile force exceeds the pullout resistance, a failure by pullout will occur. The internal stability analysis differs for extensible and inextensible reinforcement. Inextensible welded wire grid reinforcements are used in the MSE walls at both test sites as outlined herein, so the analysis of inextensible reinforcement will be discussed in further detail. The steps for the internal design process as follows: (Elias and Christopher, 1997)

- Select the location of the critical failure surface.
- Select a reinforcement spacing compatible with the facing.
- Calculate the maximum tensile force at each reinforcement level, static and dynamic.
- Calculate the maximum tensile force at the connection to the facing.
- Calculate the pullout capacity at each reinforcement level.

The critical failure surface is assumed to be bi-linear as shown in Figure 2.1 and coincides with the location of the maximum tensile force in the reinforcement. The maximum tensile force is calculated following Equation 2-1 at each reinforcement level using the lateral earth pressure coefficient from Figure 2.2 and overburden pressure including live load surcharges that are located in the active zone of the reinforced soil.

$$\boldsymbol{T_{max} = \sigma_H S_v} \quad \textbf{(2-1)}$$

where

T_{max} is the maximum tensile force in a given reinforcement,

σ_H is horizontal stress along the potential failure line per Equation 2-2, and

S_v is vertical spacing between reinforcement levels.

$$\boldsymbol{\sigma_H = K_r \sigma_V + \Delta \sigma_H} \quad \textbf{(2-2)}$$

where

K_r is the lateral earth pressure coefficient from Figure 2.2,

σ_v is the vertical stress as calculated by Equation 2-3, and

$\Delta\sigma_H$ is a concentrated horizontal surcharge load.

$$\boldsymbol{\sigma_v = \gamma_r Z + q + \Delta \sigma_v} \quad \textbf{(2-3)}$$

where

γ_r is the moist unit weight of the retained soil,

Z is depth below the top of wall to the reinforcement,

q is a uniform surcharge load, and

$\Delta\sigma_v$ is a concentrated vertical surcharge load.

The pullout capacity at each reinforcement level is a function of size and spacing of the reinforcement, the type of reinforcement and the overburden pressure. Live load surcharges are not included in determining the overburden pressure for pullout calculations. The calculation for pullout capacity is shown in Equation 2-4.

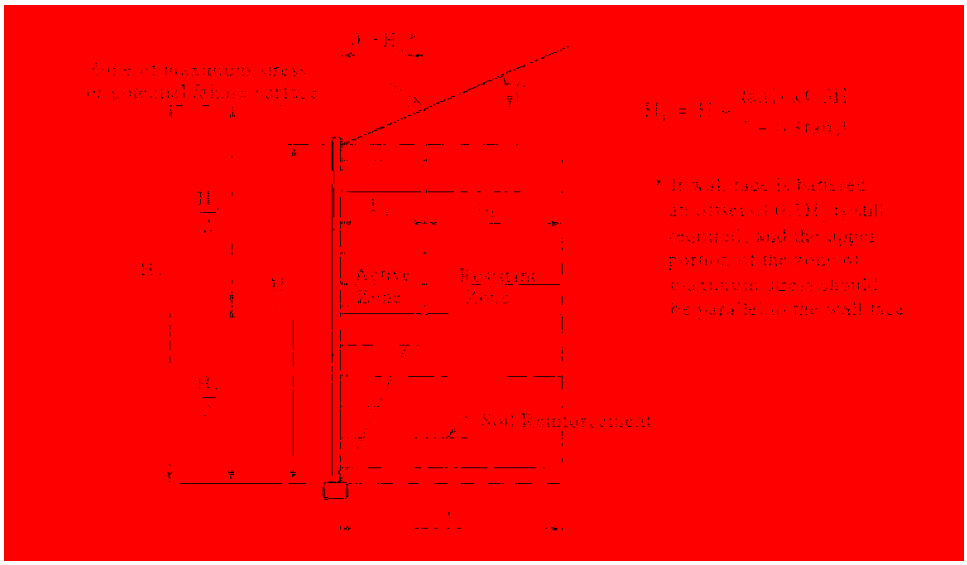

Figure 2.1: Location of critical slip surface for MSE wall with inextensible reinforcement (Elias and Christopher, 1997).

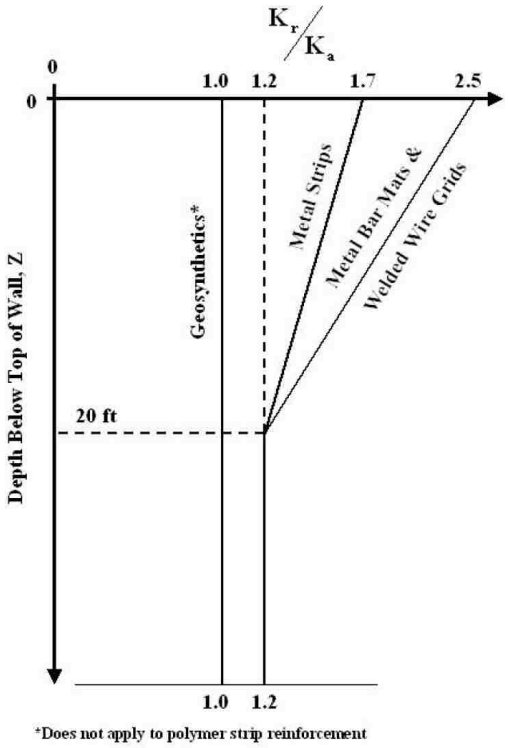

Figure 2.2: Variation of the coefficient of lateral stress ratio with depth in a MSE wall (Elias and Christopher, 1997).

$$PC = F^{*}\gamma_r Z(L_e)(C)R_c\alpha \quad \textbf{(2-4)}$$

where

PC is the pullout capacity for the reinforcement,

F* is the pullout resistance factor as defined by Equation 2-5 for wire grids,

γ_r is the moist unit weight of the retained soil,

Z is depth below the top of wall to the reinforcement,

L_e is length of embedment of the reinforcement in the resisting zone,

C is a surface area geometry factor and is equal to 2 for wire grids,

R_c is the reinforcement coverage ratio as defined in Equation 2-6, and

α is a scale factor, equal to 1 for inextensible reinforcement.

$$F^{*} = \begin{cases} 20(t/S_t), & Z = 0 \\ 10(t/S_t), & Z \geq 20\ ft \end{cases} \quad \textbf{(2-5)}$$

where

t is the thickness of the transverse bars of the wire grid, and

S_t is the spacing between transverse bars.

$$R_c = \frac{b}{S_h} \quad \textbf{(2-6)}$$

where

b is the unit width of the reinforcement, and

S_h is the horizontal center to center spacing of grids at the same elevation.

The factor of safety against pullout is simply the pullout capacity divided by the maximum tensile force in the reinforcement. A minimum factor of safety of 1.5 is recommended by FHWA (Elias and Christopher, 1997).

2.2 Lateral Load Analysis of Piles

The lateral load capacity of a pile is influenced by the geometric properties of the pile, the soil properties and the type of loading. A common method of analysis is known as the p-y method where p is the soil resistance and y is the horizontal deflection of the pile. In this method, the soil is modeled as series of discrete non-linear springs which are a function of the pile deflection.

The computer program LPILE (Reese et al, 2004) uses a finite difference method to analyze lateral loads with the p-y method. The program uses beam elements to represent the pile and non-linear p-y springs. Using an iterative approach, the program solves for the forces and displacements along the length of the pile. The program includes several different methods for obtaining p-y curves in clays and sands. The analysis output includes bending moment, shear and displacement curves.

The method used in this paper for obtaining p-y curves was developed by the American Petroleum Institute (API, 1982). The soil properties used for the API method include the unit weight γ, modulus of subgrade reaction (stiffness) k, and friction angle ϕ. The friction angle has the greatest effect at large displacements where the soil failure occurs, while the subgrade reaction has the greatest effect at small displacements.

2.3 Full Scale Testing of Piles Behind MSE Walls

A literature review indicates that only one series of large scale tests has been performed to evaluate the lateral resistance of piles near MSE walls, other than the tests reported in this thesis. Piersons et al. (2009) conducted a series of full-scale lateral load tests on 36 in. diameter drilled shafts located at four distances behind a 20 ft. high block masonry wall reinforced with extensible geogrids. The geogrid length was 14 ft. which is 0.7 times the height of the wall.

The shafts were embedded 15 to 20 ft. into the reinforced fill and were intended to model foundations for light poles adjacent to the MSE wall.

The MSE wall and shafts were all constructed specifically for the lateral load testing, and so the shafts could be loaded to failure. Each shaft was instrumented with inclinometers, which were monitored at various load levels during testing. The geogrid reinforcement was instrumented with strain gages located at varying distances from the wall face. Pressure cells were placed against the back face of the wall directly in from of each test pile at three different elevations. Photogrammetery was used to monitor the displacement of the wall face during testing. This process consisted of attaching targets to various blocks and photographing the wall before testing and at each load level with a camera attached to a tripod. The photos were rastered into AutoCAD so that the wall movement could be determined throughout the test. LVDTs were used to measure the displacement of the shafts during testing, and a load cell was placed between the hydraulic ram and the test pile to determine the load. Figure 2.3 shows the load-displacement curves for the shafts tested.

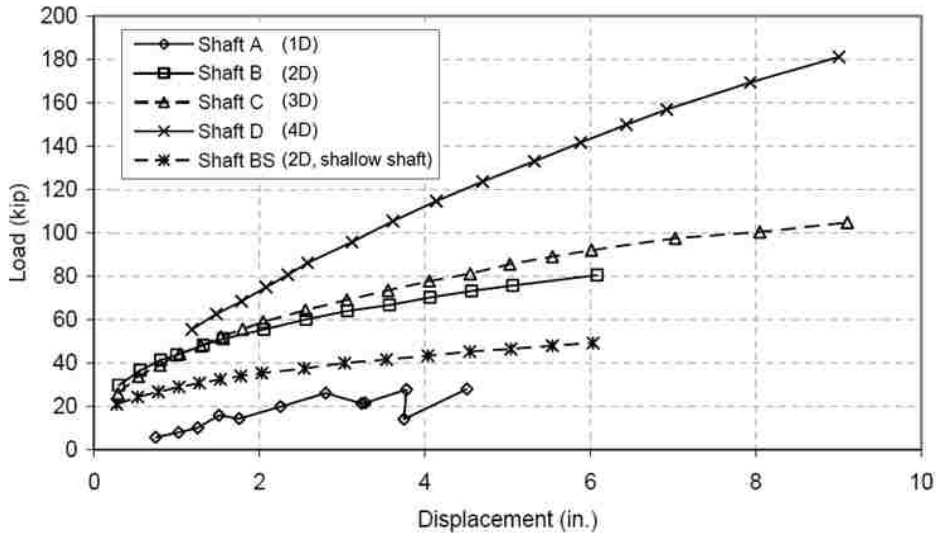

Figure 2.3: Load vs. deflection for single shafts modified from Piersons et al. (2009).

The testing showed that the lateral resistance of the shaft spaced 2 pile diameters behind the wall was less than 50% of the resistance provided by the shaft located 4 pile diameters behind the wall as shown in Figure 2.3. After testing, cracking was observed behind the reinforced zone indicating that additional capacity may be gained by longer reinforcements.

2.4 Numerical Analysis of Piles Behind MSE Walls

Research reported by Khodair and Hassiotis (2005) considered lateral loads on an integral abutment bridge due to thermal expansion and contraction of the bridge structure. The H-piles considered in their analyses were placed inside a corrugated steel pipe with the annulus filled with sand and located approximately six pile diameters from the wall. Their findings suggest that lateral loads for the case of thermal loading (maximum pile head displacement of approximately 0.9 in.), pile type, and for the distance between wall and pile considered, load transfer does not induce significant lateral loads to an MSE wall.

In a numerical modeling study by Ng and Chung (2005), interaction between a wall and a nearby single sleeved and unsleeved pile was investigated using a non-linear three-dimensional finite difference method. As shown in Figure 2.4 lateral earth pressures from a single pile placed 1.5 pile diameters from the retaining wall increased lateral earth pressures on the wall substantially. When the pile was unsleeved with a lateral load of 5000 kN, lateral earth pressures on the retaining wall at shallow depths ranged from K_p to 3 K_p, where Kp is the passive earth pressure coefficient. Althought placing a sleeve around the pile reduced the load transferred to the wall, the lateral earth pressure was still substantially greater than at-rest earth pressure conditions.

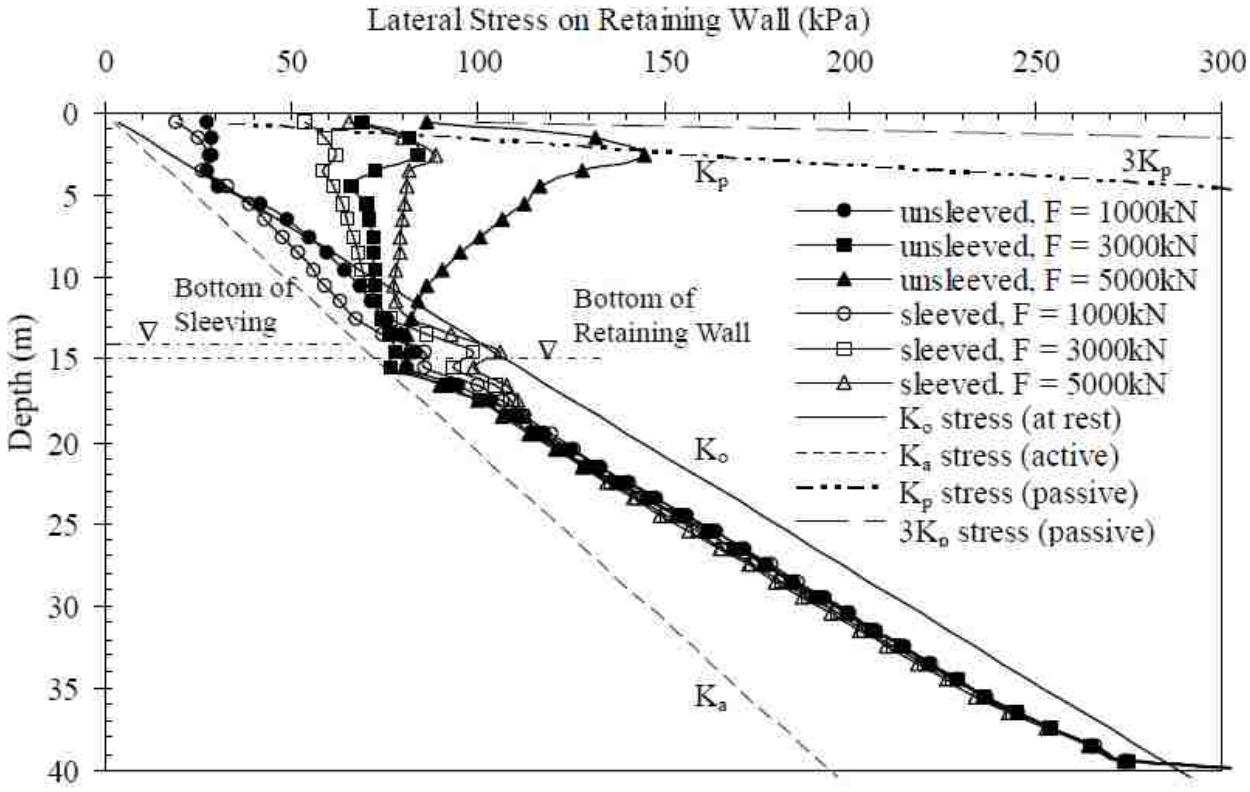

Figure 2.4: Lateral earth pressures on a retaining wall with a laterally loaded pile located 1.5 pile diameters from the wall (Ng and Chung 2005).

3 LAYOUT

3.1 U.S. Highway 89 over Union Pacific Rail Road

The first two pile lateral load tests were performed at a new overpass structure for U.S. Highway 89 (Pleasant Grove State Street) above a Union Pacific rail road line in Pleasant Grove, UT. Both tests were performed on piles supporting the bridge on the east abutment. Plan and profile views of the two pile load tests performed at this site are presented in Figure 3.1 through 4. The plan view in Figure 3.2 is an excerpt from the design plans which shows how the reinforcement overlaps in the corner of the wall.

The test piles are 12.75 in. diameter steel pipe piles with a wall thickness of 0.375 in. The piles were driven closed ended prior to the construction of the MSE walls and extend through compressible clay to a sand bearing layer at a depth of approximately 50 ft. below the base of the wall. The piles were eventually filled with reinforced concrete and embedded into the abutment wall; however at the time of testing the piles were hollow. The pipe pile detail from the bridge design plans provided by UDOT is shown in Figure 3.5. The steel conforms to ASTM A252 Grade 3 specifications and has a minimum yield strength of 45 ksi based on the 0.2% offset criteria. The abutment has 17 piles with a typical center to center spacing of 8.33 ft. The typical spacing from the back face of the MSE wall to the center of the pile is 8.0 ft. (7.5 pile diameters).

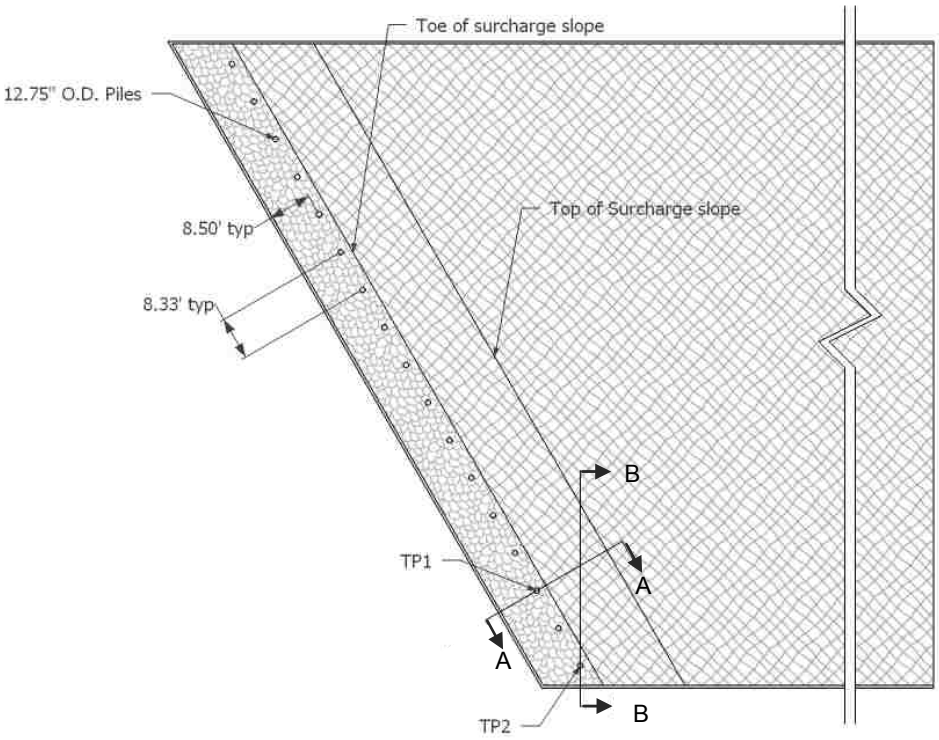

Figure 3.1: Plan view of the east abutment for the U.S. Highway 89 over UPRR.

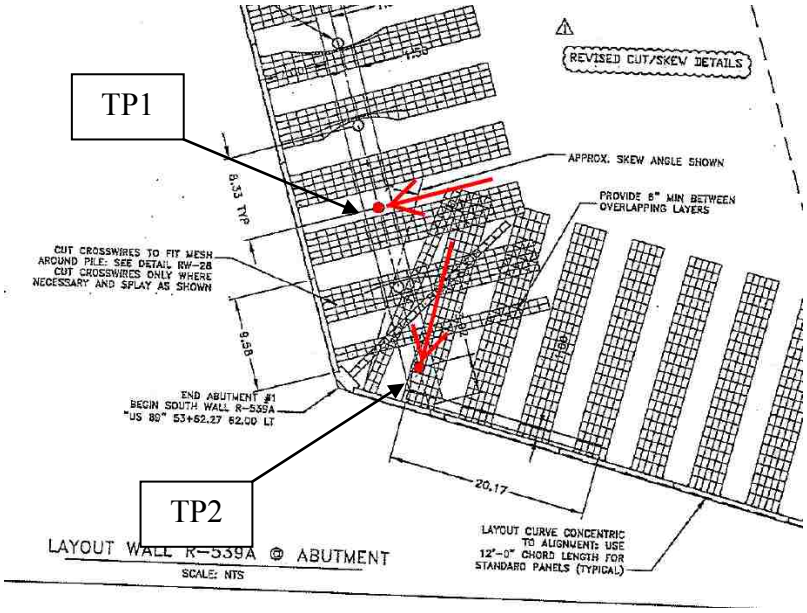

Figure 3.2: Plan view of section of MSE wall with test piles showing reinforcement overlapping in corner.

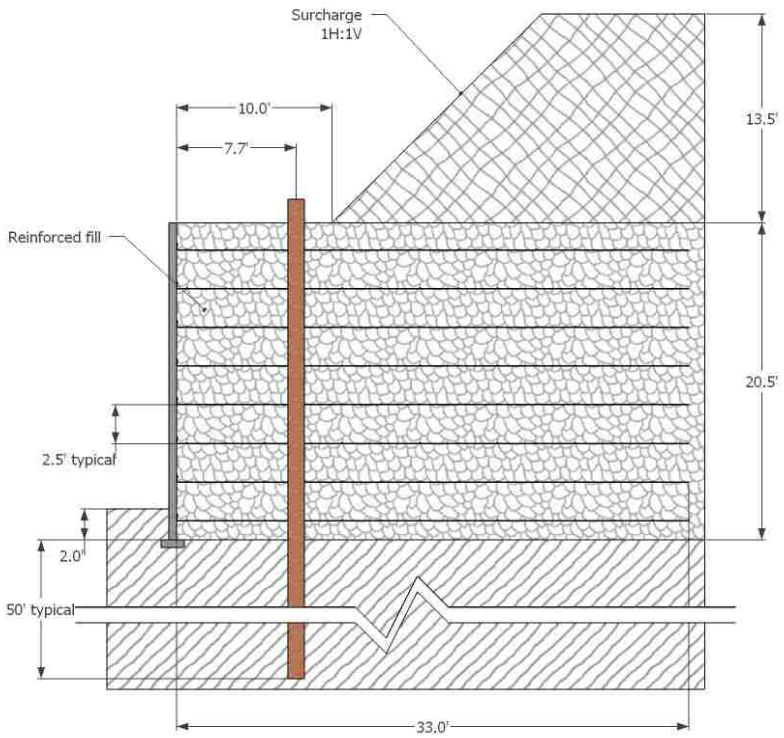

Figure 3.3: Profile view of Test Pile 1 (TP1); cross-section A-A from Figure 3.1.

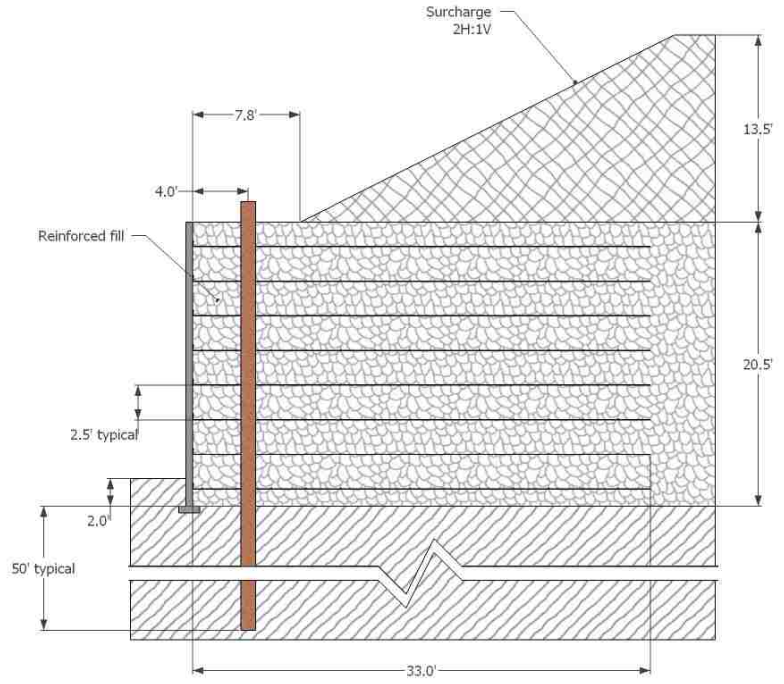

Figure 3.4: Profile view of Test Pile 2 (TP2); cross-section B-B from Figure 3.1.

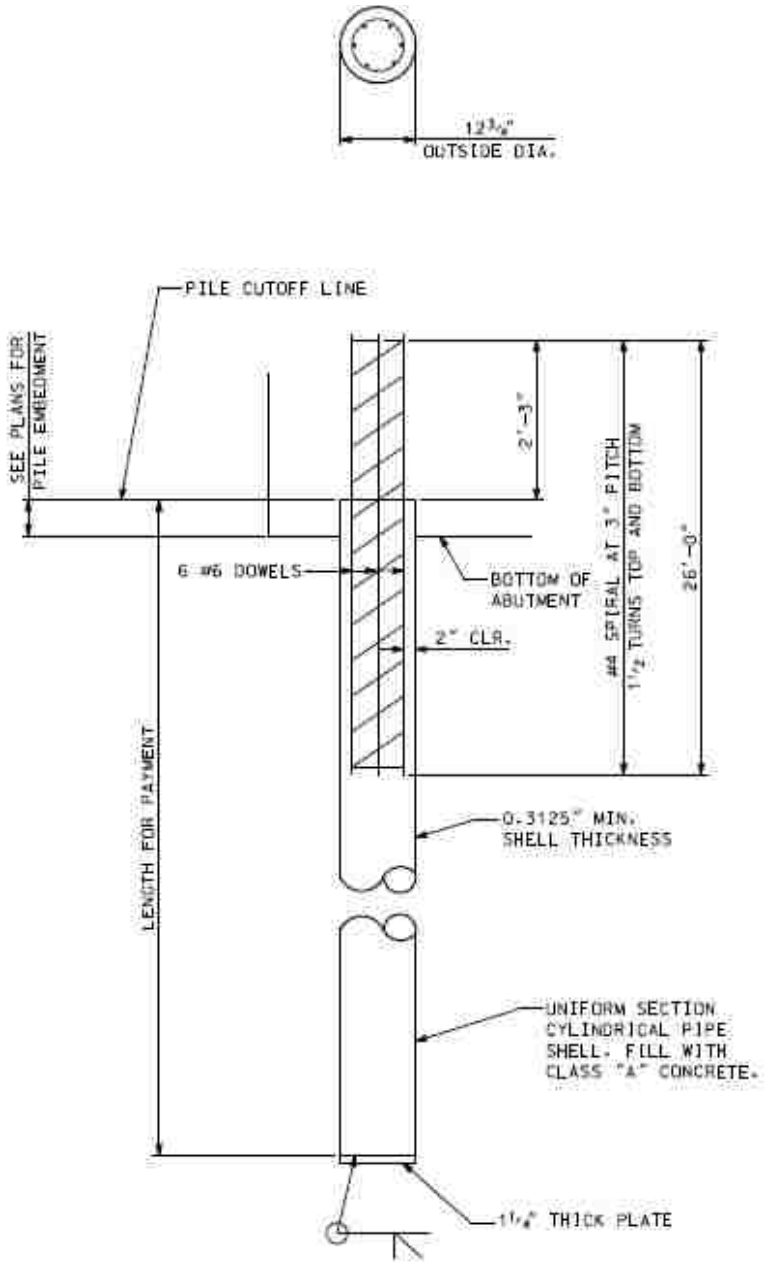

Figure 3.5: Pipe pile detail for the U.S. Highway 89 over UPRR bridge.

The single stage MSE walls were designed by SSL, LLC and consist of welded wire grid soil reinforcement connected to concrete wall panels. The welded wire grid consists of 3 to 6 longitudinal wires with a center to center spacing of 8 in. The longitudinal wires are typically size 20 wires (0.504 in. diameter) for the bottom 3 to 4 layers of reinforcement and size 11 wires

(0.374 in. diameter) for the upper 4 to 8 layers. The cross wires are all size 11 and have center to center spacing of 1.0 to 2.5 ft. The horizontal spacing of the grids at the same elevation from center to center is typically 6 ft. The vertical spacing of the grids is typically 2.5 ft. Wall panels are 6 in. thick and typically 5 ft. high by 12 ft. long. The wall was designed according to AASHTO 2007 Interim Specifications with a seismic coefficient of 0.53g for the walls within 50 ft. of the abutment. The design parameters of the MSE wall for the locations of the lateral load tests are displayed in Table 3.1.

Table 3.1: MSE wall parameters for the U.S. Highway 89 site.

Pile	TP1	TP2
Wall height (ft)	20.5	20.5
Design height from top of leveling pad to top of roadway (ft)	32.5	32.5
Mesh length (ft)	33	33
Mesh length to wall height at time of test ratio	1.6	1.6
Mesh length to design height ratio	1.0	1.0

The design height from Table 3.1 includes the abutment wall, backfill and roadway section which were not present at the time of testing. A surcharge load of about 2 ksf was in place behind the wall at the time of testing as shown in Figure 3.3 and 4.

The sandy gravel reinforced fill classifies as A-1-a material according to the AASHTO system. The average maximum dry density of the reinforced material is 139.2 pcf with an optimum moisture content of 6.1% as determined from standard Proctor tests. Nuclear density tests indicate that the soil was compacted to about 97% of the maximum dry density with a water content of about 5%. All material testing data is from tests performed by UDOT throughout the wall construction.

The static factor of safety against pull-out for the MSE wall geometry at the time of testing was approximately 8.4 for TP1 and 6.4 for TP2 as calculated in Appendix A.1 using procedures specified by FHWA (Elias and Christopher, 1997). The static factor of safety as calculated by the wall designer for the final construction is approximately 2.0. The center of Test Pile 1 (TP1) is located 7.7 ft. (7.5 pile diameters) behind the back face of the wall. The center of Test Pile 2 (TP2) is located 4.0 ft. (3.8 pile diameters) behind the back face of the wall. The piles were laterally loaded normal to the nearest wall on the planes shown in the profile views in Figure 3.3 and4.

3.2 Pioneer Crossing over Union Pacific Rail Road

The next three pile lateral load tests were performed at a new overpass structure at the intersection of Pioneer Crossing and Mill Pond Road above a Union Pacific rail road line in Lehi, UT. One test was performed on a pile supporting the bridge on the north abutment. The other two tests were performed on piles that were donated by Atlas Steel and driven by Build Inc. behind the MSE wing wall to the east of the abutment. A plan view of the test piles is shown in Figure 3.6. An aerial photograph of the site with all of the piles driven prior to wall construction is shown in Figure 3.7. Profile views for the three pile load tests performed at this site are presented in Figure 3.8 through 10.

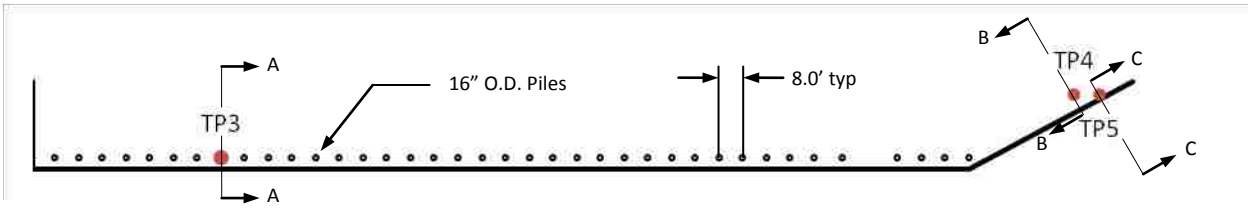

Figure 3.6: Plan view of the north abutment for the Pioneer Crossing bridge over UPRR.

Figure 3.7: Piles for the Pioneer Crossing bridge over UPRR prior to wall construction.

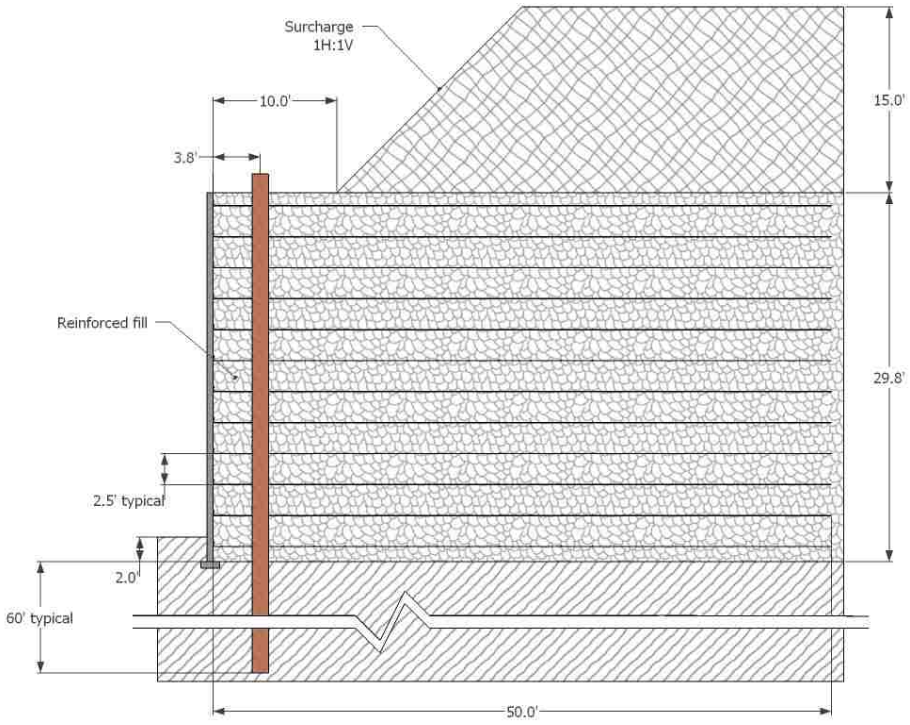

Figure 3.8: Profile view of Test Pile 3 (TP3); cross section A-A from Figure 3.6.

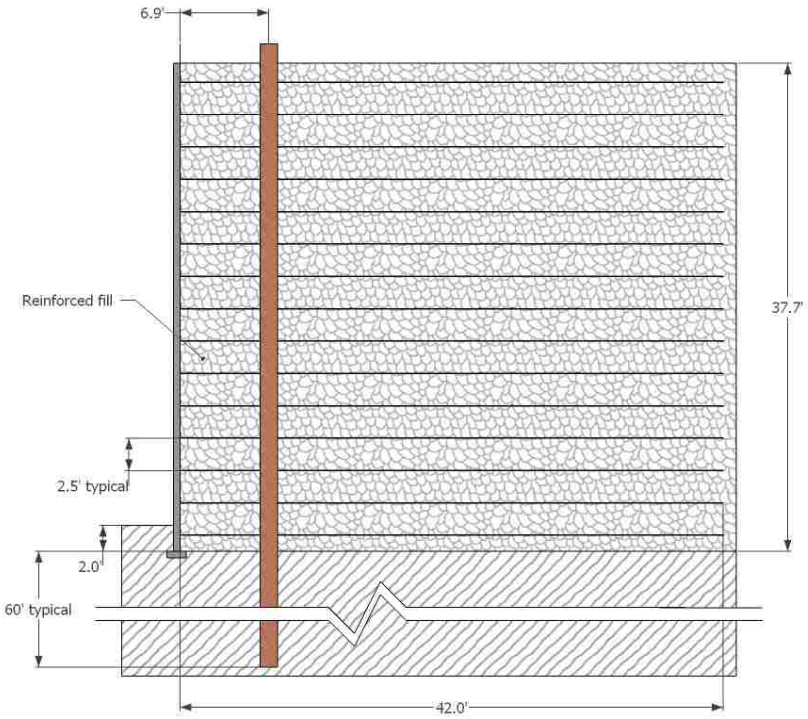

Figure 3.9: Profile view of Test Pile 4 (TP4); cross-section B-B from Figure 3.6.

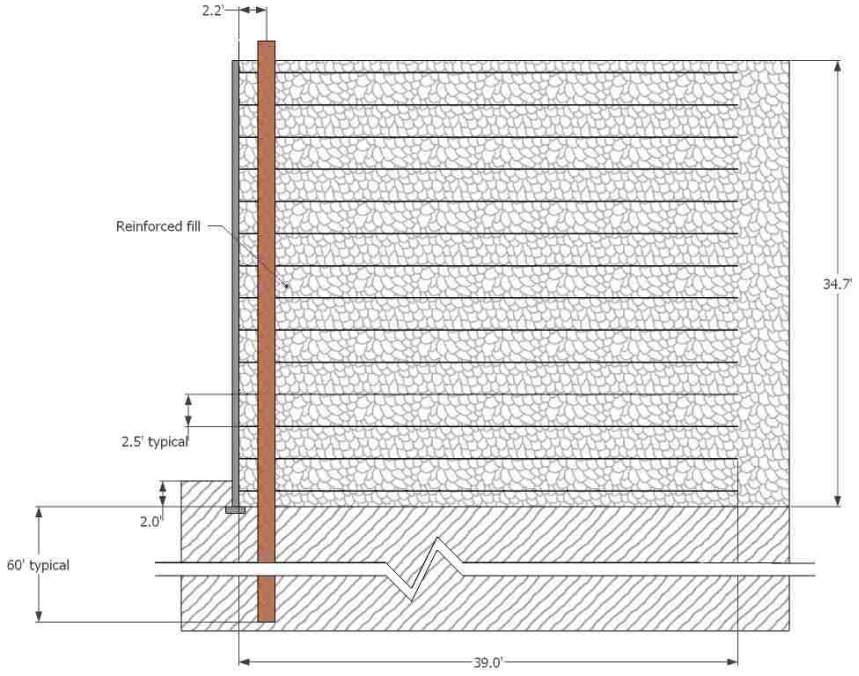

Figure 3.10: Profile view of Test Pile 5 (TP5); cross-section C-C from Figure 3.6.

The test piles are 16 in. diameter steel pipe piles with a wall thickness of 0.375 in. The construction sequence for the Pioneer Crossing bridge was similar to the sequence described in Section 3.1 for the US Highway 89 bridge with the piles driven closed ended prior to construction of the MSE walls. The piles extend through layered sand and compressible clay to a sand bearing layer at a depth of approximately 60 ft. below the base of the wall. The piles were hollow at the time of testing but were eventually filled with reinforced concrete and embedded into the abutment wall. The pile detail from the bridge plans provided by UDOT is shown in Figure 3.12 The steel conforms to ASTM A252 Grade 3 specifications and has a minimum yield strength of 45 ksi based on the 0.2% offset criteria. The abutment has 38 piles with a typical center to center spacing of 8.0 ft. The design spacing from the back face of the MSE wall to the center of the pile is 4.5 ft. (3.4 pile diameters). Prior to fill placement, the piles were double wrapped with a 10 mil (0.25 mm) thick sheet of low-density polyethylene (LDPE) to reduce down drag which was otherwise expected to be significant as the fill was compacted around the abutment piles. The photograph in Figure 3.11 shows the double sheeting wrapped around TP3. The photo was taken with the maximum load applied.

Figure 3.11: Double LDPE sheeting wrapped around TP3.

The single stage MSE walls were designed by SSL, LLC and consist of welded wire grid soil reinforcement connected to concrete wall panels. The welded wire grid consists of 3 to 6 longitudinal wires with a center to center spacing of 8 in. The longitudinal wires are typically size 20 wires (0.504 in. diameter) for the bottom 2 to 3 layers of reinforcement followed by 5 layers of size 15 wires (0.437 in. diameter) and 4 layers of size 11 wires (0.374 in. diameter) at the abutment. For the wingwalls, the longitudinal wires are typically size 20 wires for the bottom 6 layers of reinforcement and size 11 wires for the upper 7 to 8 layers. The cross wires are size 11 wires for the bottom 2 to 4 layers and size 8 wires for the upper layers. The cross wires have a center to center spacing of 1.0 to 2.5 ft. The horizontal spacing of the grids at the same elevation from center to center is typically 5 ft. The vertical spacing of the grids is typically 2.5 ft. The wall panels are 6 in. thick and typically 5 ft. high by 10 ft. long. The wall was designed following the AASHTO 2007 Interim Specifications with a seismic coefficient of 0.50g for the walls within 50 ft. of the abutment. The design parameters of the MSE wall for the locations of the lateral load tests are displayed in Table 3.2.

Table 3.2: MSE wall parameters for the Pioneer Crossing site.

Pile	TP3	TP4	TP5
Wall height (ft)	29.8	37.7	34.7
Design height from top of leveling pad to top of roadway (ft)	45.0	37.5	35.0
Mesh length (ft)	50	42	39
Mesh length to wall height at time of test ratio	1.7	1.1	1.1
Mesh length to design height ratio	1.1	1.1	1.1

Similar to the U.S. 89 site, the design height from Table 3.2 includes the abutment wall, backfill and roadway section which were not present at the time of testing. A surcharge load of about 2 ksf was in place behind the wall at the location of Test Pile 3 (along the bridge abutment)

at the time of testing as shown in Figure 3.8; however, no surcharge was in place for the other two piles.

The reinforced soil consisted of sandy gravel classifying as A-1-a material according to the AASHTO system with a standard Proctor maximum density of 139.4 pcf with an optimum moisture content of 6.0%. Nuclear density tests indicate that the soil was compacted to about 97% of the maximum dry density with a water content of about 5%.

The static factor of safety against pull-out for the MSE wall geometry at the time of testing is approximately 11.6 for TP3, 4.0 for TP4 and 3.8 for TP5 as calculated in Appendix A.2 using procedures specified by FHWA (Elias and Christopher, 1997). The static factor of safety as calculated by the wall designer for the final construction is approximately 2.0 for all piles. The centers of Test Pile 3 (TP3), Test Pile 4 (TP4) and Test Pile 5 (TP5) are located 3.8, 6.9 and 2.7 ft. (or 2.9, 5.2 and 1.6 pile diameters), respectively, behind the back face of the MSE wall. The piles were laterally loaded normal to the MSE wall on planes shown in the profile views in Figure 3.8 through 10.

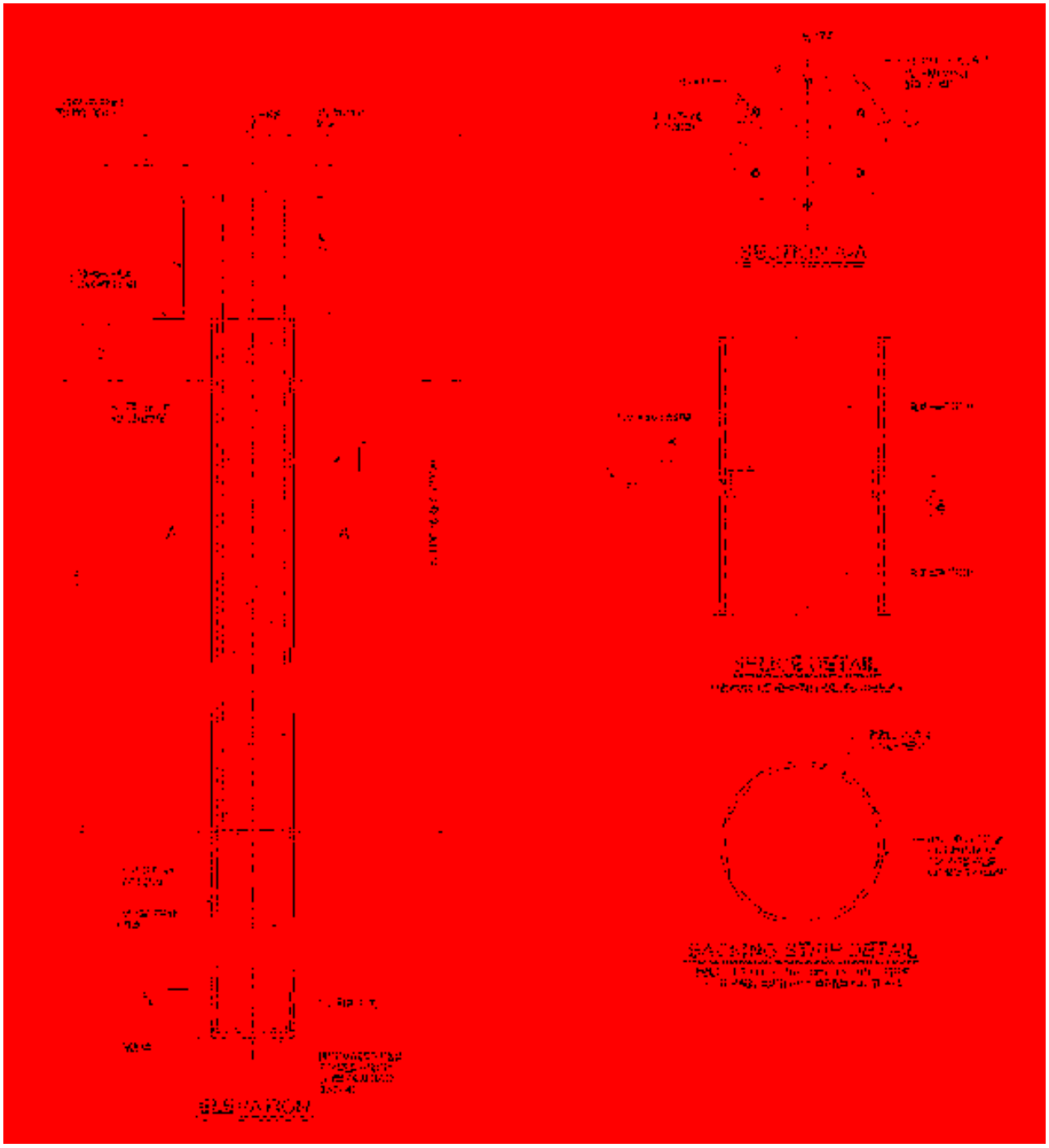

Figure 3.12: Pipe pile detail for the Pioneer Crossing bridge over UPRR.

4 INSTRUMENTATION

4.1 Load Cell and Pressure Gauge

During testing, the load applied to each pile was monitored by a load cell and checked with a pressure gauge. The load cell was placed between the hydraulic jack and the pile. Hemispherical end platens were placed between the load cell and the pile to minimize any eccentric loading on the load cell. The pressure gauge was attached to the hydraulic jack and measured the hydraulic pressure. The pressure gauge was observed visually during the loading to verify the accuracy of the load cell by comparing the gauge reading to a chart also attached to the jack. The load cell was connected to a data logger.

The same hydraulic jack, load cell and pressure gauge were used on all test piles. The typical configuration is shown in the photo presented in Figure 4.1. The figure shows the configuration just prior to testing for Test Pile 3 at the Pioneer Crossing site.

4.2 Strain Gauges

Strain gauges were used to determine the increased load in the soil reinforcement and the bending moment in the piles. The gauges were mounted to the reinforcement and the piles following the manufacturer's recommended installation procedures. Sections 4.2.1 and 2 discuss the strain gauges on the reinforcement and piles, respectively, in more detail.

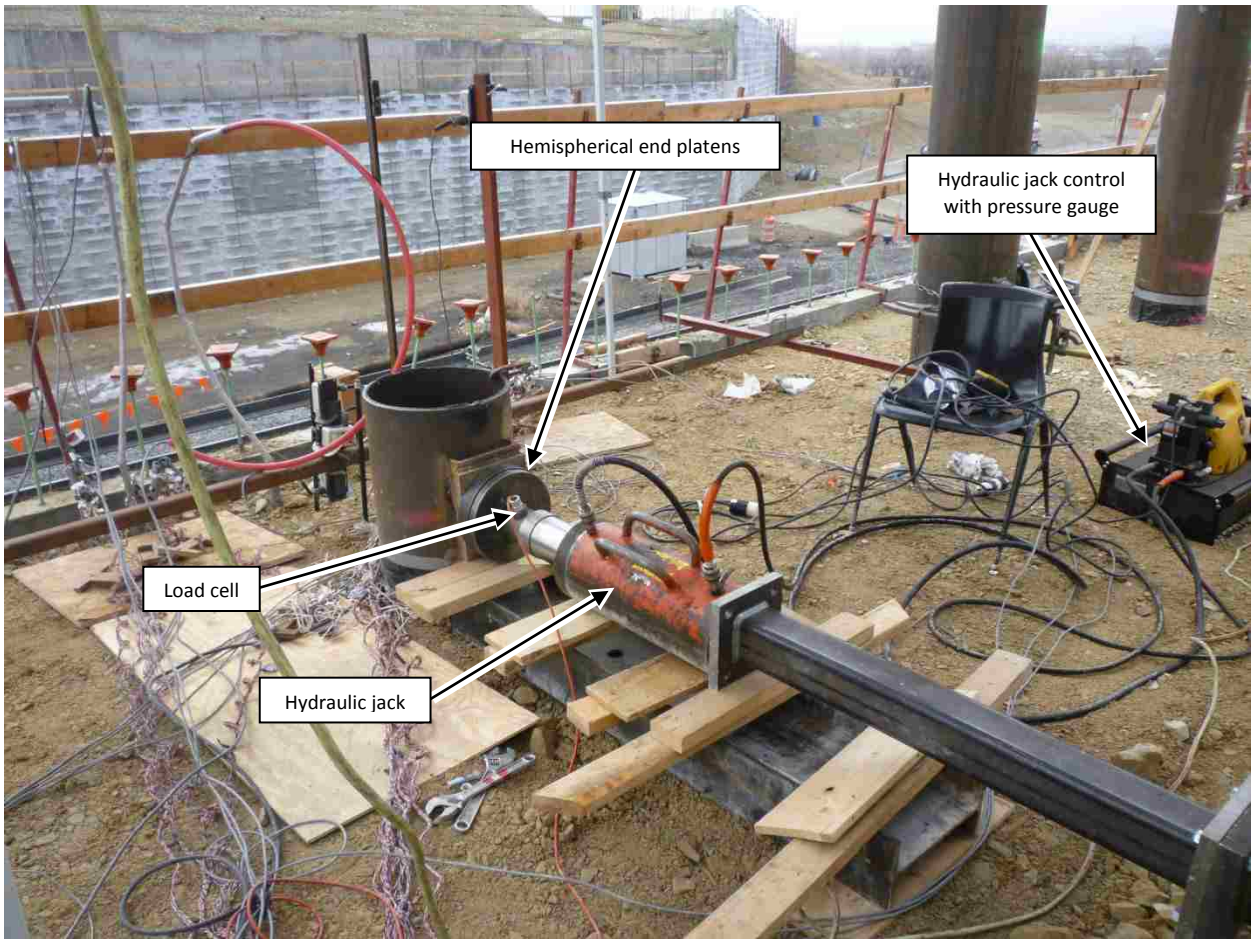

Figure 4.1: Typical load cell and pressure gauge configuration as shown at TP3.

4.2.1 Reinforcement Load

General purpose Texas Measurements Group standard electrical resistance strain gauges were mounted on select longitudinal wires for the wire grids and on either side of each test pile. FLA-2-11 series gauges were used with lead wire lengths varying from 10 to 26 ft. The wire grids to be instrumented were brought to the Department of Civil and Environmental Engineering structural lab at Brigham Young University, where the gauges were installed. The

instrumented wire grids were protected and stored at the lab until the contractor was ready to install the grids.

The intent of each wire selection for the strain gauge mounting was to monitor wires equidistant from the pile. For the test piles at the U.S. Highway 89 site, only the top layer of reinforcement was instrumented because of time and budget constraints (notice of the opportunity to test was obtained shortly before construction). For the test piles at the Pioneer Crossing site two to three of the top three layers of reinforcement adjacent to each test pile were instrumented.

The strain gauges were mounted in pairs with one located on the top and one on the bottom of the wire. Strain gauge installation in pairs provides redundancy in case of damage during the wire grid installation and backfill placement. In addition, they allow corrections for bending in the wire. Gauge pairs were installed at varying distances from the wall to provide an assessment of the shear transfer in the wire as lateral load was applied to the pile. The lead wires for the gauges were taped to the longitudinal reinforcement wire and brought to the back face of the MSE wall. At the back face of the wall, the lead wires were placed into a PVC pipe bringing them up the back face of the wall to the ground surface. Table 4.1 shows the location of each wire that was instrumented in relation to the test piles at the U.S. Highway 89 site, along with the location of the strain gauges on the wire in relation to the back face of the MSE wall. Table 4.2 shows the location of instrumented wires for the Pioneer Crossing site. The distance from the pile is shown as R for right or L for left when standing at the pile and looking toward the MSE wall. Figure 4.2 and 3 show the plan and profile view, respectively, of TP3 to demonstrate the notation for the reinforcement strain gauges. Photographs of the installed welded wire grids at the U.S. Highway 89 site are shown in Figure 4.4 and 5.

Table 4.1: Location of instrumented welded wire grids at the U.S. Highway 89 site.

Test Pile	Wire Name	Location of longitudinal wire on grid*	Distance from center line of pile (ft)	Distance from top of wall (ft)	Strain gauge distances from back face of wall (ft)
TP1	A	4 of 4	2.14 L	1.33	0.5, 3, 6, 8, 10, 12, 14
	B	1 of 4	0.80 L		
	C	3 of 4	1.93 R		
TP2	D	4 of 4	2.20 L	1.58	0.5^{+}, 3^{+}, 6, 8, 10, 12, 14
	E	1of 4	0.20 L		

*Location 1 is the longitudinal bar that is closest to the test pile.
$^{+}$Wire E cut and bent around pile as shown in Figure 4.5.

Table 4.2: Location of instrumented welded wire grids at the Pioneer Crossing site.

Test Pile	Wire Name	Location of longitudinal wire on grid*	Distance from center line of pile (ft)	Distance from top of wall (ft)	Strain gauge distances from back face of wall (ft)
TP3	F	2 of 3	2.50 L	1.75	0.5, 3.5, 6, 8.5, 11, 13.5
	G			3.26	0.5, 6, 11
	H			5.34	0.5, 3.5, 6, 8.5, 11, 13.5
	J		3.42 R	1.75	0.5, 3.5, 6, 8.5, 11, 13.5
	K			3.26	0.5, 6, 11
	L			5.34	0.5, 3.5, 6, 8.5, 11, 13.5
TP4	M	2 of 4	1.71 L	1.75	1, 3, 6, 9, 13, 18
	N			4.36	1, 3, 6, 9, 13
	P		3.33 R	1.75	1, 3, 6, 9, 13, 18
	Q			4.65	1, 3, 6, 9, 13
TP5	R	2 of 4	4.67 L	1.75	1, 3, 6, 9, 13, 18
	S			3.78	1, 3, 6, 9, 13
	T		3.42 R	1.75	1, 3, 6, 9, 13, 18
	U			4.15	1, 3, 6, 9, 13

*Location 1 is the longitudinal bar that is closest to the test pile.

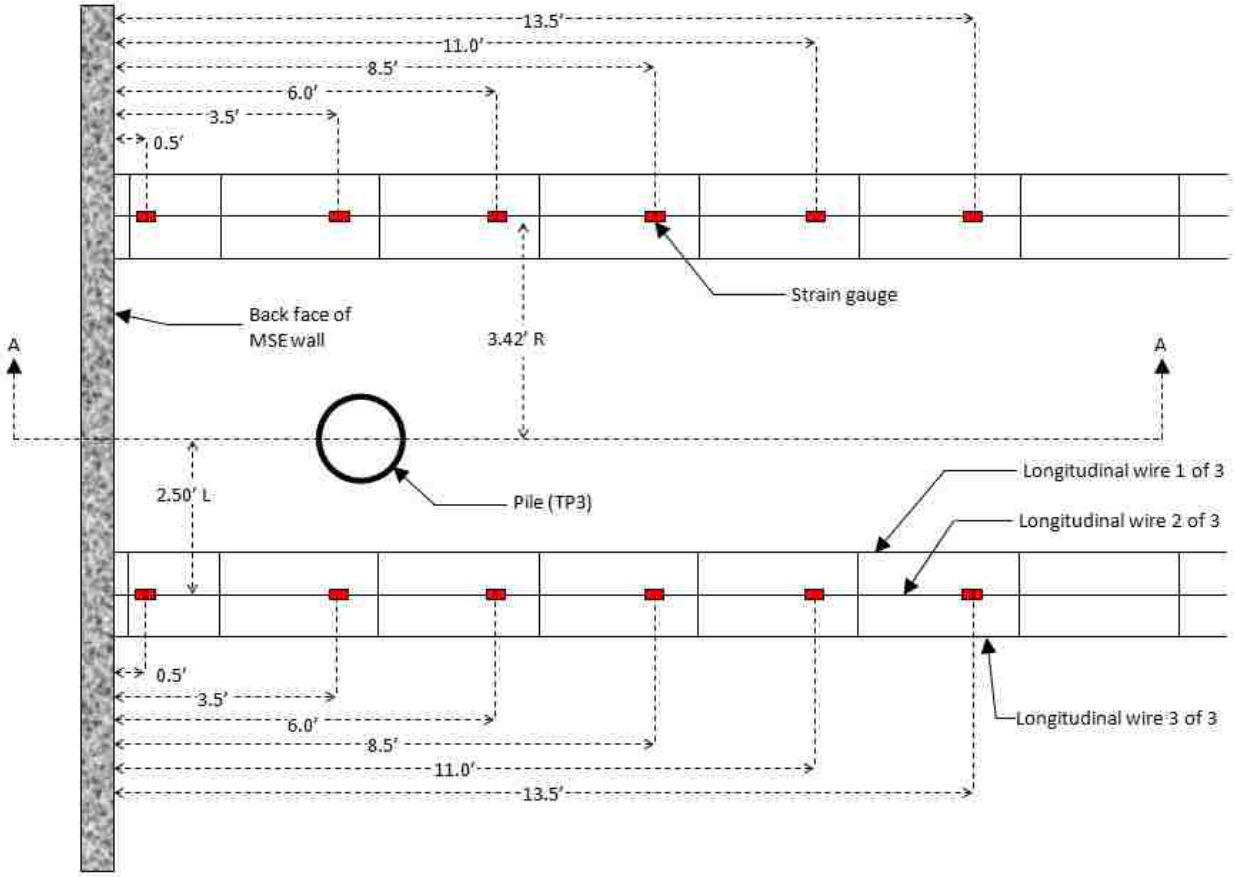

Figure 4.2: Plan view of top layer of reinforcement at TP3.

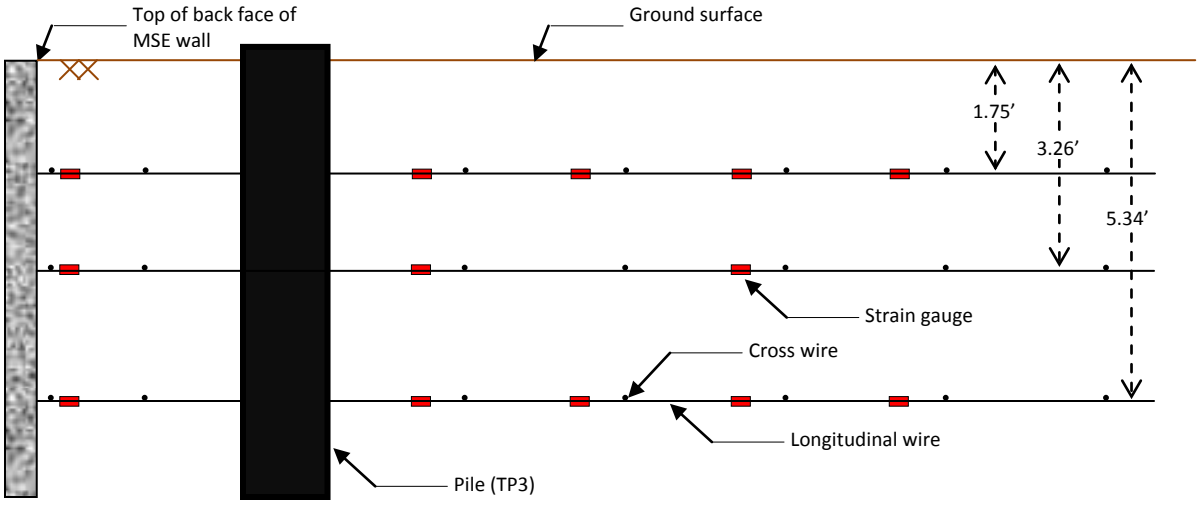

Figure 4.3: Profile view of top three layers of reinforcement at TP3; section A-A from Figure 4.2.

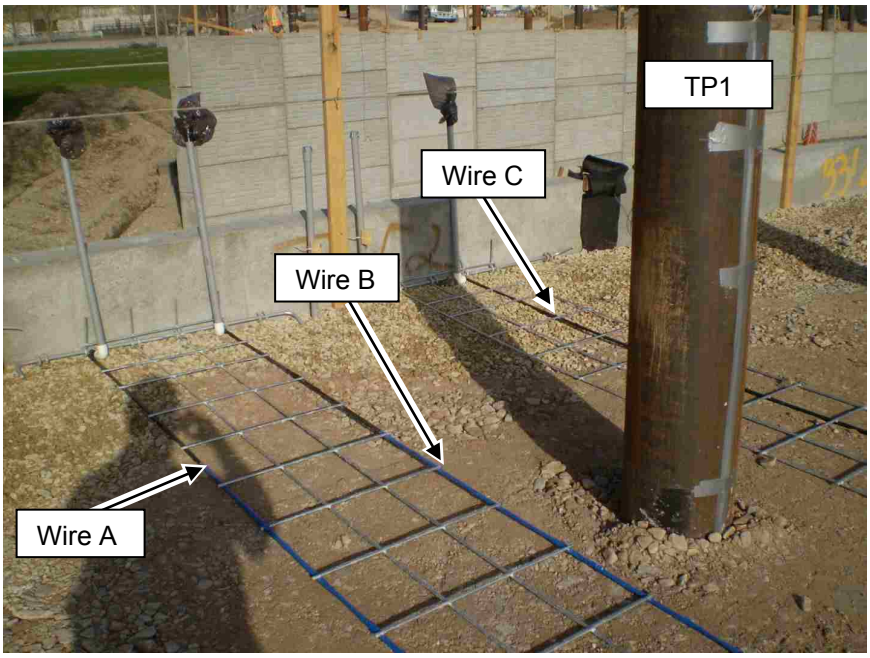

Figure 4.4: View of longitudinal wires that were instrumented near TP1 (U.S. Highway 89 site).

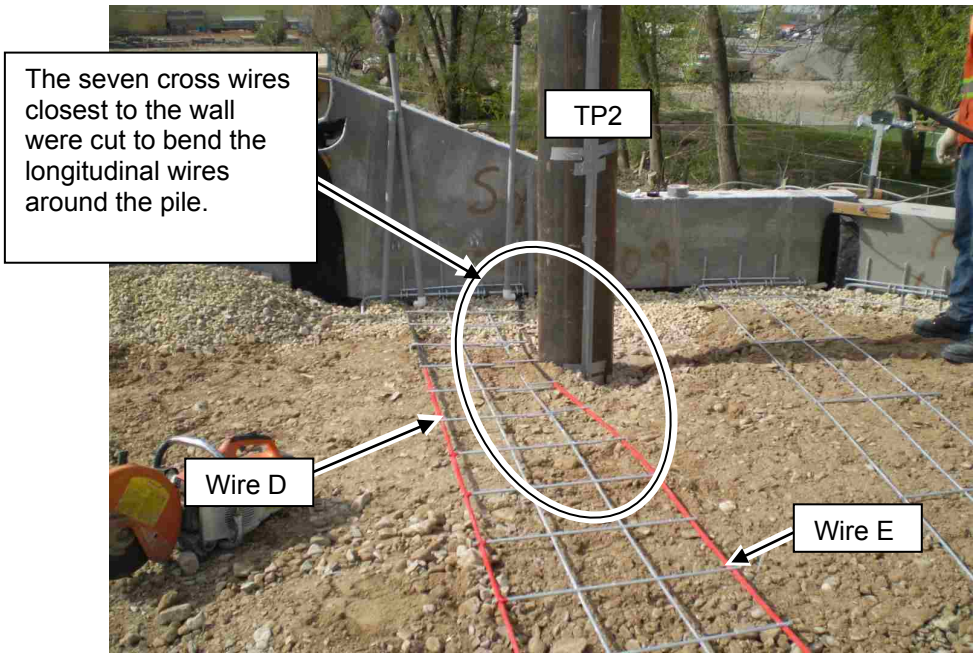

Figure 4.5: View of the longitudinal wires that were instrumented near TP2 (U.S. Highway 89 site).

4.2.2 Pile Bending Moment

Waterproof construction TML standard electrical resistance strain gauges were mounted on the outside walls of the piles after driving. WFLA-6-11 series gauges were used with lead wire lengths varying from 10 to 20 ft. The gauges were installed at several depths below the ground surface on each test pile. Strain gauges were mounted in pairs at each depth with one gauge on the side of the pile that was loaded and the other gauge on the opposite side.

At the U.S. Highway 89 site, the strain gauge wires were run straight up the pile to the ground surface and were protected only by duct tape. As a result, several of the wires were damaged during wall construction and had to be repaired. For the test piles at the Pioneer Crossing site, the wires were protected by tack welding 0.125 in. thick steel angle with 2 in. legs over the strain gauges and wires. The steel angle began just below the lowest strain gauge elevation and ran up to the top of wall elevation. No welds were placed within 6 in. of any strain gauge to prevent damage from the heat of the welding process. Table 4.3 shows the location of the strain gauge pairs for each test pile.

Table 4.3: Location of strain gauge pairs for each test pile.

Test Pile	Strain gauge depth below ground surface (ft)	Strain gauge wire protection
TP1	0, 2, 4, 6, 9	Duct tape
TP2	0, 2, 4, 6, 9	Duct tape
TP3	0, 1, 3, 5, 7, 10, 13, 16	Steel angle welded onto pile
TP4	0, 2, 4, 6, 9, 12, 15	Steel angle welded onto pile
TP5	0, 2, 4, 6, 9, 12, 15	Steel angle welded onto pile

4.3 String Potentiometers

AMETEK RAYELCO model P-20A string potentiometers (also known as linear motion transducers) were installed to measure the displacement and rotation of the pile, displacement of the ground and the top of the wall directly in front of the pile. The string potentiometers were attached to an independent reference frame located between the pile and the wall face.

The independent reference frame varied slightly between test piles. For the piles at the U.S. Highway 89 site, a 2x4 piece of lumber was attached to the adjacent piles for TP1 and to concrete nails for TP2 and cantilevered such that they extended over the edge of the wall. A third 2x4 rested on the two cantilevered 2x4s between the test pile and the wall. The string potentiometers were attached to this third 2x4. Figure 4.6 shows the independent reference frame set up for TP1.

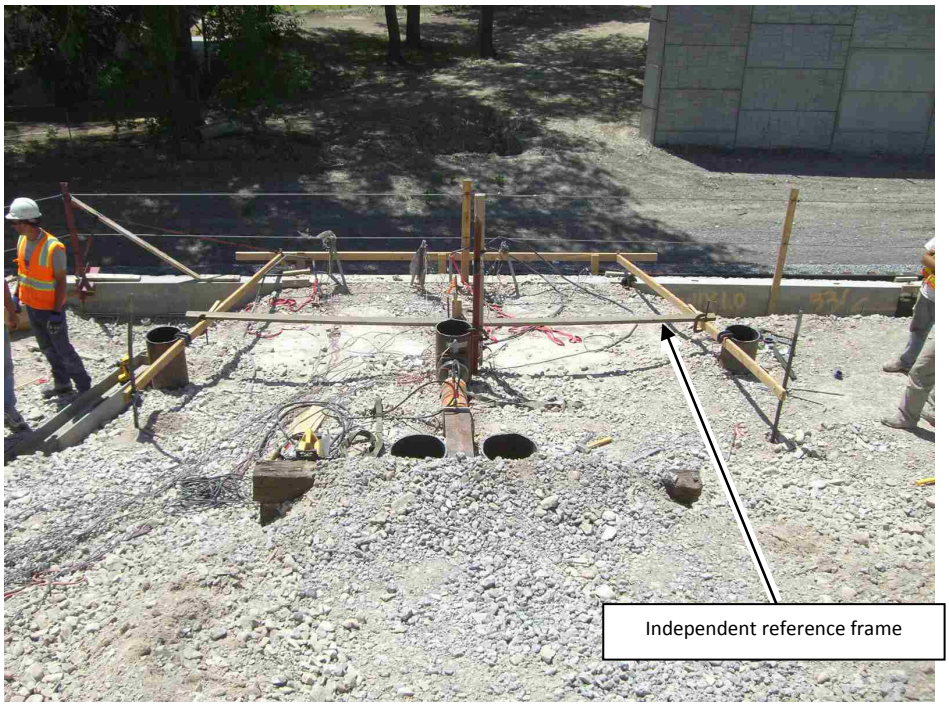

Figure 4.6: Independent reference frame at TP1 (U.S. Highway 89 site).

For the test piles at the Pioneer Crossing site a more sturdy independent reference frame was used. A 6 ft. long steel angle was welded onto each of the piles adjacent to TP3 such that the steel angles cantilevered over the MSE wall. A 20 ft. long steel box section was fastened to the top of the steel angles, and the string potentiometers were attached to this box section. Figure 4.7 shows the independent reference frame for TP3.

For TP4 and TP5 there were no adjacent piles, so heavy I-beam sections were positioned outside the expected zone of influence. Ten foot long 4x4 pieces of lumber were fastened on top of the end I-beam and laid on top of steel pins which rested on the other I-beam section. The steel pins acted as rollers to eliminate any effects of the lateral loading on the reference frame.

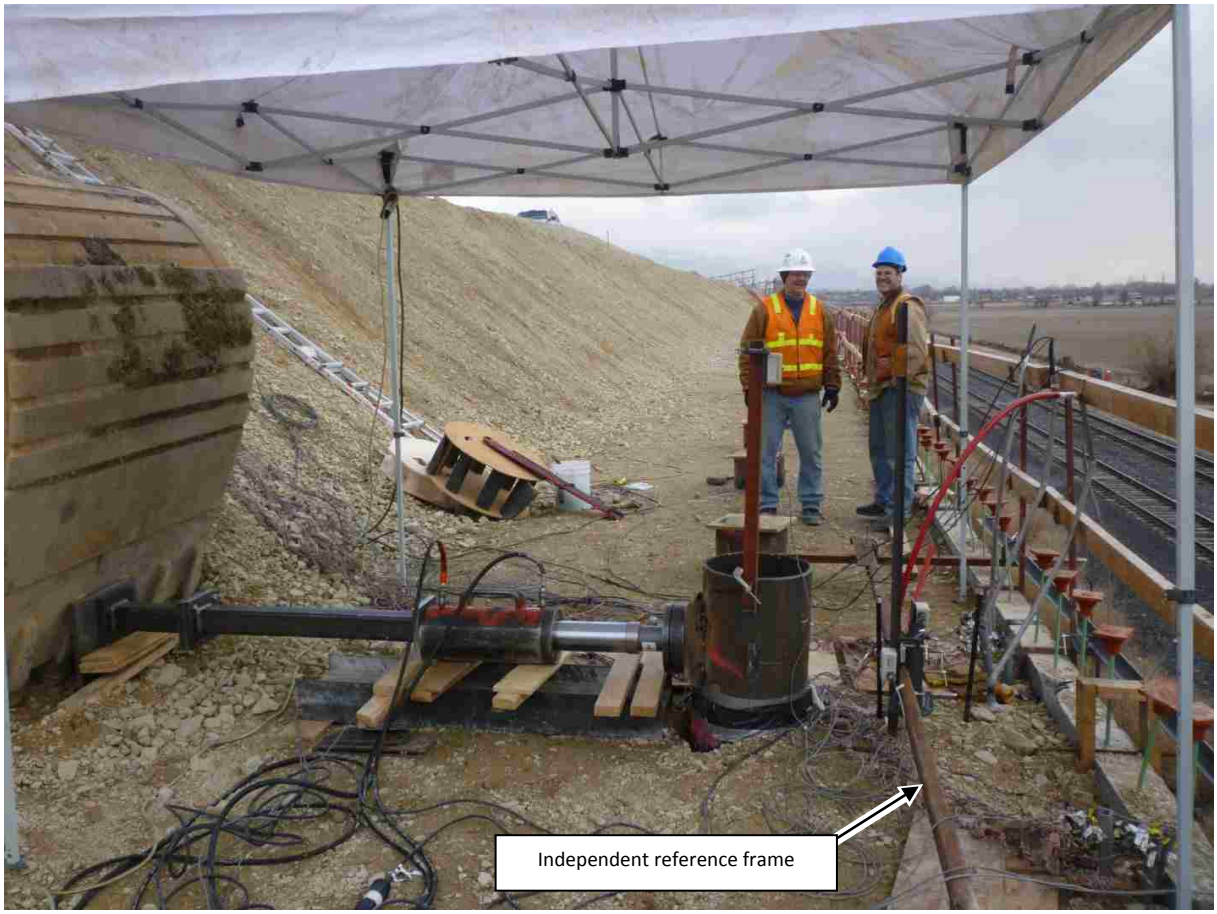

Figure 4.7: Independent reference frame at TP3 (Pioneer Crossing site).

4.3.1 Pile Head Displacement and Rotation

Pile head displacement and rotation were measured using string potentiometers with one end mounted to the pile and the other end mounted to an independent reference frame. For the pile head displacement, the string potentiometer was mounted on the side of the pile at the same elevation as the load level. A steel angle was fastened vertically to the pile at the same location as the load level string potentiometer and extended 3 to 4 ft. above the pile. A string potentiometer was mounted 3 ft. above the load level and to the independent reference frame at the same elevation to determine the rotation of the pile during testing.

4.3.2 Ground Displacement

The ground displacement between the pile and the wall face was measured by connecting the wire from the string potentiometer to a steel pin driven into the ground. Table 4.4 shows the location of the pins where the ground displacement was measured for each pile. The distance shown in the table is the distance from the back face of the wall. Figure 4.8 and 9 show the plan and profile view, respectively, of instrumentation installed at TP3 to demonstrate the notation in Table 4.4.

Table 4.4: Location of string potentiometers measuring ground displacement.

Test Pile	Distance from back face of wall to string potentiometer (ft)	Distance from back face of wall to center of test pile (ft)
TP1	1.2, 3.2, 5.2	7.7
TP2	2.0	4.0
TP3	0.0, 1.2, 2.3	3.8
TP4	0.0, 1.8, 3.6	6.9
TP5	0.0	2.2

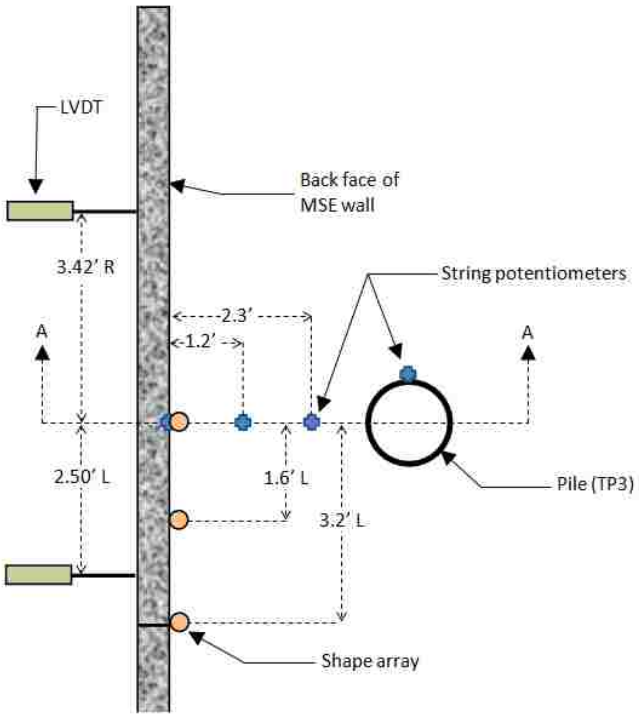

Figure 4.8: Plan view of instrumentation installed at TP3.

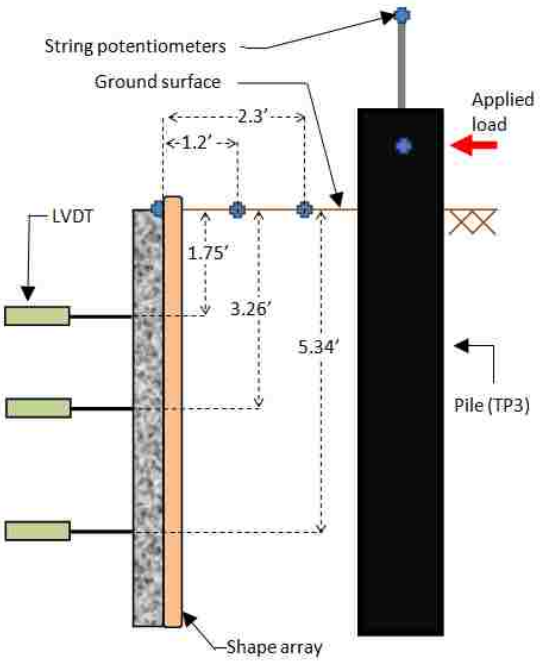

Figure 4.9: Profile view of instrumentation installed at TP3.

4.4 Linear Variable Differential Transformers (LVDTs)

Spring loaded linear variable differential transformers (LVDTs) were placed against the front face of the MSE wall to measure the displacement of the top wall panel. The LVDTs were attached to the independent reference frame discussed in section 4.3. Table 4.5 and 6 show the location of the LVDTs for the tests at the U.S. Highway 89 and Pioneer Crossing sites, respectively.

Table 4.5: Location of LVDTs on wall face at the U.S. Highway 89 site.

Test Pile	Panel ID	Panel width (ft)	Panel height (ft)	Distance from center line of pile to center of panel (ft)	Distance along wall face from center line of pile to LVDT (ft)	Distance from top of wall (ft)
TP1	T52	11.94	4.07 L / 3.83 R	0.76 R	5.21 L	0.33
					5.21 L	3.5
					0 (Center Line)	0.25
					0 (Center Line)	3.34
					5.44 R	0.13
					5.88 R	3.34
TP2	S4	9.58	4.15 L / 1.97 R	1.75 R	3.02 L	0.31
					2.91 L	3.42
					0 (Center Line)	0.23
					0.10 L	1.93
					4.56 R	0.09
					4.60 R	1.89

Table 4.6: Location of LVDTs on wall face at the Pioneer Crossing site.

Test Pile	Panel ID	Panel width (ft)	Panel height (ft)	Distance from center line of pile to center of panel (ft)	Distance along wall face from center line of pile to LVDT (ft)	Distance from top of wall (ft)
TP3	T31	9.93	6.56	1.75 R	2.50 L	1.75
						3.26
						5.34
					3.42 R	1.75
						3.26
						5.34
TP4	T34	9.94	2.72 L / 3.15 R	3.67 L	7.33 L	1.75
					1.71 L	1.75
	A	9.94	4.94	3.67 L	7.33 L	4.15
					1.71 L	4.36
	T33	9.94	5.65 L / 6.08 R	6.33 R	3.33 R	1.75
						4.65
TP5	T35	9.94	4.77 L / 5.22 R	2.92 L	4.67 L	1.75
						3.78
	T34	9.94	2.72 L / 3.15 R	7.08 R	3.42 R	1.75
					9.04 R	1.75
	A	9.94	4.94	7.08 R	3.42 R	4.15
					9.04 R	4.36

4.5 Shape Arrays

Trade size 1 inch schedule 40 PVC pipe (inside diameter of 1.049 inch) was placed vertically along the back face of the wall during construction at the locations noted in Table 4.7 and 8. A Measurand ShapeAccelArray (SAA), referred to herein as a Shape Array, was placed in each pipe during testing to measure the deformation of the wall face. The Shape Array consists of 12 inch segments, each containing three MEMS accelerometers. Each segment is connected by a flexible joint. The digital signal sent from each accelerometer was collected by the data logger and analyzed using SAARecorder software.

Table 4.7: Location of Shape Arrays on back of wall at the U.S. Highway 89 site.

Test Pile	Shape Array ID	Distance along wall face from center line of pile to Shape Array (ft)	Depth of Shape Array below surface (ft)
TP1	45112	4.9 L	12
	45104	0 (Center Line)	12
	45115	0.9 R	13
TP2	45112	2.2 L	9
	45104	0 (Center Line)	13
	45115	1.3 R	10

Table 4.8: Location of Shape Arrays on back of wall at the Pioneer Crossing site.

Test Pile	Shape Array ID	Distance along wall face from center line of pile to Shape Array (ft)	Depth of Shape Array below surface (ft)
TP3	45112	3.2 L	20.5
	45134	1.6 L	20.25
	46622	0 (Center Line)	19.25
TP4	46622	2.5 L	20.5
	47083	0 (Center Line)	20.5
TP5	46622	2.5 R	20.5
	47083	0 (Center Line)	19.5

5 LATERAL LOAD TESTING

The lateral load test was performed incrementally with a displacement control approach. Load was applied using a free-head boundary condition at a distance of 1 ft. above the ground surface. Load was applied to reach displacement increments of 0.25 in. up to a total displacement of up to 3.5 in. This approach was adopted to define the load-displacement curve in a reasonable manner. After reaching each displacement increment, the load required to reach that increment was held constant for a period of at least 2 minutes before moving to the next displacement increment.

The reaction for each load varied for each test pile. At the U.S. Highway 89 site, short sections of pile that had been cut off the production pile were driven up to 3 ft. and used in conjunction with the passive resistance from railroad ties against the surcharge to act as the reaction. Figure 5.1 and 2 show the reactions for loading of piles TP1 and TP2 respectively.

For TP3 at the Pioneer Crossing site, a Komatsu 600 track hoe was used in conjunction with the passive resistance provided by the surcharge to react the load. The track hoe sat on top of the surcharge with the bucket placed at the base of the surcharge as shown in Figure 5.3.

For TP4 at the Pioneer Crossing site, a CAT 980 rubber tire loader was initially used as the reaction for the load. This equipment was used because it was the only equipment on site at the time of testing. There was no surcharge in place at TP4 to help react the load. The loader started to move when the load exceeded 25 kips (with a pile head displacement of 0.75 in.). The

test was stopped until a different piece of equipment could be brought to the site. Three days later, a CAT D8R dozer was brought to the site. The dozer was able to react the full load of approximately 50 kips. The same dozer was used to react the loading of TP5. Figures 5.4 and 5 show the reactions for loading of piles TP4 and TP5.

Figure 5.1: Reaction for load at TP1 (U.S. Highway 89 site).

Figure 5.2: Reaction for load at TP2 (U.S. Highway 89 site).

Figure 5.3: Reaction for load at TP3 (Pioneer Crossing Site).

Figure 5.4: Reaction for load at TP4 up to 0.75 in. displacement (Pioneer Crossing Site).

Figure 5.5: Equipment used to react load at TP4 from 0.75 to 3.5 in. displacement, and all load at TP5 (Pioneer Crossing Site).

Results of the lateral load testing are discussed in this sections that follow. The data for each test was collected by the Megadac data logger at a rate of 5 readings per second (with the exception of TP3 for which data was collected at a rate of 2 readings per second). The data was analyzed by looking at the peak values and the final values for each displacement increment. The peak values are taken to be the average of the first two data points when the desired displacement interval was reached. The final values are taken to be the average of the data points recorded from 58 to 62 seconds, or 1 minute into the hold time at the desired displacement.

5.1 U.S. Highway 89 Site

5.1.1 Load Displacement Curves

Applied pile head load is plotted vs. pile head displacement for the lateral pile load tests at TP1and TP2 in Figure 5.6 at the peak load and in Figure 5.7 at the final load. Appendix B contains load-displacement curves for each individual test pile. These curves typically have a stiff, relatively linear initial section followed by a more non-linear segment as the soil resistance is mobilized progressively from the top of the pile downward and secant stiffness decreases. For a given displacement, the final load (load after a one minute hold) is generally about 7% lower than the peak load.

The lateral resistance for TP1, located 7.5 pile diameters from the wall is only slightly higher than that for TP2, located only 3.8 pile diameters from the wall. For practical purposes, the two load-displacement curves could be assumed to be identical. These results are in sharp contrast to Pierson et al. (2009) in which the lateral resistance decreased by over 50% as the test piles were located closer to the MSE wall face.

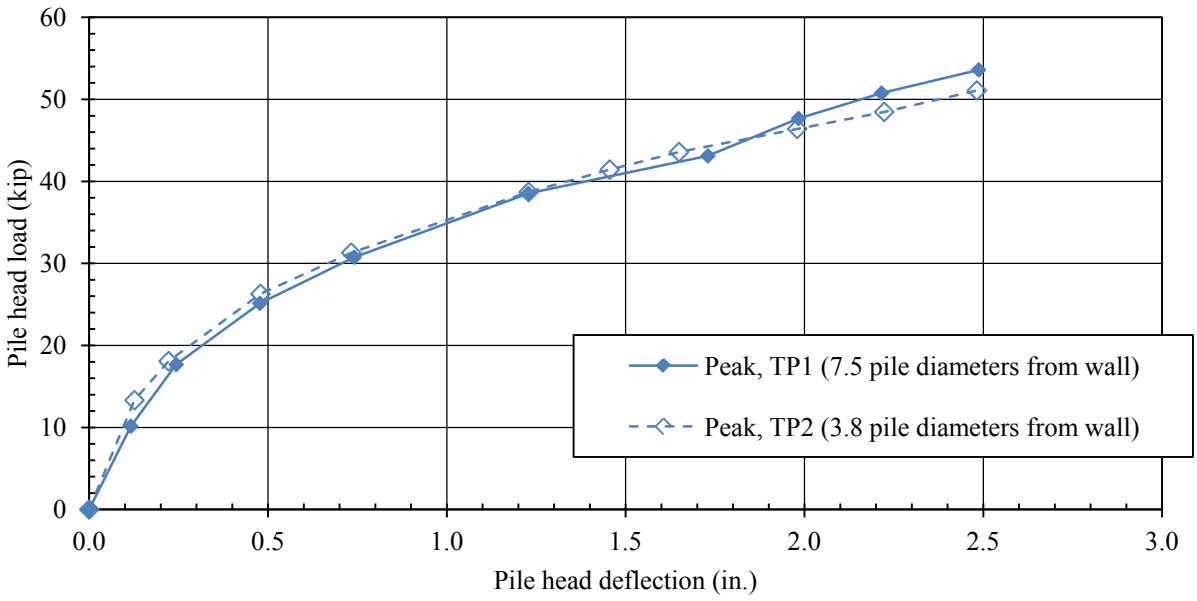

Figure 5.6: Comparison of load-displacement curves for TP1 and TP2 (U.S. Highway 89 site) for the peak data points.

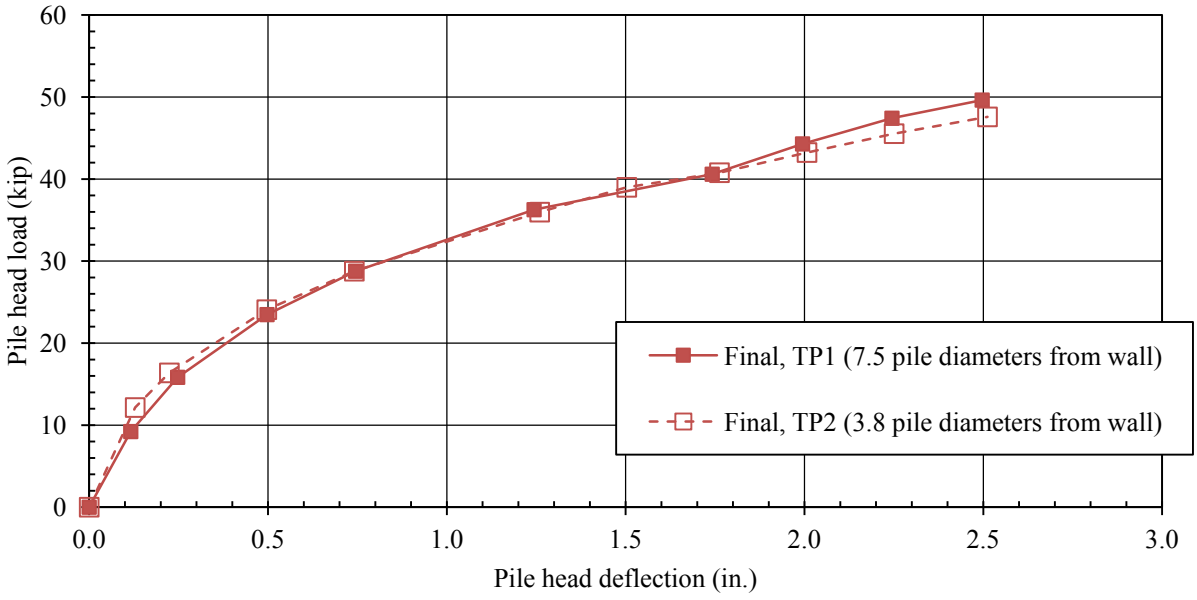

Figure 5.7: Comparison of load-displacement curves for TP1 and TP2 (U.S. Highway 89 site) for the final data points.

Three conditions exist which may explain this observed discrepancy. First, as indicated previously, the reinforcement length of 1.6H at the time of testing is considerably higher than the typical value of 0.7H for static conditions, where H is the wall height. The reinforcement length is also considerably higher than that which is typical for seismic conditions (1.0H to 1.3H). Among other factors, the reinforcement pull-out resistance is a function of the reinforcement length and the vertical effective stress on the reinforcement. The longer reinforcement length, coupled with the increased vertical stress from the fill behind the wall, would provide greater lateral resistance to pull-out which would help the wall to resist the lateral forces applied by the test pile as it was displaced towards the wall. This in turn would provide increased lateral resistance for the pile.

A second factor may be that for the closest test pile the reinforcements overlap diagonally because of the geometry of the wall face near the corner of the wall. This again would provide somewhat greater pile resistance. These factors would suggest that the lateral pile resistance for a pile located close to an MSE wall can be significantly increased by increasing the factor of safety against pull-out for the reinforcing grid.

A third potential explanation for the relatively comparable performance may simply be that the piles could both be located far enough from the wall face that the lateral resistance was not compromised by the presence of the wall. It should be noted, for example, that the normalized spacing for the closest test pile at Pleasant Grove is 3.8 diameters which is about the same as the largest spacing tested by Pierson et al (2009). In reality, some combination of all three mechanisms could be occurring.

5.1.2 Soil Reinforcement Performance

The load on the entire wire grid was calculated from the strain gauge data using Equation 6-1. The average value of the paired strain gauges was used when both gauges were functioning. There were several locations where one gauge was damaged during installation, in which case only the data from the functioning gauge was used.

$$\boldsymbol{T_i = EA(\mu\varepsilon_i - \mu\varepsilon_o)(10^{-6})(B)} \quad \textbf{(5-1)}$$

where

T_i is the equivalent induced force in kips for the wire grid at the i^{th} data point,

E is the modulus of elasticity of the steel mat (2900 ksi),

A is the cross sectional area of the wire instrumented (0.11 in^2),

$\mu\varepsilon_i$ is the micro strain for the i^{th} data point,

$\mu\varepsilon_o$ is the micro strain for the initial data point, and

B is a location factor as calculated in Equation 6-2.

$$\boldsymbol{B = (n - 1)x} \quad \textbf{(5-2)}$$

where

n is the number of longitudinal wires in the reinforcement grid and

x is 1 for interior longitudinal wires or 2 for wires on the edge of the grid.

The increased load in the welded wire grid as measured by the strain gauge data from wires A and B due to the lateral loading of pile TP1 is shown in Figure 5.8 and 9, respectively. These two figures indicate that the induced load in the welded wire grid is greatest near the pile with an average measured load of 5 kips when the maximum pile load was applied as shown in Figure 5.10. Figure 5.11 shows the induced load as measured by the strain gauge data from wire C. Similar figures for the wire grids on either side of TP2 are found in Appendix C. The load is

plotted as a function of distance from the wall for several pile head deflections increments. As the pile head deflection (and lateral load) increases, the induced force in the reinforcing mat also increases.

Figure 5.12 compares the induced force in the welded wire grids adjacent to TP1 and TP2. The force in the grid near TP1 is approximately half the load in the grid near TP2. This result suggests that the reinforcement grid is providing some beneficial influence in restraining the MSE wall from movement for the pile spaced closer to the wall.

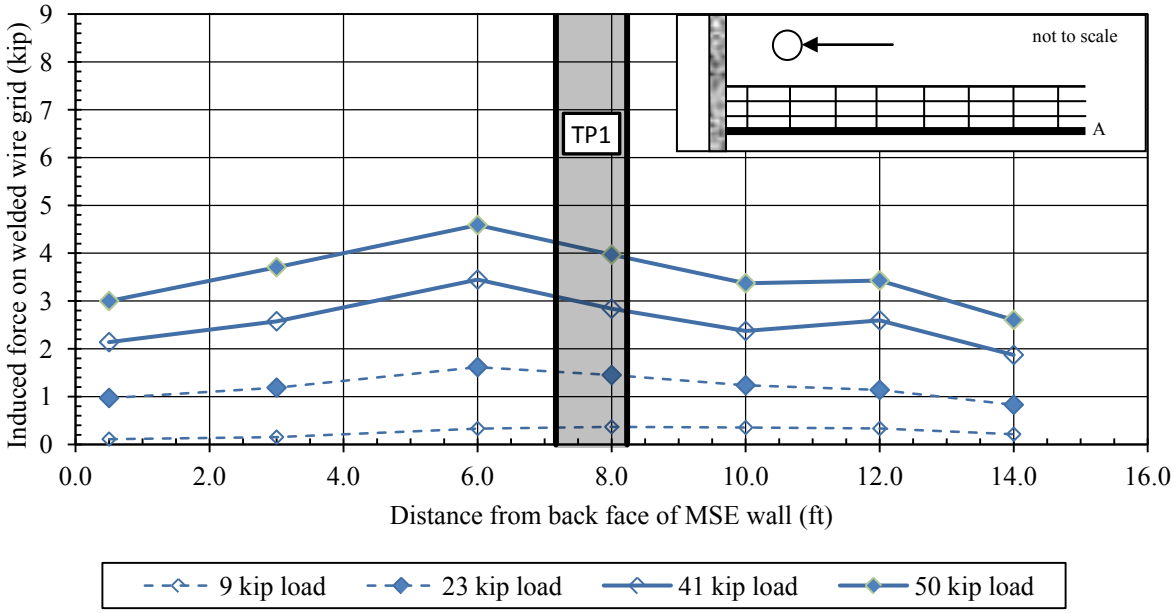

Figure 5.8: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire A during loading of TP1 (see Table 4.1).

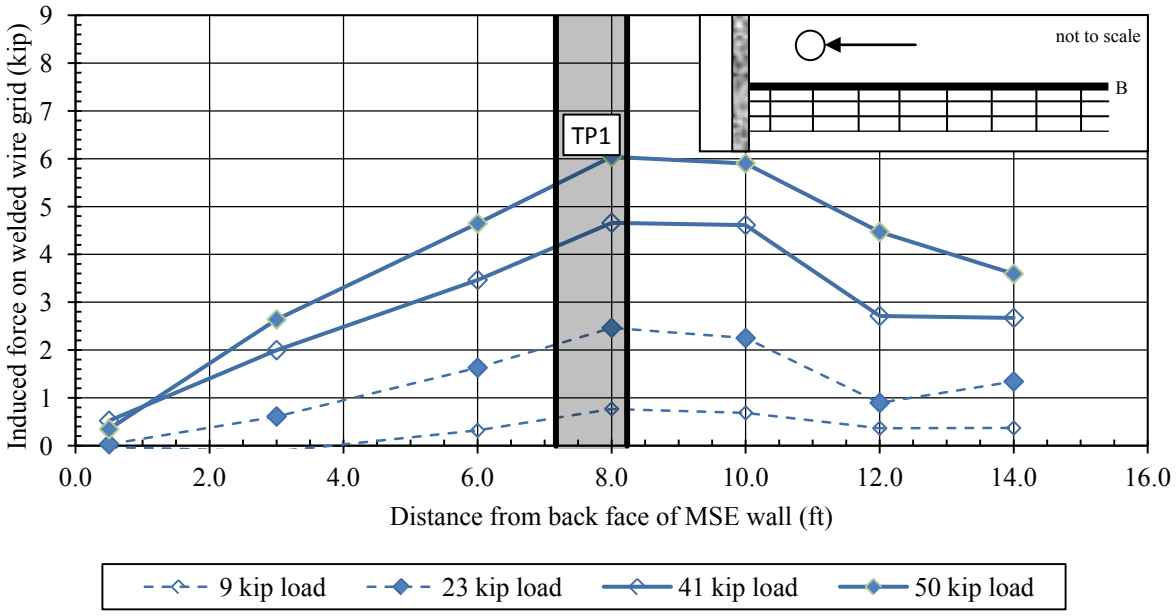

Figure 5.9: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire B during loading of TP1 (see Table 4.1).

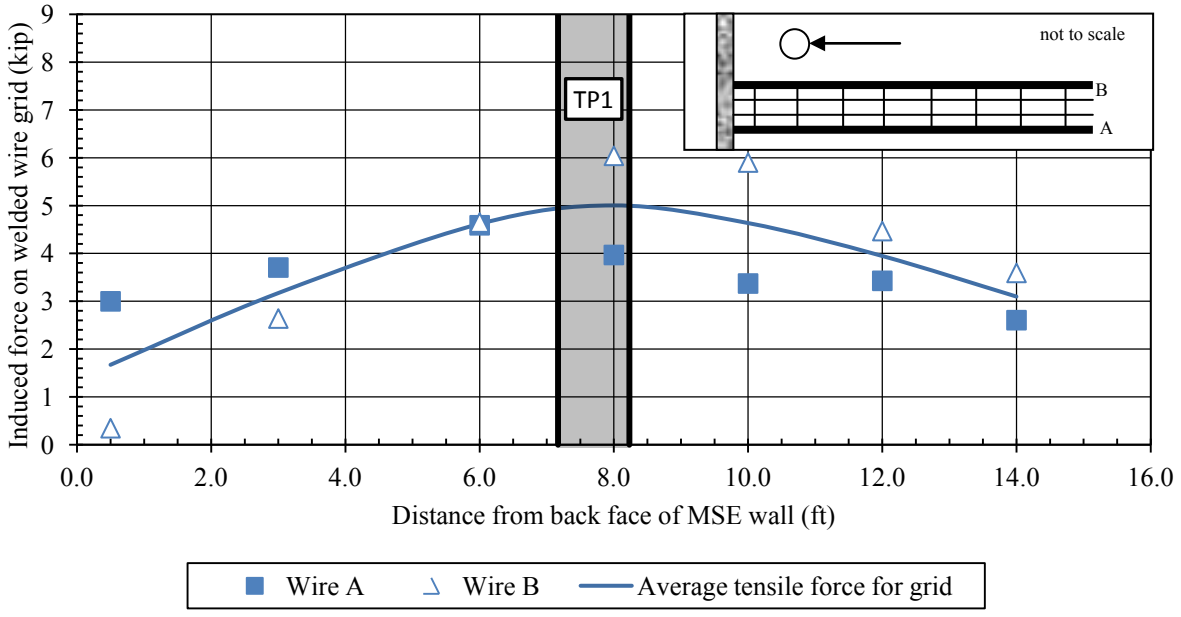

Figure 5.10: Average induced load in welded wire grid vs. distance from back face of pile with a 50 kip load applied to the pile.

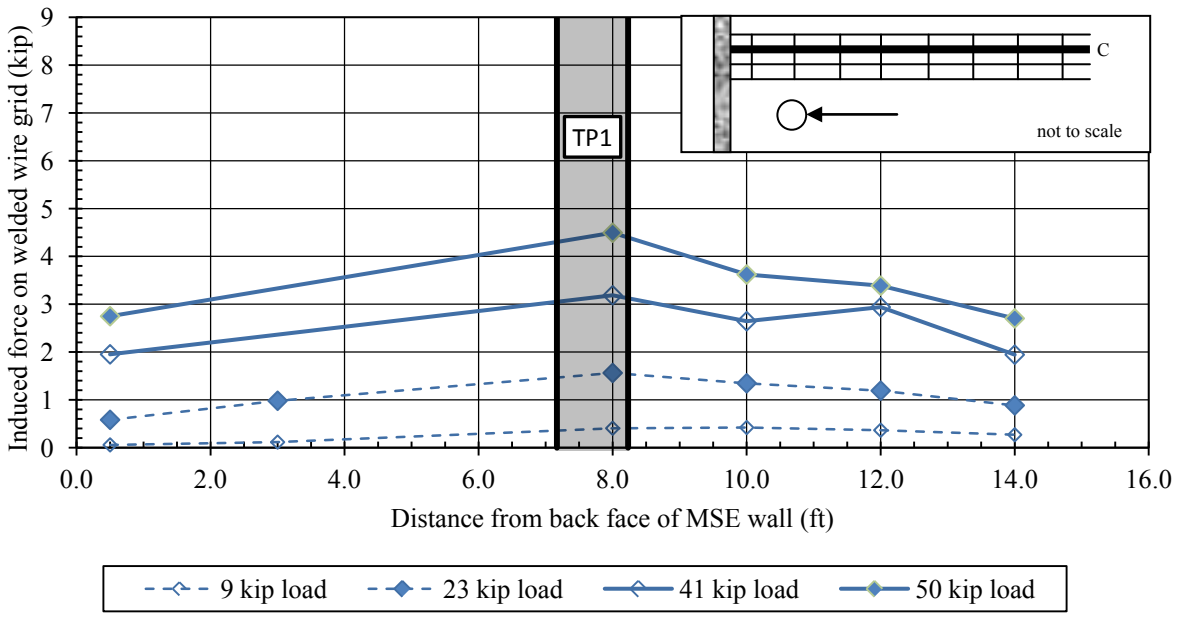

Figure 5.11: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire C during loading of TP1 (see Table 4.1).

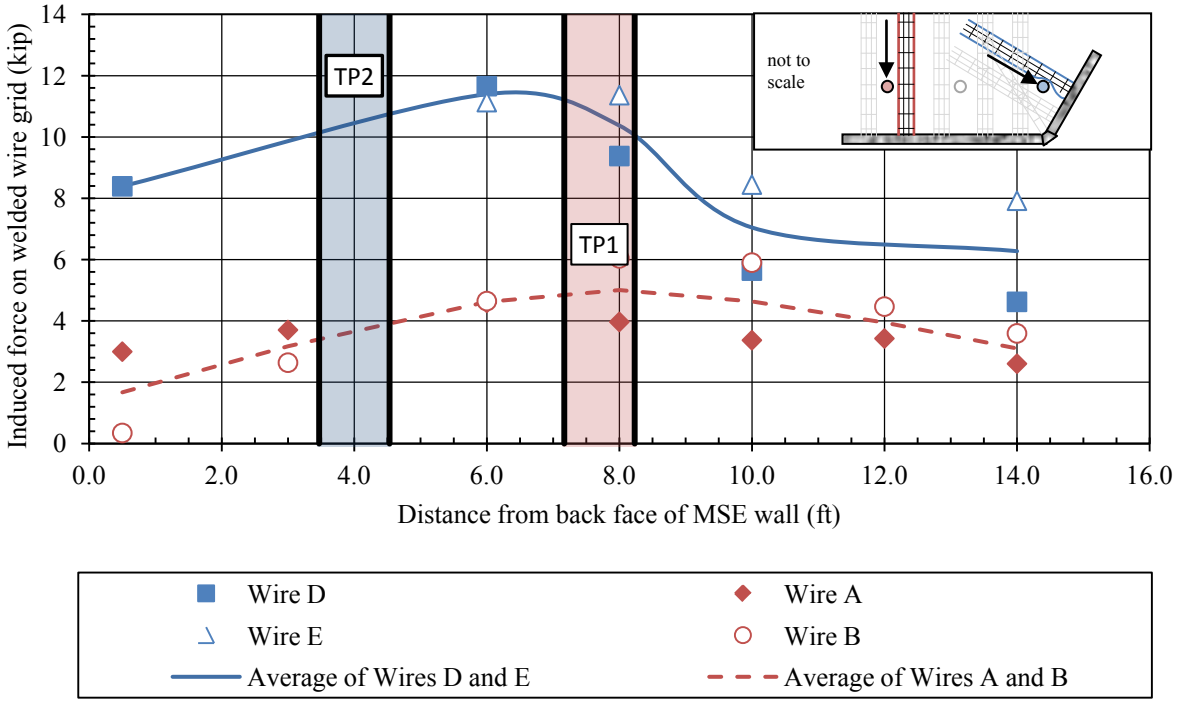

Figure 5.12: Comparison of the induced load in the welded wire grids adjacent to TP1 and TP2.

The force distribution in the grid suggests that soil in front of the pile is being pushed forward as the pile is loaded while soil behind the pile is serving to anchor the reinforcement grid. Behind the pile, the grid is moving towards the wall relative to the soil. This leads to a decrease in tension in the grid behind the pile as load is transferred to the surrounding soil by skin friction. It is anticipated that the increased tension in the grid behind the pile will go to zero at the location where the factor of safety against pullout is greater than one. In front of the pile, the soil is moving toward the wall relative to the grid. This leads to an increase in tension in the grid as load is transferred from the soil to the grid by skin friction. A positive tensile force in the reinforcement at the wall face is likely a result of the increased earth pressure on the wall. This interaction between the soil and the reinforcement is illustrated in Figure 5.13 below.

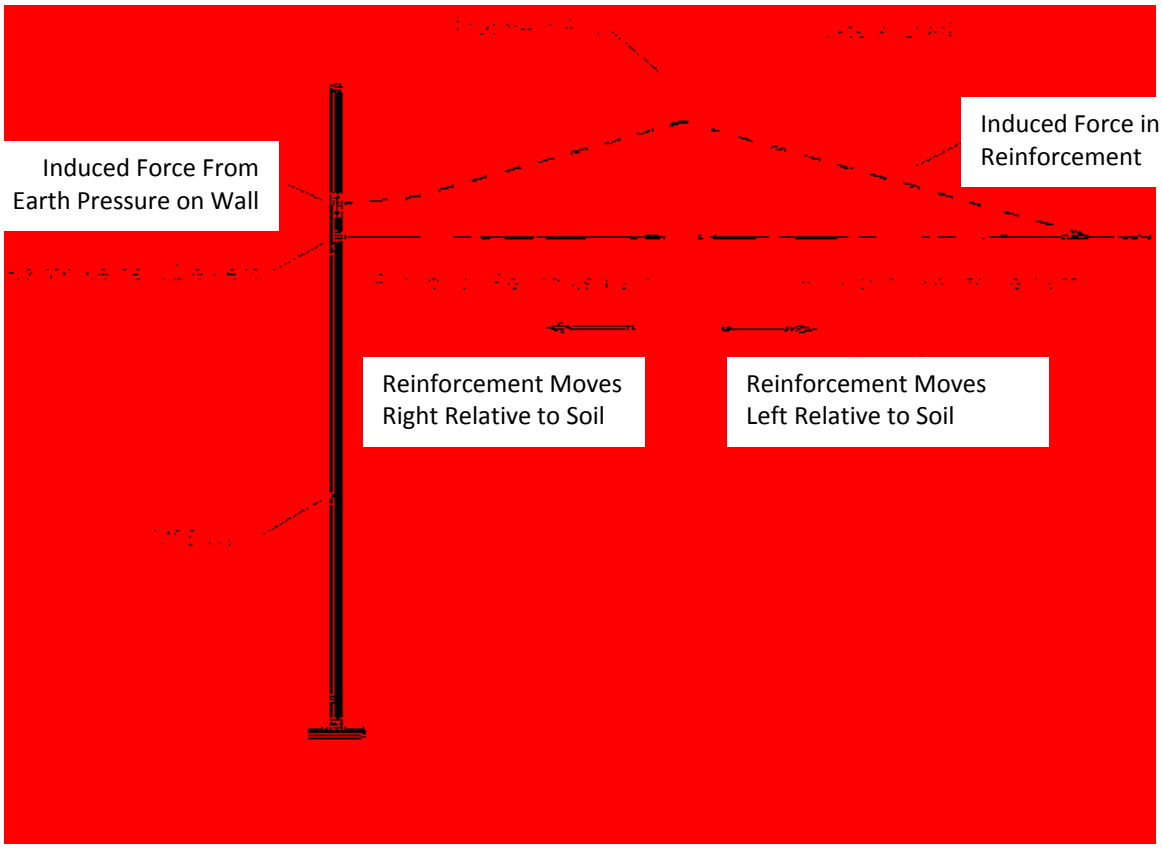

Figure 5.13: Interaction of soil and MSE wall reinforcement when pile is laterally loaded.

5.1.3 Displacement of Ground and Wall Panels

The displacement of the ground surface as a function of distance from the MSE wall for TP1 and TP2 at the maximum load (approximately 50 kips) is shown in Figure 5.14. As expected, the pile that is closest to the wall produces the greatest displacement at the wall. Nevertheless, the displacements at the wall face in both cases are relatively small and did not cause cracking or other permanent distress to the wall panels. For these two tests, soil displacement became relatively low at normalized distances greater than about 3 diameters from the center of the piles. Plots showing the ground surface displacement at different load levels throughout the testing for TP1 and TP2 are included in the Appendix D.

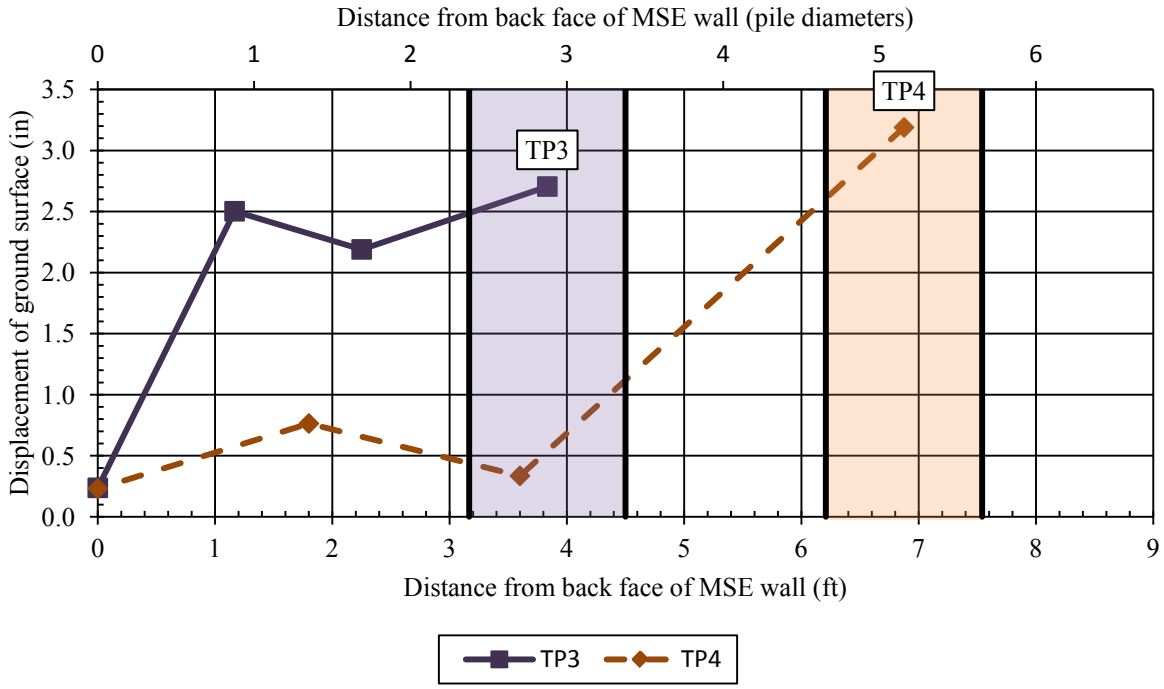

Figure 5.14: Horizontal displacement of the ground surface as a function of distance from the MSE wall at the maximum load (50 kips).

The wall displacements as measured by the LVDTs and the Shape Arrays at the maximum load for TP1 and TP2 are shown in Figure 5.15 and 16 respectively. For TP1 the data collected from the Shape Array located right of the pile was erroneous and is not plotted. The wall displacement for TP2 is significantly higher than that of TP1; however in both cases the wall deflection at the peak load is likely still within acceptable limits. Despite scatter associated with the small deflection levels involved, the shape array profiles suggest that wall displacements drop considerably at depth greater than about 8 ft or 7.5 pile diameters.

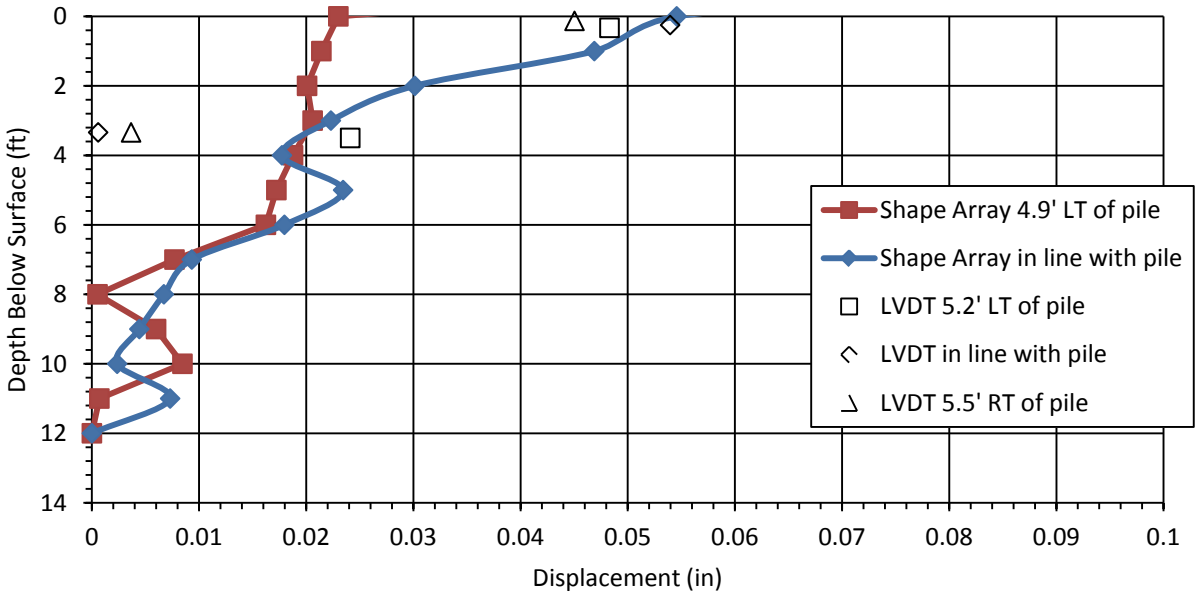

Figure 5.15: Displacement of the wall as measured by the Shape Arrays and LVDTs at the maximum load of TP1 (50 kips).

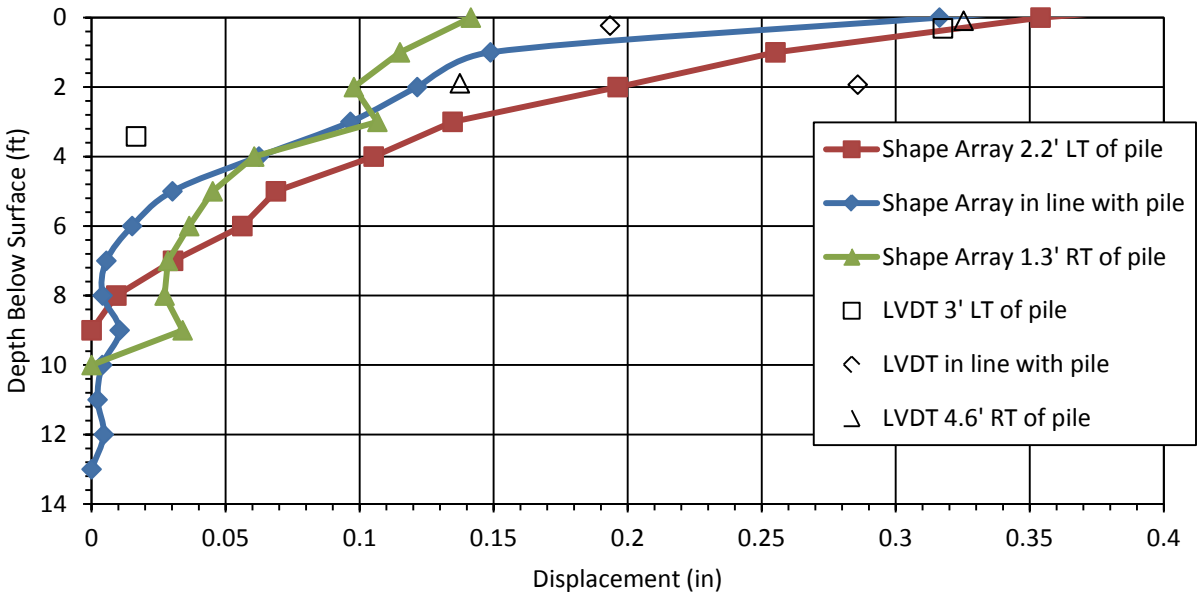

Figure 5.16: Displacement of the wall as measured by the Shape Arrays and LVDTs at the maximum load of TP2 (50 kips).

The data plotted in Figure 5.16 indicates that there is more displacement in the wall 2.2 ft left of pile than directly in line with the pile for TP2. This is in contrast to the data for TP1 presented in Figure 5.15 on the previous page where the greatest displacement was observed in line with the pile. Considering the geometry of the wall at TP2, these results appear to be due to rotation of the wall panel as demonstrated in Figure 5.17.

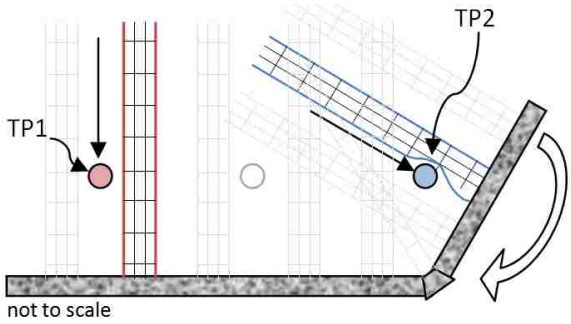

Figure 5.17: Rotation of wall panel near TP2 due to additional reinforcement at wall corner.

5.1.4 Pile Performance

The bending moment in the pile is calculated from the strain gage data using Equation 6-3. The average value of the paired strain gauges was used when both gages were functioning. At depths where one of the paired gages was damaged during construction only the data from the functioning gauge was used.

$$\boldsymbol{M_i = EI(\mu\varepsilon_i - \mu\varepsilon_o)(10^{-6})\left(\frac{D_o}{2}\right)} \qquad \textbf{(5-3)}$$

where

M_i is the bending moment in inch-kips for the pile at the i^{th} data point,

E is the modulus of elasticity of the steel (2900 ksi),

I is the moment of inertia of the pile,

$\mu\varepsilon_i$ is the micro strain for the i^{th} data point,

$\mu\varepsilon_o$ is the micro strain for the initial data point, and

D_o is the outside diameter of the pile.

Several of the strain gages on the piles at the U.S. Highway 89 site were damaged during construction. The measured bending moment for TP1 and TP2 at the maximum load of approximately 50 kips is shown in Figure 5.18. The maximum bending moment at this load varied from 1320 to 1450 in-kips at a depth of 5 to 7 ft. below the load level.

The bending moment vs. depth curve for TP2 as shown in Figure 5.18 indicates that the maximum bending moment in the pile occurs at a greater depth than for TP1. One possible explanation for this is that there is less soil resistance for the pile spaced closer to the wall thereby moving the maximum bending moment deeper in the pile. However, considering that the strain gauge data is fairly sparse and not particularly robust, this assessment must remain somewhat tentative.

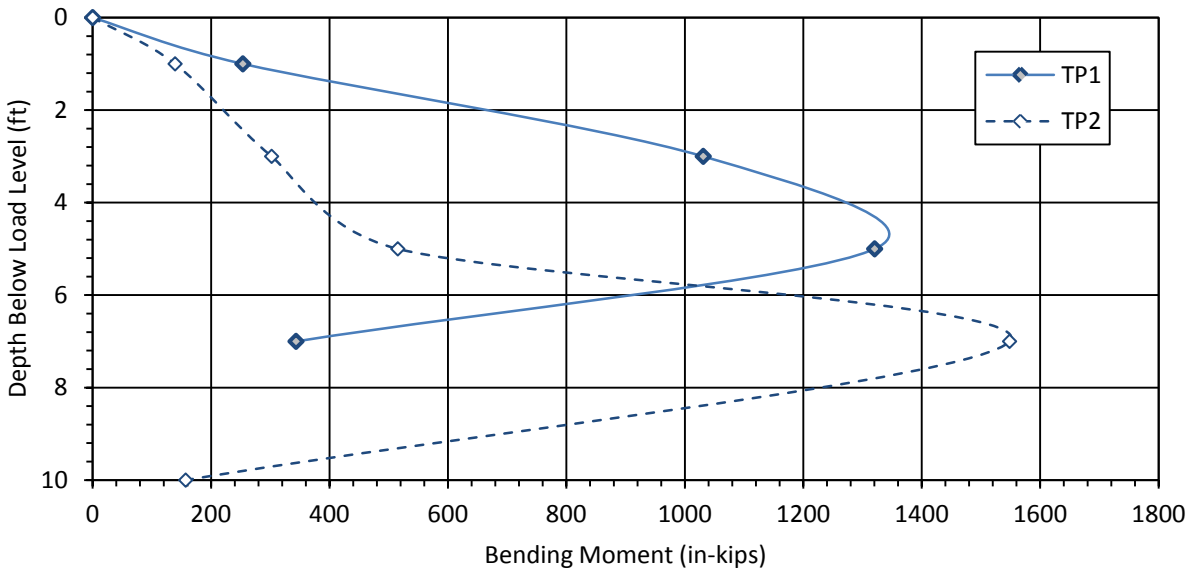

Figure 5.18: Bending moment vs. depth below load level at maximum load for TP1 and TP2.

5.2 Pioneer Crossing Site

5.2.1 Load Displacement Curves

Figure 5.19 is a comparison of the load-displacement curves for the test piles at the Pioneer Crossing site (TP3, TP4 and TP5) for the peak data points. Figure 5.20 is a comparison of the for the final data points. On average, the final load for TP3 and TP4 is 7% lower than the peak load. The average difference for TP5 between final and peak loading is nearly 10%. This additional relaxation appears to be related to spacing from the wall because the same reaction was used for both TP4 and TP5. For a given displacement, the lateral resistance clearly decreases as the distance from the wall decreases. These results point out the importance of adequately accounting for reduced resistance near a wall face and the need for an improved design approach.

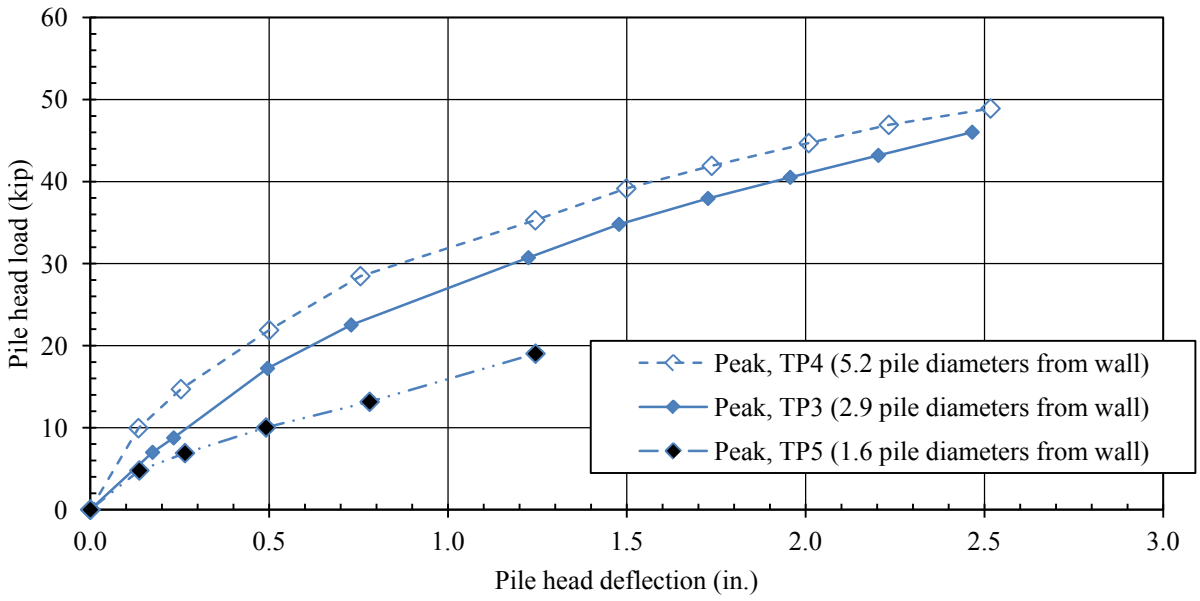

Figure 5.19: Comparison of load-displacement curves for TP3 through TP5 (Pioneer Crossing site) for the peak data points.

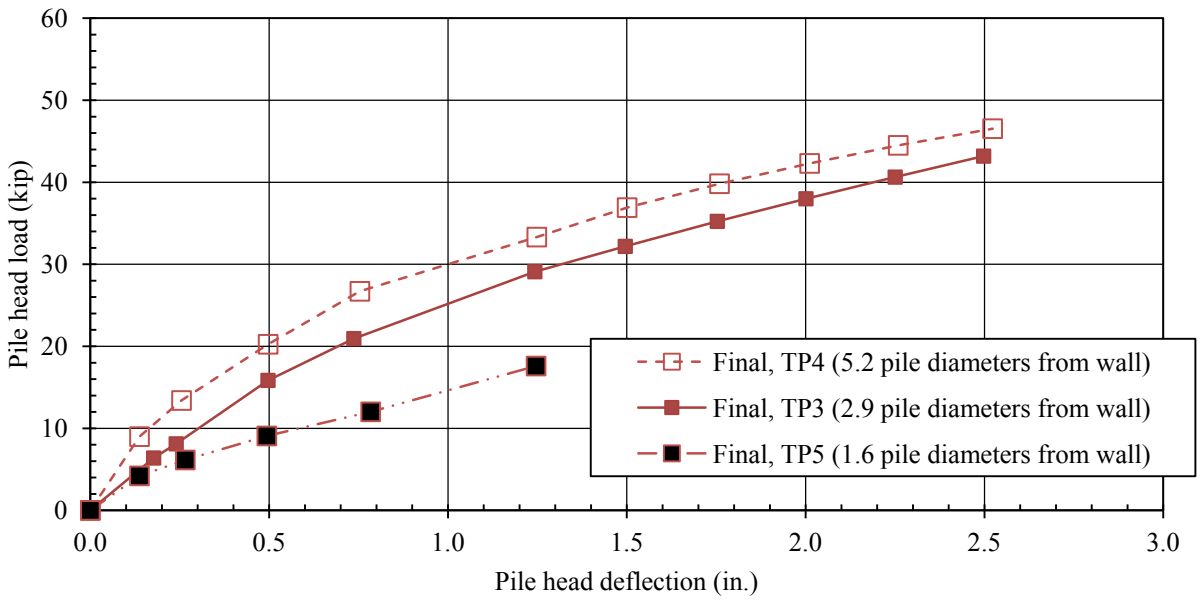

Figure 5.20: Comparison of load-displacement curves for TP3 through TP5 (Pioneer Crossing site) for the final data points.

Relative to the pile at a distance of 5.2 D from the wall, the piles at 2.9 D and 1.6 D from the wall provided only about 80% and 50% of the lateral resistance, respectively. This decrease in resistance with decreasing distance from the wall is consistent with results from previous studies conducted by Pierson et al. (2009) in which the lateral resistance decreased by over 50% as the test piles were located closer to the MSE wall face. However the results differ from the U.S. Highway 89 site discussed in Section 5.1.1. This discrepancy can be attributed to at least two factors. First, the reinforcement ratio for TP4 and TP5 (spaced 5.2D and 1.6D respectively) at the Pioneer Crossing site is much less than at the U.S. Highway 89 site (1.1 versus 1.6). The reinforcement ratio for TP3 however had a slightly larger reinforcement ratio of 1.7. Secondly, the spacing between the pile and the wall is substantially smaller for the test piles at the Pioneer Crossing location.

At the largest pile head displacements the MSE wall panels moved less than 0.6 in. and no cracking or distress was observed in the panels. Testing for TP5 (the closest pile to the wall) was stopped at a pile head displacement of approximately 1.25 in. to prevent excessive distress to the wall panels which had already reached a value of approximately 0.6 in.

5.2.2 Reinforcement Mat Performance

The load on the instrumented wire grids at the Pioneer Crossing site is determined in the same way as the grids at the U.S. Highway 89 site discussed in Section 5.1.2. The induced loads in the wire grid at the Pioneer Crossing site generally have a similar trend to the U.S. Highway 89 site with the peak located near the center of the pile. Figure 5.21 through 22 show the induced force in the welded wire grids at the maximum pile load for TP3, TP4 and TP5 respectively. Charts showing the induced force in each grid at varying pile loads are included in Appendix C.

A comparison of the induced forces in the grids for the three test piles indicates that the pile located furthest away from the wall produced the highest force in the grid. Moreover, as spacing decreased, the induced force in the grid decreased. However, interpretation of this trend is complicated by the fact that the peak load applied to the piles also decreased significantly as the spacing decreased.

Figure 5.24 shows a curve where both the induced load and the distance from the pile have been normalized. The induced load is normalized by dividing the maximum induced force at the maximum load by the maximum load. The lateral distance from the pile to the center of the grid is divided by the spacing from the back wall to the center of the pile. The normalized curve shows a trend of decreasing influence of induced force as the normalized distance increases. There does not appear to be any consistent trend to the induced force as a function of depth for the grids instrumented.

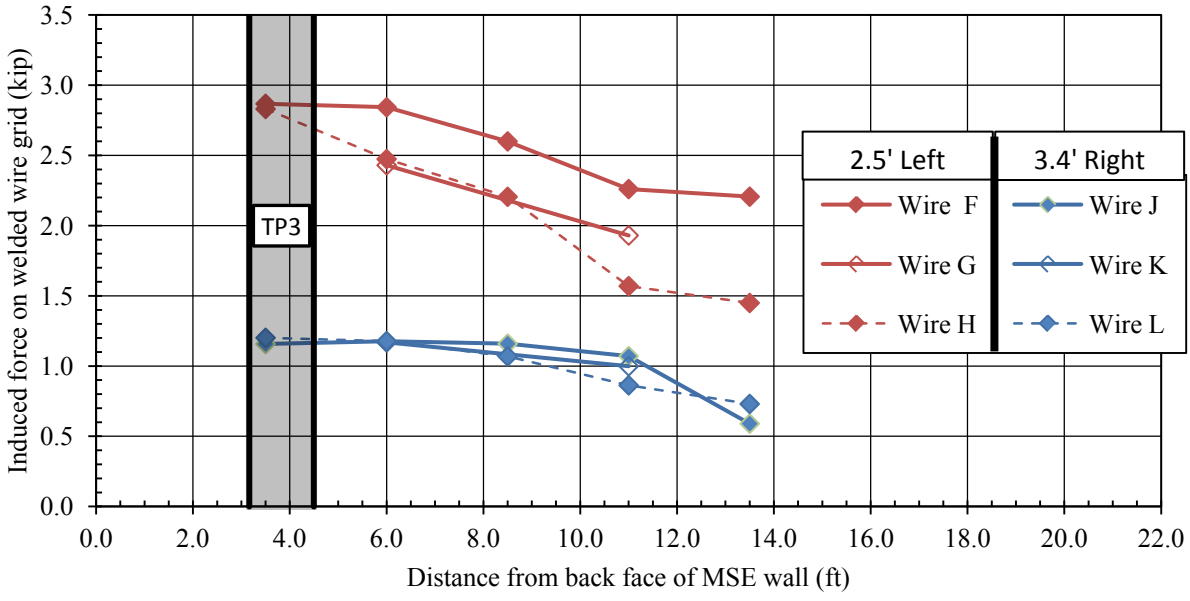

Figure 5.21: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wires F through L with a 55 kip load applied to TP3 (see Table 4.2).

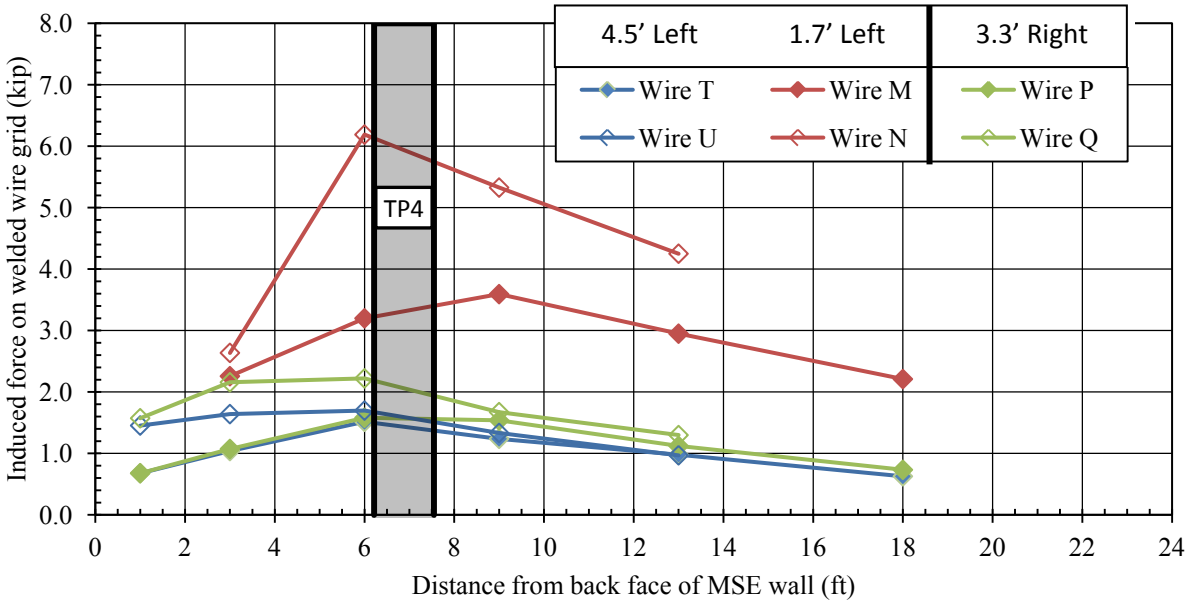

Figure 5.22: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on instrumented wires with a 50 kip load applied to TP4 (see Table 4.2).

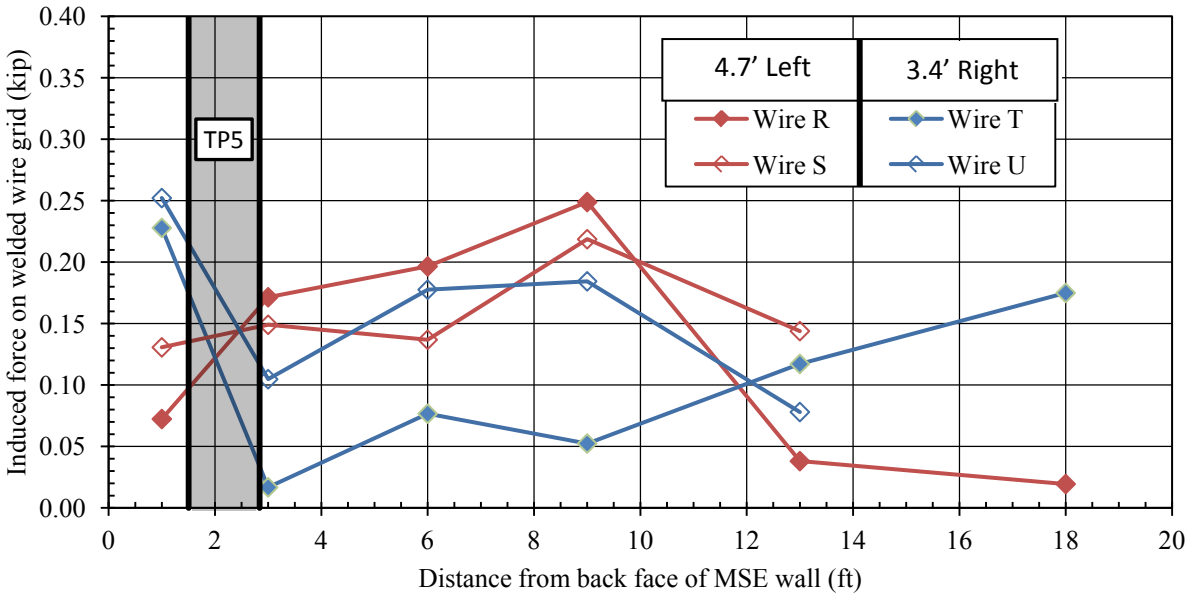

Figure 5.23: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on instrumented wires with a 18 kip load applied to TP5 (see Table 4.2).

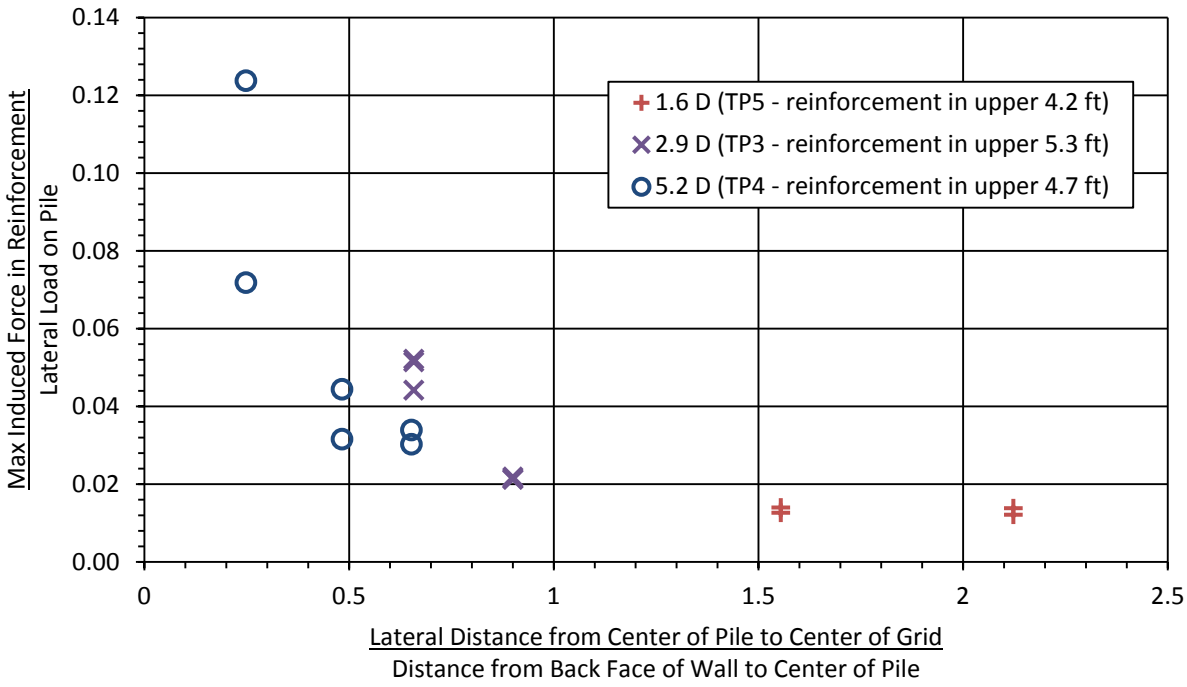

Figure 5.24: Normalized maximum induced force in grids vs. normalized distance from pile for all piles at the Pioneer Crossing site.

5.2.3 Displacement of Ground and Wall Panels

The displacement of the ground surface as a function of distance from the MSE wall for TP3, TP4 and TP5 at a load of approximately 18 kips (the maximum load applied to TP5) is shown in Figure 5.25. A similar plot is shown in Figure 5.26 for TP3 and TP4 at their maximum load (approximately 50 kips). As expected, the pile that was closest to the wall produced the greatest displacement. At greater distances from the wall, the ground surface displacement was also highest for the pile closest to the wall. As with the test piles at Pleasant Grove, ground surface displacement typically dropped to relatively low values at normalized distances greater than about 3 pile diameters.

The displacements at the wall face for the piles at 2.9 and 5.2 pile diameters from the wall were relatively small and did not cause cracking or other permanent distress to the wall panels. Plots showing the ground surface displacement at different load levels throughout the testing for TP3, TP4 and TP5 are included in Appendix D.

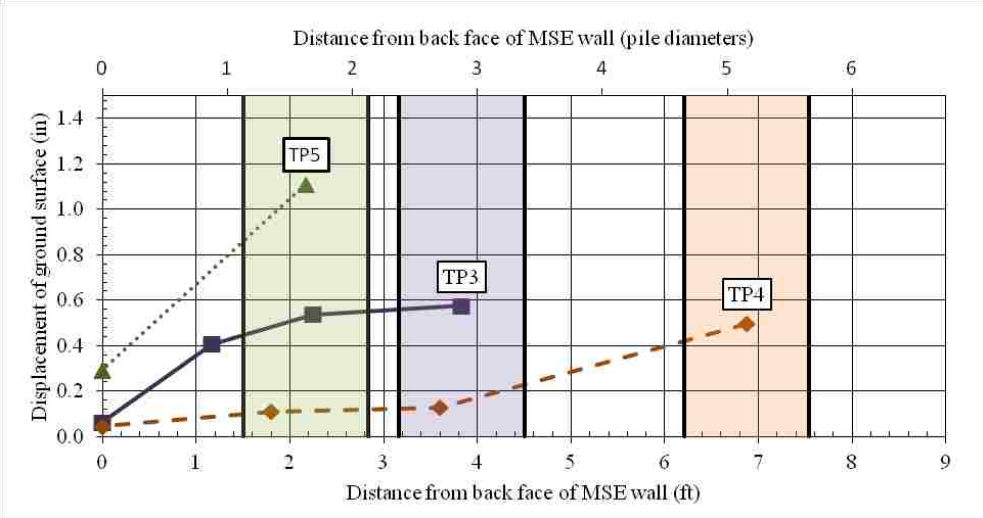

Figure 5.25: Horizontal displacement of the ground surface as a function of distance from the MSE wall at approximately 18 kips (maximum load for TP5).

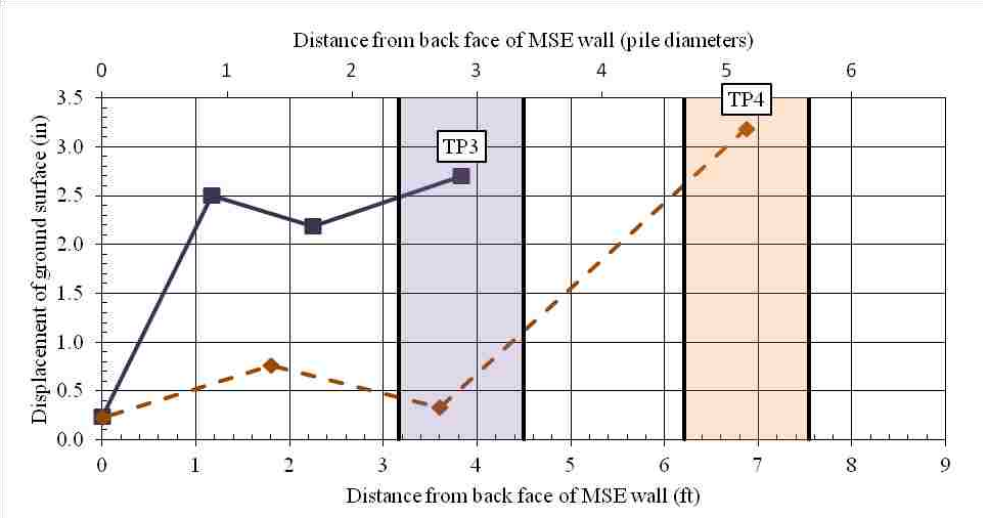

Figure 5.26: Horizontal displacement of the ground surface as a function of distance from the MSE wall at approximately 50 kips (maximum load for TP3 and TP4).

The wall displacement as measured by the Shape Arrays and LVDTs for TP3 at the maximum load of approximately 50 kips is shown in Figure 5.27. The Shape Array in line with TP3 showed several inches of displacement, whereas the string pot that was attached to the wall in line with the pile showed less than 0.5 inch of displacement. This discrepancy appears to be a result of the Shape Array casing being separated from the wall face during construction. Figure 5.28 shows the location of the Shape Arrays with respect to the back face of the wall. The instrument in line with the pile was approximately 10 inches behind the back face of the wall, and the instrument 1.6 ft. left of the pile was approximately 4 inches behind the back face of the wall. The material between the casing and the wall is likely to be relatively un-compacted fill which resulted in the high displacements recorded.

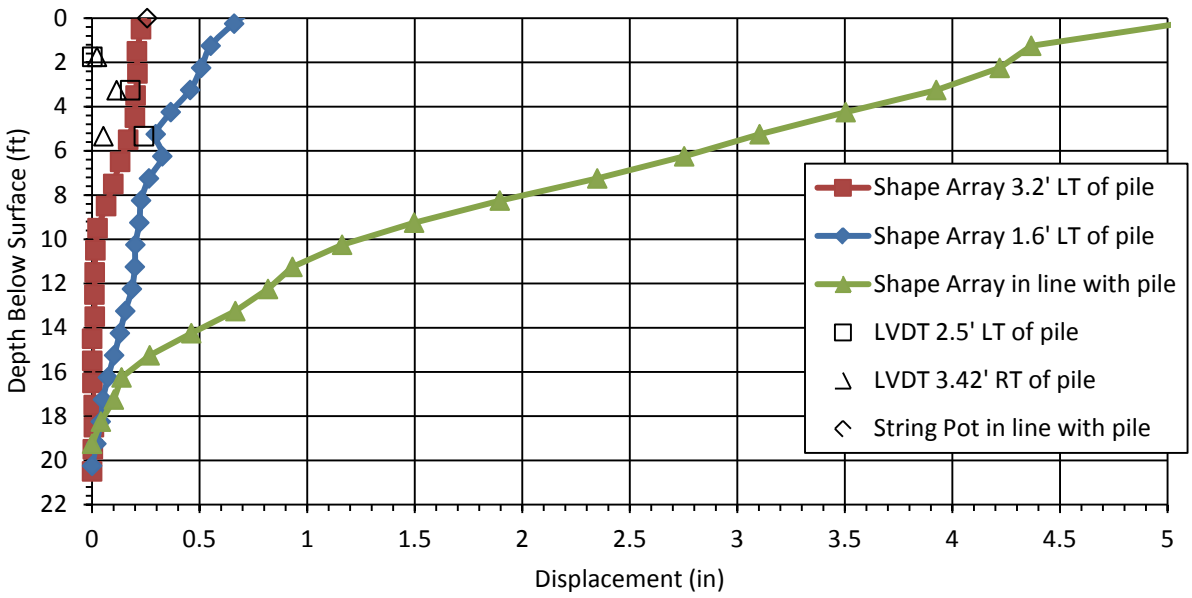

Figure 5.27: Displacement of the wall as measured by the Shape Arrays and LVDTs at the maximum load of TP3 (50 kips).

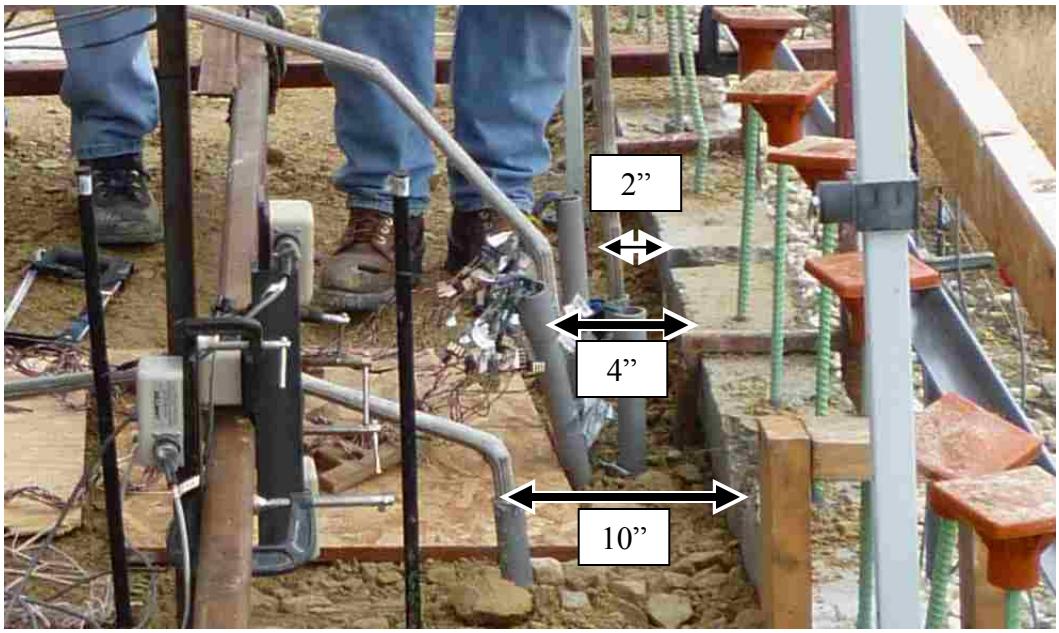

Figure 5.28: Location of Shape Arrays for TP3 with respect to the back face of the wall.

The shape array at the back of the wall face (3.2 ft LT of the pile) indicated deflection values which were in reasonable agreement with the measurements from the LVDTs and string pots. As was the case for the test piles at Pleasant Grove, the shape array profile indicates that displacements become relatively small at depths greater than about 8 ft.

The wall displacement as measured by the Shape Arrays and LVDTs for TP4 and TP5 at the maximum applied load are shown in Figure 5.29 and 30 respectively. The Shape Arrays placed in line with both TP4 and TP5 show significantly more displacement than the string pots attached to the wall, similar to the test data for TP3. The photos shown in Figure 5.31 and 26 are of the test setup of TP4 and TP5 respectively, and it is apparent that the Shape Array casings are separated by a couple of inches from the wall. This separation is significantly less than previously discussed for TP3, but still results in a measured displacement that is higher than the actual wall displacement.

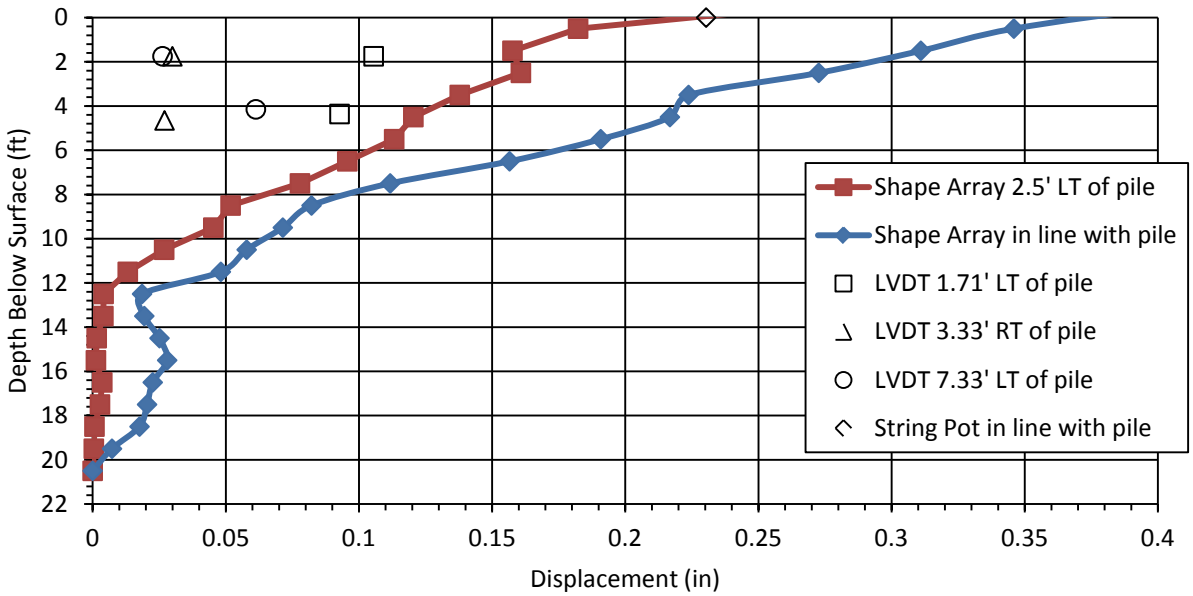

Figure 5.29: Displacement of the wall as measured by the Shape Arrays and LVDTs at the maximum load of TP4 (50 kips).

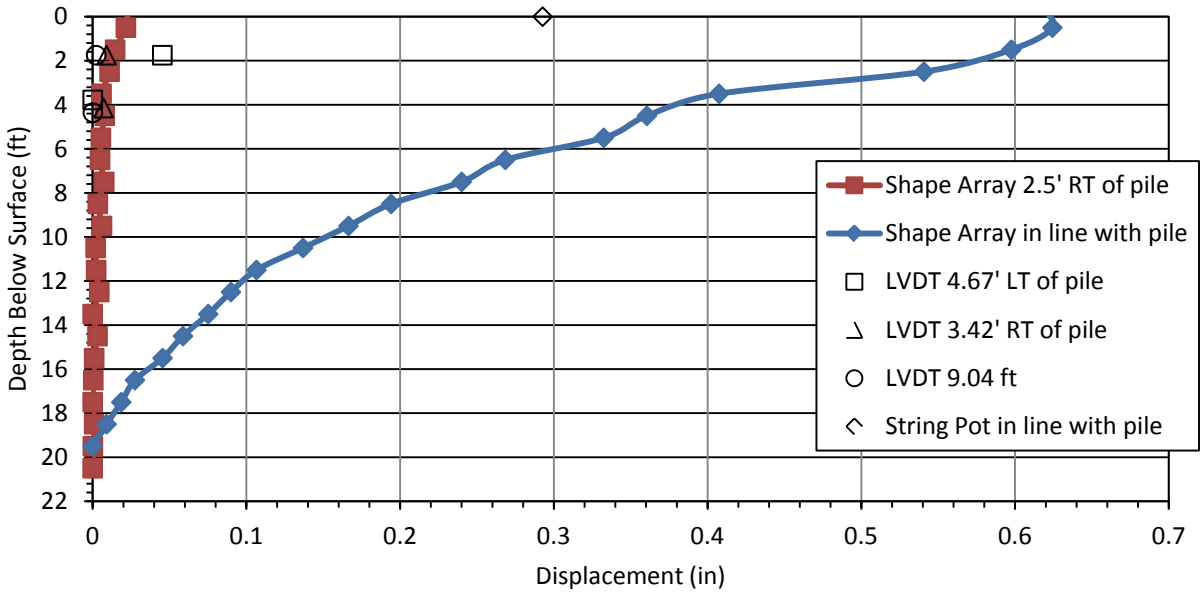

Figure 5.30: Displacement of the wall as measured by the Shape Arrays and LVDTs at the maximum load of TP5 (18 kips).

Figure 5.31: Shape Array casing in line with TP4 separated from wall by a couple inches.

Figure 5.32: Shape Array casing in line with TP5 separated from wall by a couple inches.

5.2.4 Pile Performance

The bending moment in the pile is calculated from the strain gauge data using Equation 6-3. The average value of the paired strain gauges was used when both gauges were functioning. There were several locations where one gauge was damaged during construction, in which case only the data from the functioning gauge was used.

The gages at the Pioneer Crossing site experienced less damage during construction due to the added protection of the steel angles welded onto the pile. The measured bending moment for TP3 and TP4 at the maximum load of approximately 50 kips is shown in Figure 5.33. The maximum bending moment at this load varied from 2700 to 3200 in-kips at a depth of 6 to 8 ft. below the load level. As was observed in the Pleasant Grove tests, TP 3 at 2.9D from the wall developed a higher maximum bending moment than TP 4 at 5.2D wall.

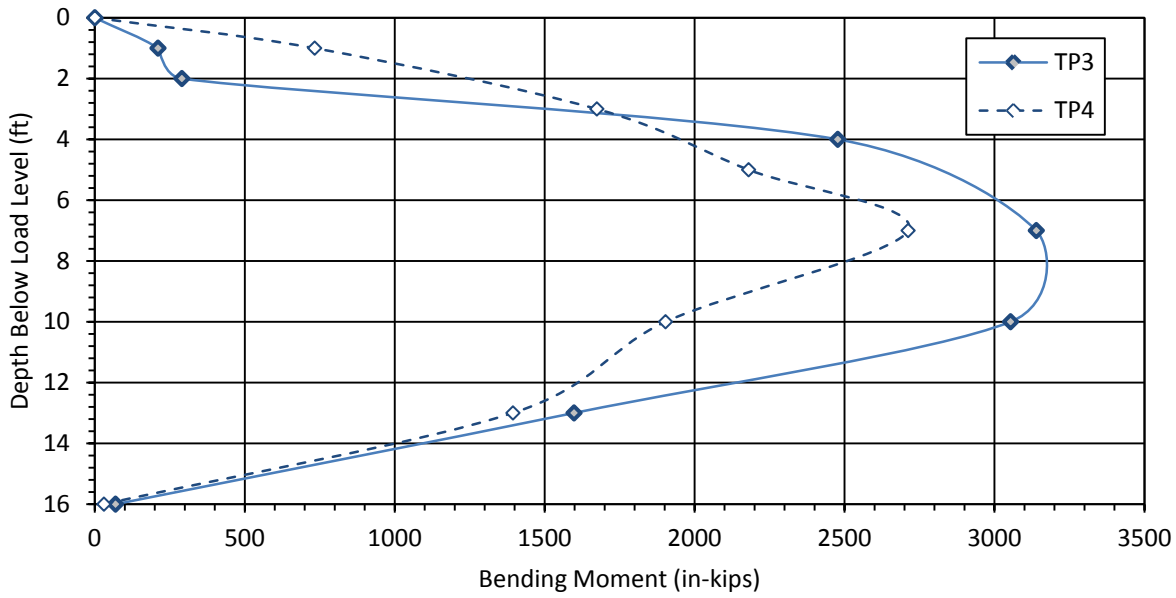

Figure 5.33: Bending moment vs. depth below load level at maximum load (50 kip) for TP3 and TP4.

The maximum load applied to TP5 was 18 kips and the measured bending moment versus depth curve for this pile at this load is shown in Figure 5.34, along with the bending moment curves for TP3 and TP4 at approximately the same load. The maximum moment of approximately 350 in-kips for TP5, which is considerably lower than the other two tests piles which were further from the wall (650 in-kips for TP3 and 720 in-kips for TP4).

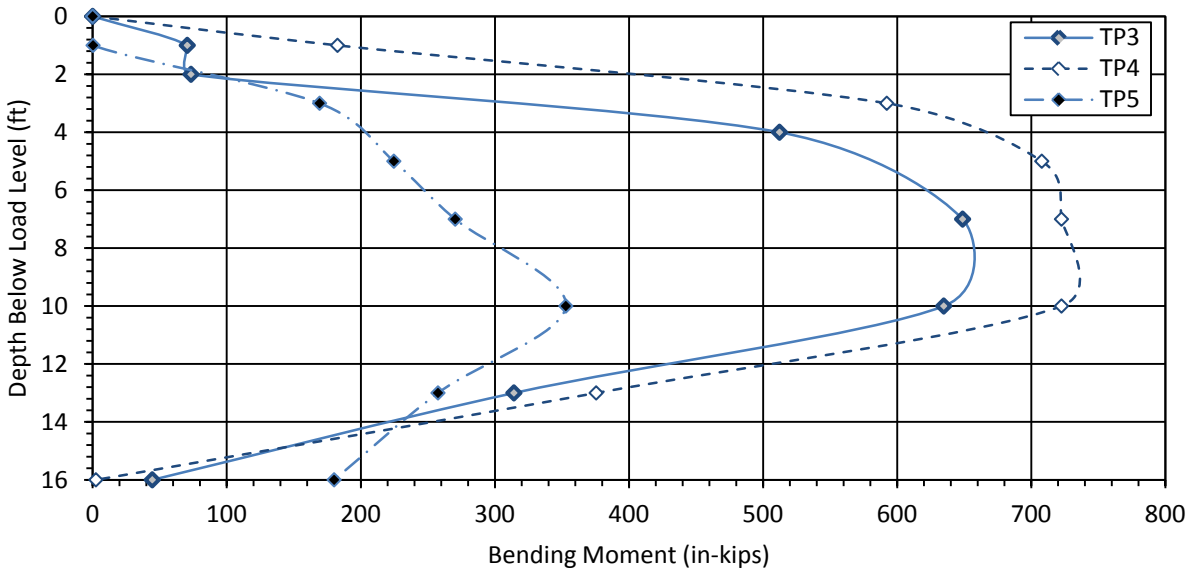

Figure 5.34: Bending moment vs. depth below load level for TP3, TP4 and TP5 at a load of 18 kips (maximum load for TP5).

6 LATERAL PILE LOAD ANALYSIS

The analyses were performed using the computer program LPILE (Reese et al., 2004). LPILE uses a finite difference method in which the pile is represented by beam elements and the soil is represented by non-linear p-y springs where p represents the horizontal soil resistance per length of pile and y is the horizontal displacement. The method uses an iterative approach to obtain compatible force and displacement along the length of the pile.

Because the pile was composed of steel and the load was limited to levels which did not exceed the yield stress of the pile, the pile could be treated as a linear elastic material with the modulus of elasticity of steel and the moment of inertia of the steel section.

Relatively few lateral load tests have been performed on piles in dense gravelly soils (Macklin and Chou, 1988, and Smith et al., 2000) similar to the compacted fill behind the MSE walls. As a result, stiffness and strength parameters for laterally loaded piles in gravelly soils are not well calibrated. Therefore, lateral pile load analyses were performed as part of this study required some back-calculation to obtain relevant soil parameters. Although the soil near the pile was actually gravel, the p-y curve shape was modeled within the framework of the API (1982) sand p-y curve. The moist unit weight of gravel for each site was well known based on density testing as discussed previously, however the friction angle (ϕ) and stiffness (k) values had to be refined based on back-calculation procedures. While these two parameters both have an effect on the entire computed load-displacement curve, the friction angle has the greatest

effect at large displacements where the soil strength becomes fully developed. In contrast, the stiffness parameter has the greatest influence on the shape of the load-displacement curve at smaller displacements. Guided by this understanding, the load-displacement curves were computed for each test pile with a curve fitting approach. The friction angle and stiffness of the reinforced fill was modified to find the best match to the test data plotted after the one minute hold time (final load data).

A pinned-head condition was used for the boundary conditions for each LPILE analysis by applying a shear force to the top of the pile and setting the applied moment to zero. Loads were typically applied in 10 kip intervals up to 50 kip. The analyses for each site are discussed in the following sections.

6.1 U.S. Highway 89 Site

The soil profile for the LPILE analysis consists of two generalized layers. The top layer of soil is the reinforced fill with a thickness equal to the wall height. The second layer is the foundation soil consisting of stiff clay. Although the native soil profile is more complicated than this simplified model, parametric analyses indicate that the properties of the deeper layers had relatively little affect on the computed load-deflection and bending moment vs depth curves. Table 6.1 shows the pile property input for the LPILE analysis. Table 6.2 shows the soil layering and properties used in the analysis, including the friction angle (ϕ) and stiffness (k) values for the reinforced fill resulting in the best agreement with the measured data.

Table 6.1: Pile properties for the U.S. Highway 89 site LPILE analysis.

Pile Shape	Total Length (in)	Number of Increments	Distance from Pile Top to Top of Ground Surface (in)	Outside Diameter (in)	Wall Thickness (in)	Moment of Inertia (in^4)	Area (in^2)	Modulus of Elasticity (psi)	Yield Stress (psi)
Circular Pipe	960	200	12	12.75	0.375	279.34	14.58	29,000,000	60,000

Table 6.2: Material properties for the U.S. Highway 89 site LPILE analysis.

Depth (ft)	Description	Soil Type (p-y model)	Eff. Unit Weight (pci)	Cohesion (psi)	Strain Factor e_{50}	Friction Angle (degrees)	p-y Modulus, k (pci)
0 to 17	Reinforced Fill	API Sand (O'Neill)	0.080	-	-	39	800
17 to 60	Foundation Soil	Stiff Clay w/o Free Water (Reese)	0.069	6.94	0.007	-	-

The back-calculated friction angle of 39º used in the analysis appears reasonable for dense compacted gravel (US Navy, 1982, Rollins et al., 2005); however, the k value is 3.6 times higher than would be expected for a dense sand (typically 225 pci for Dr = 80% and ϕ = 39º (API, 1982)). Figure 6.1 shows the curves used for the API method to determine the subgrade reaction modulus k. Other investigations (Macklin and Chou, 1988) have also found the k value for dense gravels to be unusually high; therefore, this result is not without precedent. The load deflection curve from the LPILE analysis is shown in Figure 6.2, along with the measured lateral load displacement curves for TP1 and TP2. The output file for the LPILE analysis is included in Appendix E.

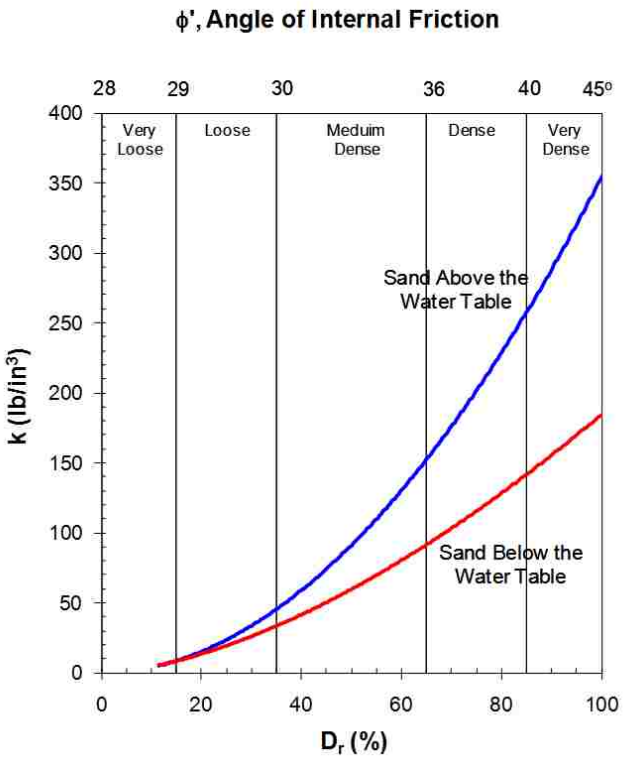

Figure 6.1: Subgrade reaction modulus, k used for API sand criteria in p-y analysis (API, 1982).

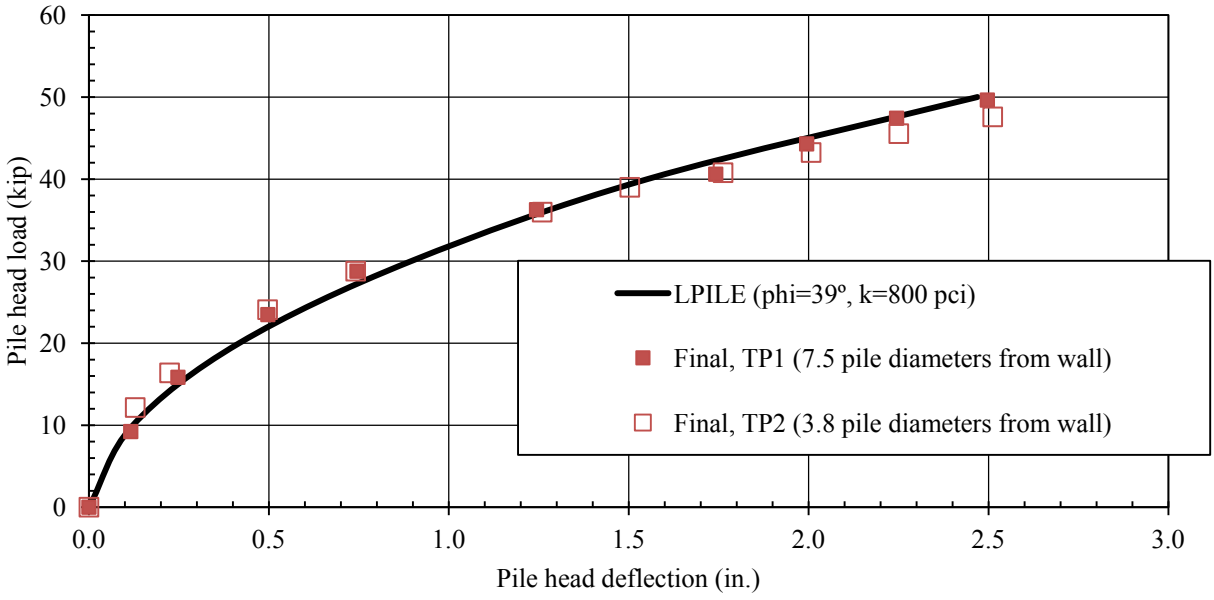

Figure 6.2: Comparison of computed and measured load-displacement curves for TP1 and TP2.

The analysis shows a maximum computed bending moment of 3070 in-kips occurring 6.8 ft. below the load level for both TP1 and TP2. This value is approximately twice the measured bending moment in both test piles as shown in Figure 6.3. The low measured values are likely a result of the poor protection of the gages and wires due to the short time frame from notice to proceed with instrumentation and wall construction.

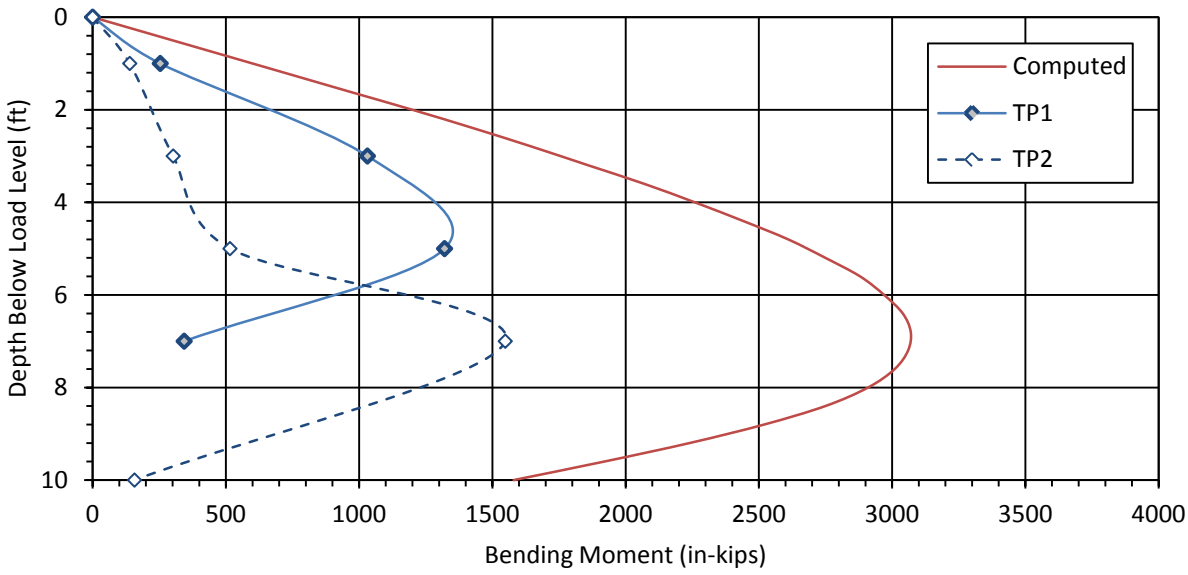

Figure 6.3: Comparison of measured and computed bending moment for TP1 and TP2 with a 50 kip load.

6.2 Pioneer Crossing Site

The soil profile for the LPILE analysis consists of two generalized layers. The top layer of soil is the reinforced fill with a thickness equal to the wall height. The second layer is the foundation soil consisting of stiff clay. Table 6.3 shows the pile property input for the LPILE analysis.

Table 6.3: Pile properties for the Pioneer Crossing site LPILE analysis.

Pile Shape	Total Length (in)	Number of Increments	Distance from Pile Top to Top of Ground Surface (in)	Outside Diameter (in)	Wall Thickness (in)	Moment of Inertia (in^4)	Area (in^2)	Modulus of Elasticity (psi)	Yield Stress (psi)
Circular Pipe	960	200	12	16	0.375	562.08	18.41	29,000,000	60,000

Analyses were first performed on the pile located at a distance of 5.2 pile diameters from the wall (TP4) assuming that there was no effect from the proximity of the wall. Thereafter, the soil parameters calibrated based on the analysis of that pile were held constant for the analyses of the other piles. The reduction in lateral soil resistance was accounted for by using constant p-multipliers over the length of the pile.

Table 6.4 shows the material properties used in the analyses, including the friction angle (ϕ) and stiffness (k) values for the reinforced fill resulting in the best match to the measured data for TP4.

Table 6.4: Material properties for the Pioneer Crossing site LPILE analysis.

Depth (ft)	Description	Soil Type (p-y model)	Eff. Unit Weight (pci)	Cohesion (psi)	Strain Factor e_{50}	Friction Angle (degrees)	p-y Modulus, k (pci)
0 to 40	Reinforced Fill	API Sand (O'Neill)	0.080	-	-	28	150
40 to 83	Foundation Soil	Stiff Clay w/o Free Water (Reese)	0.069	6.94	0.007	-	-

Despite the fact that the test piles at the Pioneer Crossing site were 16 inch in diameter with a moment of inertia of 562 in^4 relative to the 12.75 inch diameter piles at the Pleasant Grove site with a moment of inertia of only 292 in^4, the load-displacement curve for the Pioneer Crossing test pile was lower than at Pleasant Grove. The back-calculated friction angle obtained from the analyses appears to be low for dense compacted gravel based on recommendations made by others (API 1982, US Navy 1982, Rollins et al. 2005) where values between 38º and 45º are commonly reported. The k value is reasonable for dense sand (typically 225 pci for Dr = 80%) based on API recommendations, but significantly lower than the values found at the U.S. Highway 89 site and discussed in the previous section. The load deflection curve from the LPILE analysis is shown in Figure 6.4, along with the measured lateral load displacement curves for TP4. The output file for the LPILE analysis is included in Appendix F.

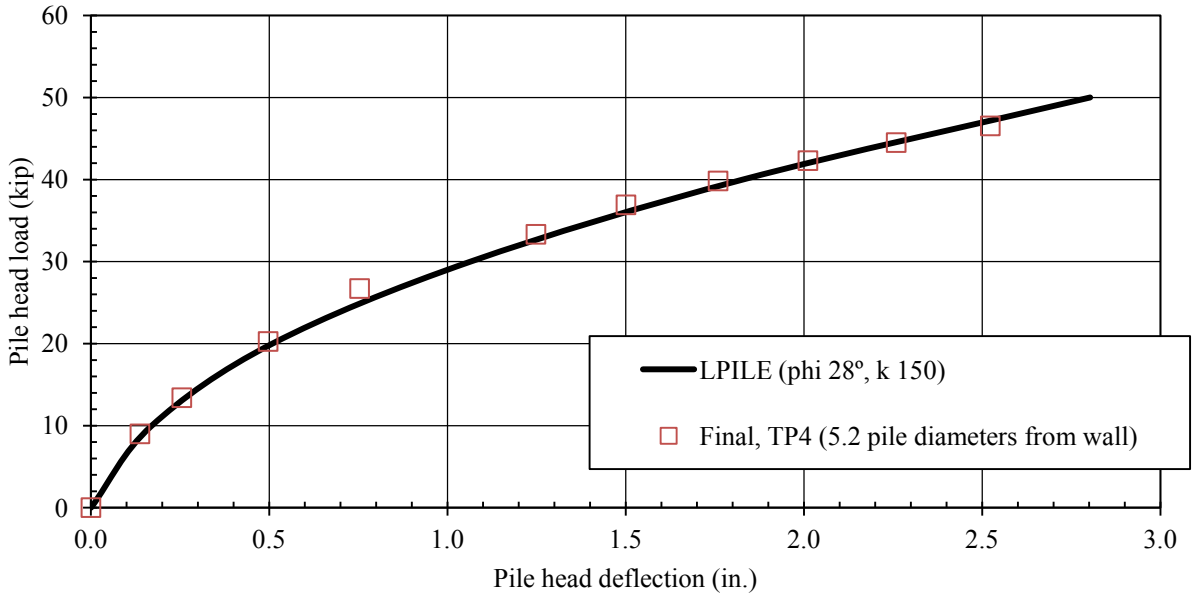

Figure 6.4: Comparison of computed and measured load-displacement curves for TP4.

The lower friction angle and k value could be attributable to three potential factors: (1) the presence of the MSE wall which might still be reducing lateral resistance relative to a pile without the presence of a wall, (2) lower compaction of the backfill in the area around the test piles and (3) the presence of the double sheet of low-density polyethylene surrounding the piles.

While compaction quality may vary particularly near an MSE wall face, there is no evidence in the construction records to indicate that compaction effort was less effective at Pioneer Crossing than at Pleasant Grove. Based on our review of the strain data, it appears that the double sheeting is the major source of the reduction in lateral resistance.. Therefore, the action taken to reduce the force on the pile due to drag load likely had negative consequences on the lateral resistance of the abutment piles. If friction angle and k values more typical of dense compacted gravel were employed (similar to those used for the Pleasant Grove test for example), the computed lateral resistance would be expected to be 60 to 80% higher than what was measured. Therefore, in this case it appears that double wrapping the pile reduced the lateral capacity by as much or more than would have been the case if the pile were placed 1.6 pile diameters from the wall face but without the double wrapping in plastic.

Using the same soil model developed for the pile at 5.2 pile diameters, p-multipliers were obtained by back-analysis to match the measured load-deflection curves for the piles at closer spacings. In each case a constant p-multiplier was used for the entire length of the pile. Back calculated P-multipliers to account for the reduced capacity of piles TP3 (2.9 pile diameters behind wall) and TP5 (1.6 pile diameters behind wall) were found to be 0.8 and 0.25, respectively. The computed pile head load versus displacement curves using these p-multipliers are shown in Figure 6.5 relative to the measured curves and the agreement is very good.

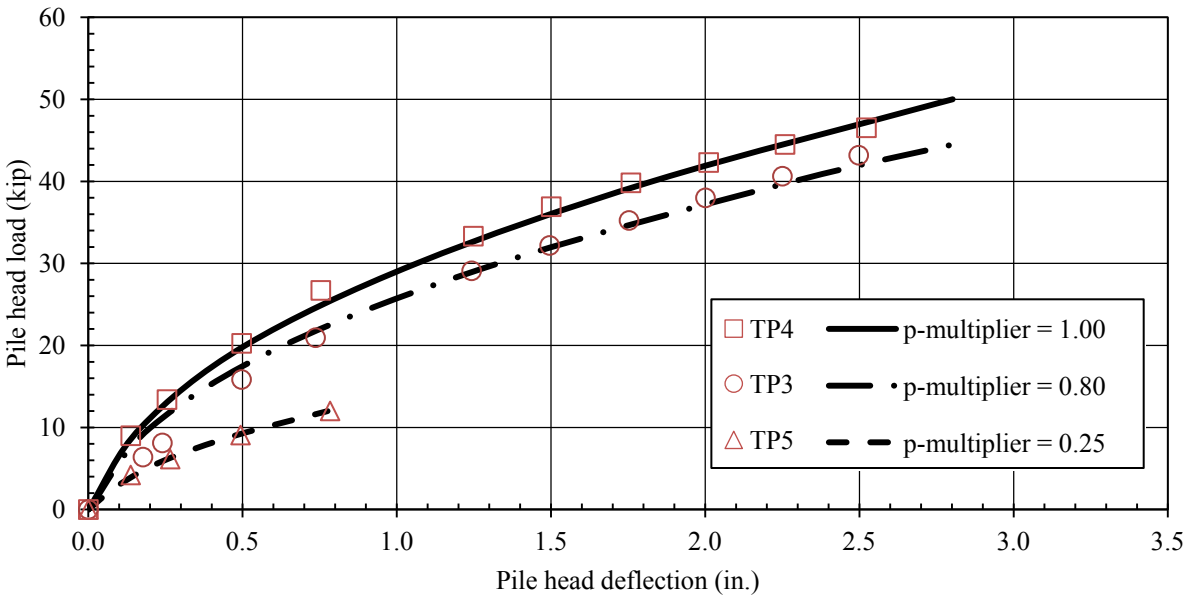

Figure 6.5: Comparison of computed and measured load-displacement curves for TP3, TP4 and TP5.

The bending moment vs. depth curves for each of the three cases is plotted with the measured bending moment vs. depth curve for the maximum applied lateral load in Figure 6.6 through 8. The shape of each of the measured bending moment curves matches the shape of the computed curves fairly well. The maximum measured bending moment, however, is significantly lower than the computed bending moment even with the additional protection of the steel angles around the strain gauges.

With a p-multiplier of 1 for TP4, the maximum computed bending moment is 3900 in-kips for a lateral load of 50 kips compared to 2700 in-kips maximum measured bending moment. With a p-multiplier of 0.8 for TP3, the maximum computed bending moment is 4300 in-kips for the same load compared to 3200 in-kips maximum measured bending moment. The biggest discrepancy between computed and measured bending moment is in TP5. With a p-multiplier of

0.25 and a lateral load of 18 kips, the maximum computed bending moment is 1560 in-kips compared to the maximum measured bending moment of 350 in-kips.

The measured bending moment in each case is less than the computed bending moment. One possible explanation is that the soil is more dense than what was used in the LPILE analysis. As discussed previously, the LPILE parameters were back-calculated to get the best fit between the computed and measured load-displacement curves. The resulting friction angle of 28º is very low for a dense gravel. Increasing the friction angle and stiffness parameter in LPILE to values similar to the U.S. Highway 89 site, while keeping the same p-multipliers previously discussed results in computed bending moments that are very similar to the measured bending moments for TP-3 and TP-4. The computed bending moment for TP-5 remains significantly higher than measured even when increasing the friction angle and stiffness parameters. It is also possible that the discrepancy is related to unknown problems with the instrumentation.

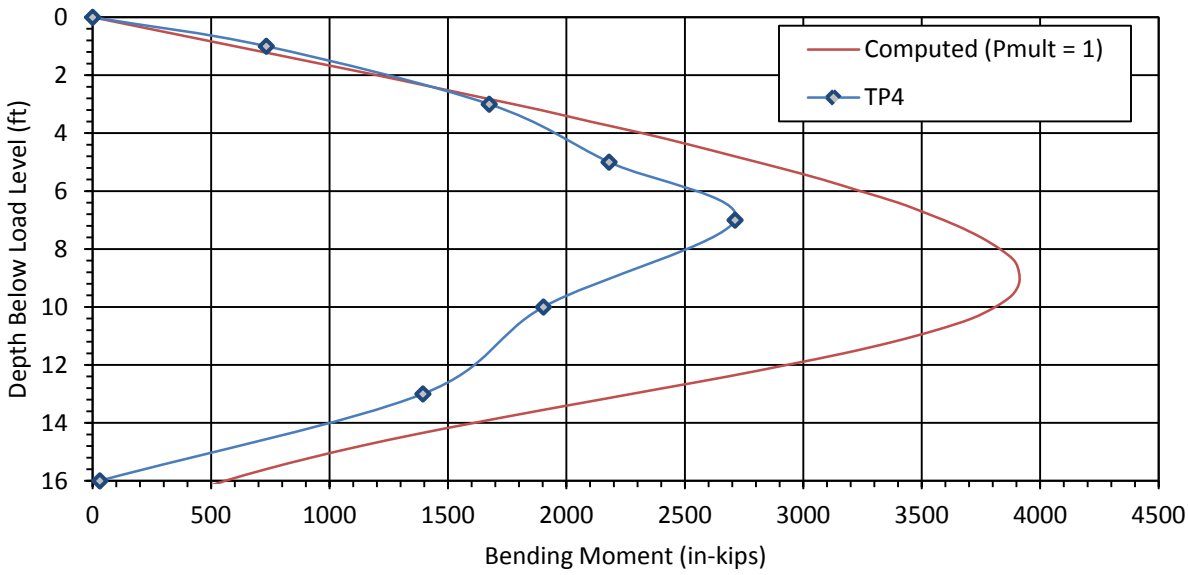

Figure 6.6: Comparison of measured and computed bending moment for TP4 with a 50 kip load.

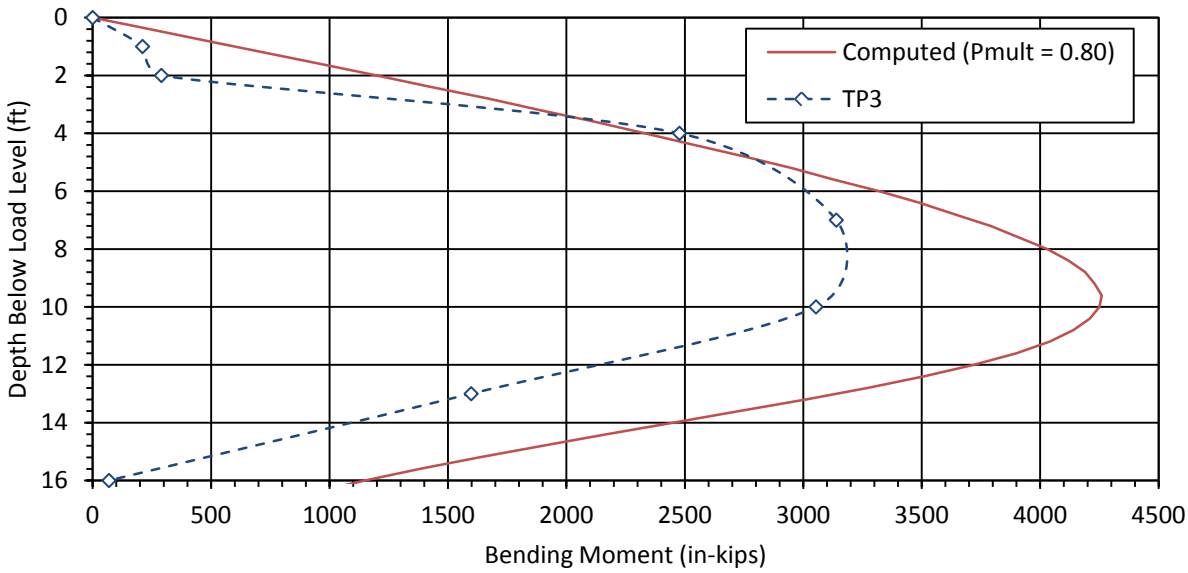

Figure 6.7: Comparison of measured and computed bending moment for TP3 with a 50 kip load.

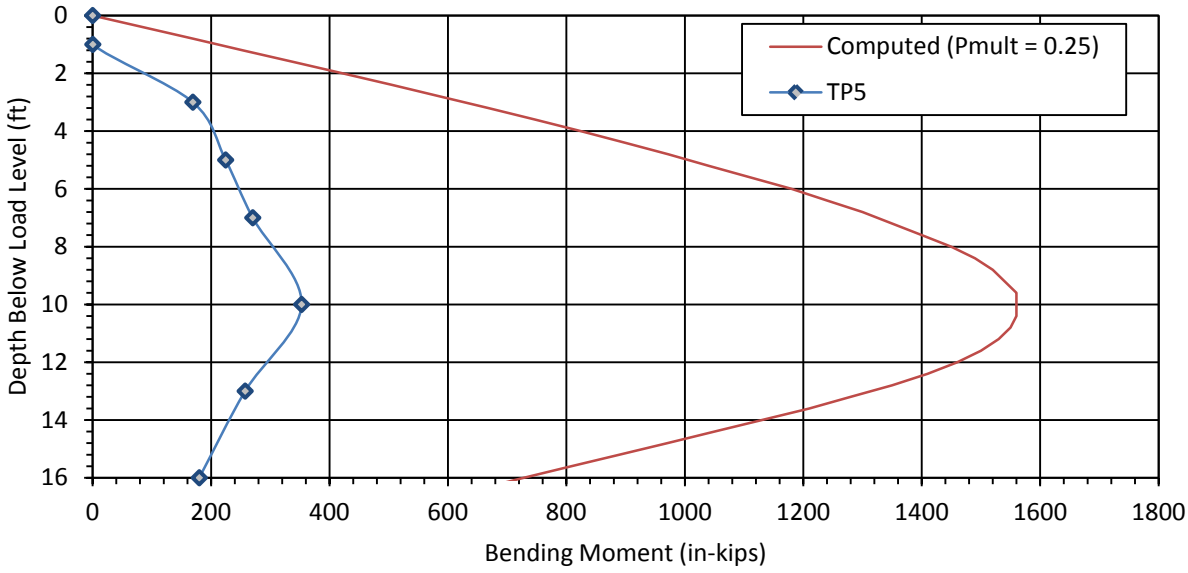

Figure 6.8: Comparison of measured and computed bending moment for TP5 with an 18 kip load.

6.3 P-Multiplier Analysis

The results from the lateral load analyses discussed in Sections 7.1 and 2 are summarized in Figure 6.9. This figure plots the p-multiplier vs. the normalized distance from the wall, taken as the distance from the back face of the wall to the center of the pile (S) divided by the diameter of the pile. Two general curves are drawn with the data points from the two test sites. The upper curve is labeled "Typical L/H=1.6" consisting of the U.S. Highway 89 test piles and one of the Pioneer Crossing test piles (TP1, TP2 and TP3). The lower curve is labeled "Typical L/H=1.1" and consists of the other two Pioneer Crossing test piles (TP4 and TP5). This label refers to the ratio of the length of the reinforcement to the height of the wall at the time of testing. A p-multiplier of 1 indicates that there is no influence of the wall on the lateral resistance of the pile whereas a p-muliplier less than 1 indicates that the presence of the wall is causing a reduction in the lateral resistance provided by the reinforced soil.

The data suggest that with a L/H ratio of 1.6, a p-multiplier of 1 can be used when the normalized distance from the wall to the center of the pile is at least 3.8 pile diameters. When the L/H ratio decreases to 1.1, a p-multiplier of 1 can be used when the pile is at least 5.2 pile diameters behind the wall. For smaller spacings the p-multipliers decrease approximately linearly with normalized distance based on the limited data set available. These results are consistent with observations that placing piles closer to the wall leads to lower lateral resistance and that longer reinforcements provide greater pull-out resistance and greater wall stiffness.

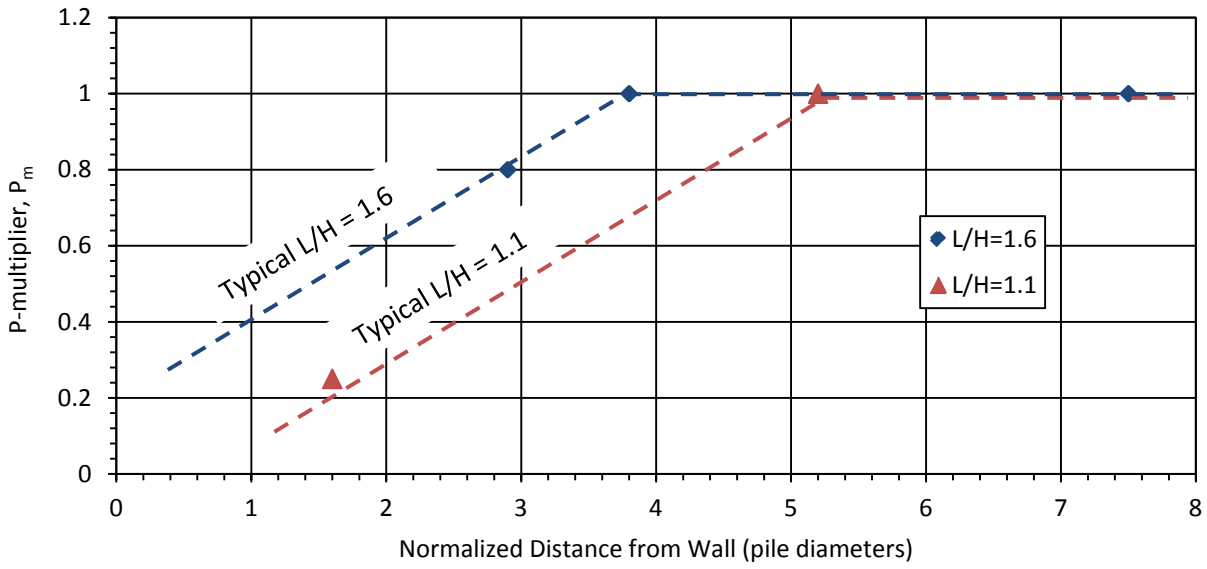

Figure 6.9: Tentative p-multiplier curves.

6.4 Induced Load in Reinforcement

A normalized induced load in the reinforcement was introduced in Section 5.2.2. The maximum measured load in the reinforcement at the maximum lateral load is divided by the maximum lateral load to calculate the normalized load. The load is plotted against a normalized distance which is equal to the lateral spacing from the center of the wire grid to the center of the pile divided by the spacing from the back face of the wall to the center of the pile. The normalized load vs. distance is shown in Figure 6.10 based on data from all test piles. The data points for TP2 show significantly higher induced loads than the other tests. TP2 is the pile that has the overlapping reinforcement from the adjacent wall, and these data points are treated as outliers. A design envelope has been plotted that is capped at a normalized induced load of 0.15 starting at a normalized distance of 0.05. The dashed curve is a best fit after removing the two data points from TP2. The data show that the induced force in the reinforcement when a lateral

load is applied to the piles decreases exponentially as the normalized distance from the pile increases. The plot is limited to the conditions tested, i.e. for the reinforcement in the upper 6 ft. of the wall with L/H values ranging from 1.1 to 1.6.

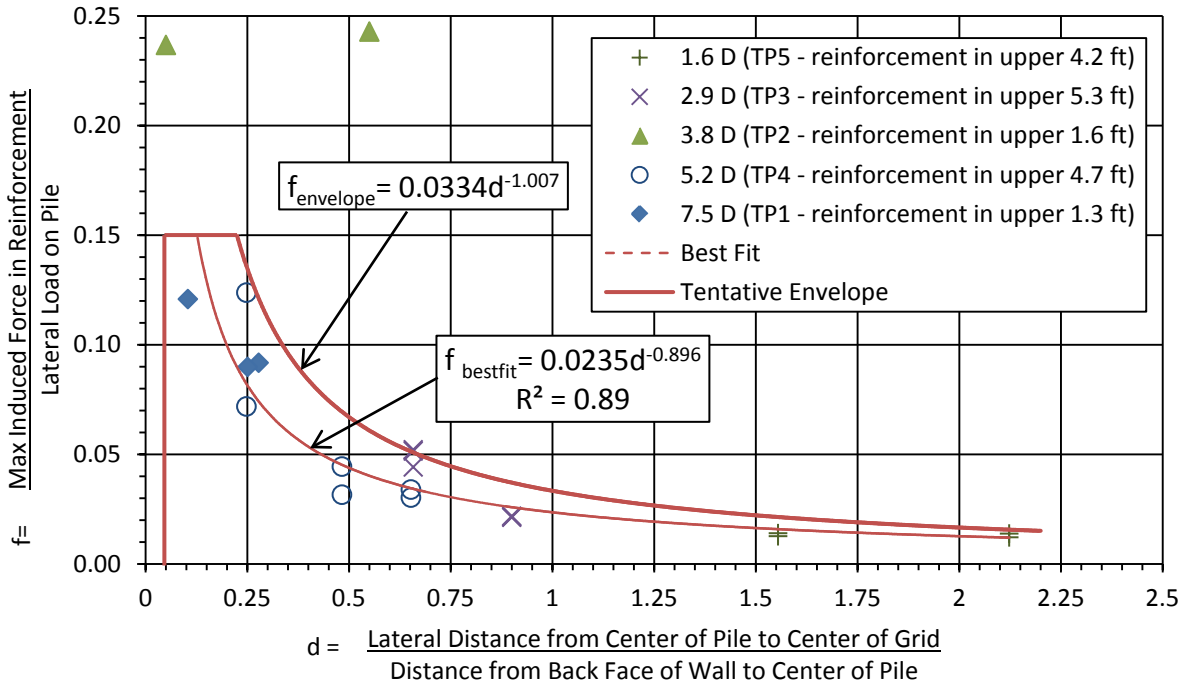

Figure 6.10: Plot of normalized induced force in grid vs. distance from pile.

7 CONCLUSIONS

The different pile configurations and wall parameters for the two sites lead to unique conclusions for each site. Therefore, the conclusions for each site are discussed separately in the sections that follow. After the discussion of the conclusions for each site is a discussion of general conclusions and recommendations for further research.

7.1 U.S. Highway 89 Site

1. In contrast to previous studies where the lateral pile resistance decreased as the pile spacing from the wall decreased, lateral resistance for these tests was independent of pile spacing relative to the wall. This effect appears to be related to both the length of the reinforcing grid (1.6H) relative to typical lengths (0.7H to 1.2H) for static and seismic loadings, respectively along with the fact that both piles are located relatively far from the wall face itself (7.5D and 3.8D).
2. The load tests in this study suggest that reductions in lateral resistance for a pile near an MSE wall face can be reduced by using longer reinforcement ratios, at least near the ground surface. This option has the potential for reducing construction costs in comparison with options such as adding additional piles for piles spaced close to the wall or placing the piles further from the wall face.

3. Despite the similar load-displacement curves, the pile closest to the wall produced greater displacement at the wall face and greater loads in the reinforcements. These results confirm that the higher than expected resistance for the pile closest to the wall was at least partially a result of greater force in the reinforcement and somewhat higher wall panel movements.
4. Good agreement with measured response was obtained using a p-y curve approach with a friction angle (ϕ) for the gravel of 39º and a lateral stiffness factor (k) of 800 pci. This friction angle is consistent with expected values for dense gravel; however, the k value is 3.6 times higher than would be expected for sand at an equivalent density.

7.2 Pioneer Crossing Site

1. Test results showed a significant decrease in lateral load capacity as the distance from the wall to the pile decreased.
2. Good agreement with measured response was obtained using a p-y curve approach with a friction angle (ϕ) for the gravel of 28º and a lateral stiffness factor (k) of 150 pci. These values are substantially lower than would be expected for dense compacted gravel likely owing to the presence of the double plastic wrapping around the piles.
3. P-multipliers of 0.80 and 0.25 provide very good agreement with measured pile response for piles spaced 2.9 and 1.6 pile diameters from the wall, respectively relative to soil resistance for a pile spaced 5.2 pile diameters from the wall.

4. Double wrapping a pile with plastic sheeting to reduce drag load can significantly reduce lateral load resistance of piles and the consequences of this action should be viewed against the benefits of reduced drag load.

7.3 General Conclusions

1. Tentative curves have been developed showing p-multiplier vs. normalized spacing behind wall for a length to height ratio of 1.1 and 1.6. These curves are shown in Figure 6.9. The data suggest that with a L/H ratio of 1.6, a p-multiplier of 1 can be used when the normalized distance from the back face of the MSE wall to the center of the pile is at least 3.8 pile diameters. When the L/H ratio decreases to 1.1 a p-multiplier of 1 can be used when the pile is at least 5.2 pile diameters behind the wall.
2. A plot showing the induced load in the reinforcement as a function of distance from the pile has been developed and is shown in Figure 6.10. The data in the plot is normalized to the maximum lateral load and to the spacing from the wall to the pile. The best fit curve is capped at a normalized induced force of 0.15. The data show that the induced force on the reinforcement when a lateral load is applied to the piles decreases exponentially as the normalized distance from the pile increases. The plot is limited to the conditions tested, i.e. for the reinforcement in the upper 6 ft. of the wall with L/H values ranging from 1.1 to 1.6.

7.4 Recommendations for Future Research

The current standard of practice for MSE wall design is to use a uniform reinforcement length throughout the height of the wall (AASHTO, 2010). The AASHTO LRFD code does comment that the "uppermost reinforcement layers can be lengthened beyond 0.7H to meet pullout requirements, or to address seismic or impact loads." Based on the bending moment diagrams discussed in Chapter 7, it appears that the high L/H ratio would only be needed in no more than the upper 10 ft. of the walls tested. A possibility for future research is to perform lateral load tests on piles behind MSE walls with non-uniform reinforcement lengths to define the "uppermost" reinforcement layers that need to be lengthened.

The minimum reinforcement length under the current standard of practice is 0.7 times the wall height (AASHTO, 2010). Another possibility for future research is to develop a p-multiplier curve for a wall constructed with the minimum reinforcement length. To develop the curve a series of at least 3 lateral load tests should be performed on piles spaced from 2 to 6 pile diameters behind an MSE wall constructed with reinforcements lengths equal to 0.7 times the height of the wall. Ideally, these tests can be conducted at a site where variability in the soil and pile properties can be more closely controlled than at bridges under construction.

Additional research is recommended to better define the increased tensile force in the reinforcement as lateral load is applied to the pile. Considerations could be given to different types of reinforcement (e.g. metallic strips and geosynthetics). The effect on reinforcements deeper than 6 ft. could also be determined. This research could be done in conjunction with the research possibilities discussed above. In conjunction with the testing mentioned above, it would be beneficial to instrument the connections between the reinforcement and the wall panels to develop design guidelines for the induced load with respect to pile offset.

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APPENDIX A. FACTOR OF SAFETY AGAINST PULLOUT CALCULATIONS

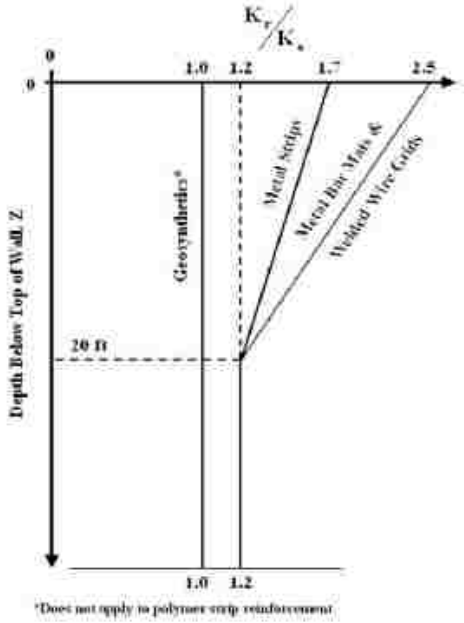
Reference sheet for pullout calculations

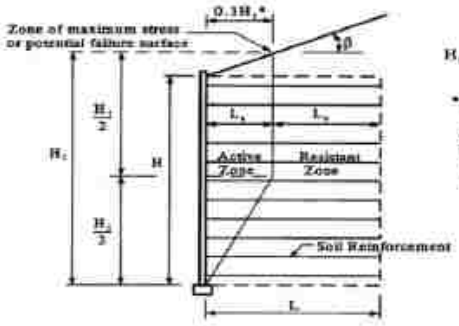
Steel Grid Properties

Steel Grid ID	Number of Longitudinal Bars	Thickness of Transverse Bar, t (in)	Unit Width of Reinforcement, b (ft)	Distance Between Transverse Bars, S_t (in)
3W11X2.50W8	6	0.319	3.33	30
3W15X2.50W8	6	0.319	3.33	30
3W20X2.50W11	6	0.374	3.33	30
4W11X1.00W8	4	0.319	2.00	12
4W11X1.00W11	4	0.374	2.00	12
4W20X2.50W11	4	0.374	2.00	30
5W11X2.50W8	5	0.319	2.67	30
5W20X2.50W11	5	0.374	2.67	30
6W11X2.50W8	6	0.319	3.33	30
6W11X2.50W11	6	0.374	3.33	30

Curve definitions for steel grids

Depth below top of wall, Z (ft)	K_r/K_a	F*
0	2.5	20
20	1.2	10





$$H_1 = H + \frac{\tan\beta \times 0.3H}{1 - 0.3\tan\beta}$$

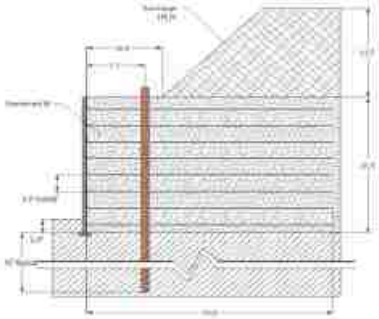
* If wall face is battered, an offset of $0.3H_1$ is still required, and the upper portion of the zone of maximum stress should be parallel to the wall face

A.1 U.S. Highway 89 Site

Description: TP1
Given: MSE wall with inextensible reinforcement consisting of steel grids. No live load present. Deadload present at some test locations.
Determine: Factor of safety against pullout for the load condtions just prior to lateral load testing.
Known:

Wall Properties

Wall Height at time of Test	H	20.5	ft	
Angle of sloping backfill	β	0	°	
		0	rad	
	H_1	20.5	ft	$H+[\tan(\beta)(0.3H)]/[1-0.3\tan(\beta)]$



Soil Properties

Moist unit weight	γ_r	142	pcf	
Friction angle	ϕ_r'	34	°	
		0.59	rad	
Active Earth Pressure Coefficient	K_a	0.28		$\tan^2(45-\phi_r'/2)$

Reinforcement Properties (steel grids)

Vertical spacing	S_v	2.5	ft
Horizontal spacing	S_h	6	ft
Length of reinforcement	L_t	33	ft

Z (ft)		Le	
	0	26.85	L_t-0.3H_1
H_1/2	10.25	26.85	L_t-0.3H_1
H	20.5	33	L_t

Surcharge

Unit weight of surcharge	γ_q	135	pcf
Height of surcharge	H_q	13.5	ft
Surcharge	q	1822.5	psf

Surcharge is located outside of active zone, on only the back 37% of the embedded reinforcement, use half the weight of the surcharge in pullout calc.

Average Factor of Safety against pullout 8.4

Reinforcement Level	Grid ID	Depth to Layer, Z (ft)	K_r/K_a	K_r	$\sigma_v=\gamma_r(Z)$ (psf)	$\sigma_h=K_r(\sigma_v)$ (psf)	$T_{max}=\sigma_h(S_v)$ (lbs/ft)	t (in)	S_h (in)	b (ft)	$R_c=b/S_h$	F*	L_e (ft)	Pullout Capacity, $P_{Cr}=F^*[(\gamma_r)(Z)+37q](L_e)(C)(R_c)(t)$ (lbs/ft)	$FS_{PO}=P_{Cr}/T_{max}$
1	4W11x1.00W11	1.50	2.4	0.68	213	145	362	0.374	12	2.00	0.33	0.600	26.85	9529	26.3
2	6W11x2.50W11	2.75	2.3	0.66	391	256	641	0.374	30	3.33	0.56	0.232	26.85	7376	11.5
3	6W11x2.50W11	5.25	2.2	0.61	746	455	1137	0.374	30	3.33	0.56	0.217	26.85	9175	8.1
4	6W11x2.50W11	7.75	2.0	0.56	1101	621	1553	0.374	30	3.33	0.56	0.201	26.85	10644	6.9
5	6W11x2.50W11	10.25	1.8	0.52	1456	755	1886	0.374	30	3.33	0.56	0.185	26.85	11783	6.2
6	4W20x2.50W11	12.75	1.7	0.47	1811	855	2139	0.374	30	2.00	0.33	0.170	28.35	7977	3.7
7	4W20x2.50W11	15.25	1.5	0.43	2166	924	2309	0.374	30	2.00	0.33	0.154	29.85	8718	3.8
8	4W20x2.50W11	17.75	1.3	0.38	2521	959	2398	0.374	30	2.00	0.33	0.139	31.35	9261	3.9
9	5W20x2.50W11	20.25	1.2	0.34	2876	976	2439	0.374	30	2.67	0.44	0.125	32.85	12922	5.3

Description: TP2

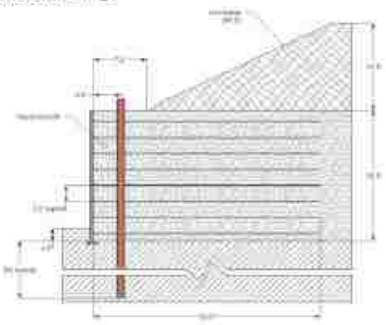
Given: MSE wall with inextensible reinforcement consisting of steel grids. No live load present. Deadload present at some test locations.

Determine: Factor of safety against pullout for the load condtions just prior to lateral load testing.

Known:

Wall Properties

Wall Height at time of Test	H	20.5	ft	
Angle of sloping backfill	β	0	°	
		0	rad	
	H_1	20.5	ft	$H+[\tan(\beta)(0.3H)]/[1-0.3\tan(\beta)]$



Soil Properties

Moist unit weight	γ_r	142	pcf	
Friction angle	ϕ_r'	34	°	
		0.59	rad	
Active Earth Pressure Coefficient	K_a	0.28		$\tan^2(45-\phi_r'/2)$

Reinforcement Properties (steel grids)

Vertical spacing	S_v	2.5	ft
Horizontal spacing	S_h	6	ft
Length of reinforcement	L_t	33	ft

Z (ft)		Le	
	0	26.85	L_t-0.3H_1
$H_1/2$	10.25	26.85	L_t-0.3H_1
H	20.5	33	L_t

Surcharge

Unit weight of surcharge	γ_q	135	pcf
Height of surcharge	H_q	13.5	ft
Surcharge	q	1822.5	psf

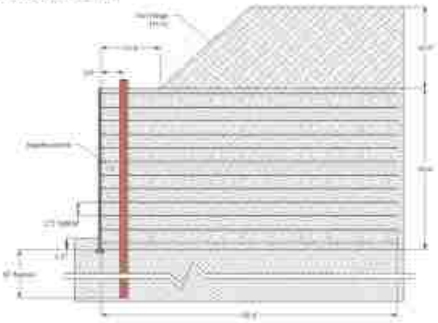
Surcharge is located outside of active zone, on only the back 20% of the embedded reinforcement, use half the weight of the surcharge in pullout calc.

Average Factor of Safety against pullout 6.4

Reinforcement Level	Grid ID	Depth to Layer, Z (ft)	K_r/K_a	K_r	$\sigma_v=\gamma_r(Z)$ (psf)	$\sigma_H=K_r(\sigma_v)$ (psf)	$T_{max}=\sigma_H(S_v)$ (lbs/ft)	t (in)	S_t (in)	b (ft)	$R_c=b/S_h$	F*	L_e (ft)	Pullout Capacity, $PC_i=F^*[(\gamma_r)(Z)+20q](L_e)(C)(R_c)(2)$ (lbs/ft)	$FS_{PO}=PC_i/T_{max}$
1	4W11x1.00W11	1.50	2.4	0.68	213	145	362	0.374	12	2.00	0.33	0.600	26.85	6202	17.1
2	6W11x2.50W11	2.75	2.3	0.66	391	256	641	0.374	30	3.33	0.56	0.232	26.85	5230	8.2
3	6W11x2.50W11	5.25	2.2	0.61	746	455	1137	0.374	30	3.33	0.56	0.217	26.85	7173	6.3
4	6W11x2.50W11	7.75	2.0	0.56	1101	621	1553	0.374	30	3.33	0.56	0.201	26.85	8786	5.7
5	6W11x2.50W11	10.25	1.8	0.52	1456	755	1886	0.374	30	3.33	0.56	0.185	26.85	10069	5.3
6	4W20x2.50W11	12.75	1.7	0.47	1811	855	2139	0.374	30	2.00	0.33	0.170	28.35	6982	3.3
7	4W20x2.50W11	15.25	1.5	0.43	2166	924	2309	0.374	30	2.00	0.33	0.154	29.85	7767	3.4
8	4W20x2.50W11	17.75	1.3	0.38	2521	959	2398	0.374	30	2.00	0.33	0.139	31.35	8363	3.5
9	5W20x2.50W11	20.25	1.2	0.34	2876	976	2439	0.374	30	2.67	0.44	0.125	32.85	11794	4.8

A.2 U.S. Highway 89 Site

Description: TP3
Given: MSE wall with inextensible reinforcement consisting of steel grids. No live load present. Deadload present at some test locations.
Determine: Factor of safety against pullout for the load condtions just prior to lateral load testing.
Known:



Wall Properties

Wall Height at time of Test	H	29.8	ft	
Angle of sloping backfill	β	0	°	
		0	rad	
	H_1	29.8	ft	$H+[\tan(\beta)(0.3H)]/[1-0.3\tan(\beta)]$

Soil Properties

Moist unit weight	γ_r	142	pcf	
Friction angle	ϕ_r'	34	°	
		0.59	rad	
Active Earth Pressure Coefficient	K_a	0.28		$\tan^2(45-\phi_r'/2)$

Reinforcement Properties (steel grids)

Vertical spacing	S_v	2.5	ft
Horizontal spacing	S_h	6	ft
Length of reinforcement	L_t	50	ft

Z (ft)		Le	
	0	41.06	$L_t-0.3H_1$
$H_1/2$	14.9	41.06	$L_t-0.3H_1$
H	29.8	50	L_t

Surcharge

Unit weight of surcharge	γ_q	135	pcf
Height of surcharge	H_q	15	ft
Surcharge	q	2025	psf

Surcharge is located outside of active zone, on only the back 57% of the embedded reinforcement, use half the weight of the surcharge in pullout calc.

Average Factor of Safety against pullout 11.6

Reinforcement Level	Grid ID	Depth to Layer, Z (ft)	K_r/K_a	K_r	$\sigma_v=\gamma_r(Z)$ (psf)	$\sigma_H=K_r(\sigma_v)$ (psf)	$T_{max}=\sigma_H(S_v)$ (lbs/ft)	t (in)	S_t (in)	b (ft)	$R_c=b/S_h$	F*	L_e (ft)	Pullout Capacity, $P_{Ci}=F^*(\gamma_r)(Z)+57q)(L_e)(C)(R_c)(2)$ (lbs/ft)	$FS_{Ci}=P_{Ci}/T_{max}$
1	3W11X2.50W8	1.50	2.4	0.68	213	145	362	0.319	30	3.33	0.56	0.205	41.06	12768	35.3
2	3W11X2.50W8	2.75	2.3	0.66	391	256	641	0.319	30	3.33	0.56	0.198	41.06	10298	16.1
3	3W11X2.50W8	5.25	2.2	0.61	746	455	1137	0.319	30	3.33	0.56	0.185	41.06	12599	11.1
4	3W11X2.50W8	7.75	2.0	0.56	1101	621	1553	0.319	30	3.33	0.56	0.171	41.06	14470	9.3
5	3W11X2.50W8	10.25	1.8	0.52	1456	755	1886	0.319	30	3.33	0.56	0.158	41.06	15910	8.4
6	3W15X2.50W8	12.75	1.7	0.47	1811	855	2139	0.319	30	3.33	0.56	0.145	41.06	16919	7.9
7	3W15X2.50W8	15.25	1.5	0.43	2166	924	2309	0.319	30	3.33	0.56	0.132	41.27	17588	7.6
8	3W15X2.50W8	17.75	1.3	0.38	2521	959	2398	0.319	30	3.33	0.56	0.118	42.77	18381	7.7
9	3W15X2.50W8	20.25	1.2	0.34	2876	976	2439	0.319	30	3.33	0.56	0.106	44.27	18959	7.8
10	3W20X2.50W11	22.75	1.2	0.34	3231	1096	2740	0.374	30	3.33	0.56	0.125	45.77	25232	9.2
11	3W20X2.50W11	25.25	1.2	0.34	3586	1216	3041	0.374	30	3.33	0.56	0.125	47.27	28383	9.3
12	3W20X2.50W11	27.75	1.2	0.34	3941	1337	3342	0.374	30	3.33	0.56	0.125	48.77	31682	9.5

Description: TP4

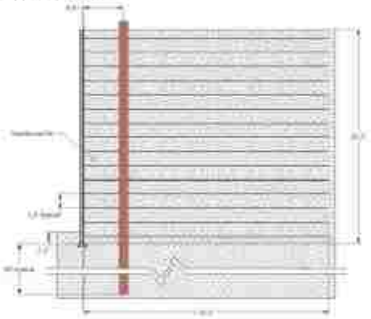
Given: MSE wall with inextensible reinforcement consisting of steel grids. No live load present. Deadload present at some test locations.

Determine: Factor of safety against pullout for the load condtions just prior to lateral load testing.

Known:

Wall Properties

Wall Height at time of Test	H	37.7	ft	
Angle of sloping backfill	β	0	°	
		0	rad	
	H_1	37.7	ft	$H+[\tan(\beta)(0.3H)]/[1-0.3\tan(\beta)]$



Soil Properties

Moist unit weight	γ_r	142	pcf	
Friction angle	ϕ_r'	34	°	
		0.59	rad	
Active Earth Pressure Coefficient	K_a	0.28		$\tan^2(45-\phi_r'/2)$

Reinforcement Properties (steel grids)

Vertical spacing	S_v	2.5	ft
Horizontal spacing	S_h	6	ft
Length of reinforcement	L_t	42	ft

Z (ft)		Le	
	0	30.69	L_t-0.3H_1
$H_1/2$	18.85	30.69	L_t-0.3H_1
H	37.7	42	L_t

Surcharge

Unit weight of surcharge	γ_q	135	pcf
Height of surcharge	H_q	0	ft
Surcharge	q	0	psf

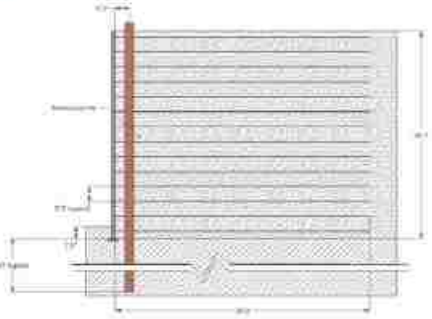
Average Factor of Safety against pullout 4.0

Reinforcement Level	Grid ID	Depth to Layer, Z (ft)	K_r/K_a	K_r	$\sigma_v=\gamma_r(Z)+q$ (psf)	$\sigma_H=K_r(\sigma_v)$ (psf)	$T_{max}=\sigma_H(S_v)$ (lbs/ft)	t (in)	S_t (in)	b (ft)	$R_c=b/S_h$	F*	L_e (ft)	Pullout Capacity, $PC_i=F^*(\gamma_r)(Z)(L_e)(C)(R_c)(\mu)$ (lbs/ft)	$FS_{PO}=PC_i/T_{max}$
1	4W11X1.00W8	2.50	2.3	0.66	355	235	587	0.319	12	2.00	0.33	0.498	30.69	3620	6.2
2	4W11X1.00W8	3.75	2.3	0.64	533	340	849	0.319	12	2.00	0.33	0.482	30.69	5249	6.2
3	5W11X2.50W8	6.25	2.1	0.59	888	525	1313	0.319	30	2.67	0.44	0.179	30.69	4344	3.3
4	5W11X2.50W8	8.75	1.9	0.55	1243	678	1696	0.319	30	2.67	0.44	0.166	30.69	5632	3.3
5	5W11X2.50W8	11.25	1.8	0.50	1598	799	1997	0.319	30	2.67	0.44	0.153	30.69	6661	3.3
6	5W11X2.50W8	13.75	1.6	0.45	1953	887	2217	0.319	30	2.67	0.44	0.140	30.69	7434	3.4
7	5W11X2.50W8	16.25	1.4	0.41	2308	942	2355	0.319	30	2.67	0.44	0.126	30.69	7949	3.4
8	6W11X2.50W8	18.75	1.3	0.36	2663	964	2411	0.319	30	3.33	0.56	0.113	30.69	10258	4.3
9	4W20X2.50W11	21.25	1.2	0.34	3018	1024	2559	0.374	30	2.00	0.33	0.125	32.13	8058	3.1
10	4W20X2.50W11	23.75	1.2	0.34	3373	1144	2860	0.374	30	2.00	0.33	0.125	33.63	9426	3.3
11	4W20X2.50W11	26.25	1.2	0.34	3728	1265	3161	0.374	30	2.00	0.33	0.125	35.13	10883	3.4
12	4W20X2.50W11	28.75	1.2	0.34	4083	1385	3463	0.374	30	2.00	0.33	0.125	36.63	12429	3.6
13	4W20X2.50W11	31.25	1.2	0.34	4438	1505	3764	0.374	30	2.00	0.33	0.125	38.13	14063	3.7
14	5W20X2.50W11	33.75	1.2	0.34	4793	1626	4065	0.374	30	2.67	0.44	0.125	39.63	21047	5.2

Description: TP5
Given: MSE wall with inextensible reinforcement consisting of steel grids. No live load present. Deadload present at some test locations.
Determine: Factor of safety against pullout for the load condtions just prior to lateral load testing.
Known:

Wall Properties

Wall Height at time of Test	H	34.7	ft	
Angle of sloping backfill	β	0	°	
		0	rad	
	H_1	34.7	ft	H+[tan(β)(0.3H)]/[1-0.3tan(β)]



Soil Properties

Moist unit weight	γ_r	142	pcf	
Friction angle	ϕ_r'	34	°	
		0.59	rad	
Active Earth Pressure Coefficient	K_a	0.28		$\tan^2(45-\phi_r'/2)$

Reinforcement Properties (steel grids)

Vertical spacing	S_v	2.5	ft
Horizontal spacing	S_h	6	ft
Length of reinforcement	L_r	39	ft

Z (ft)		Le	
	0	28.59	L_r-0.3H_1
H_1/2	17.35	28.59	L_r-0.3H_1
H	34.7	39	L_r

Surcharge

Unit weight of surcharge	γ_q	135	pcf
Height of surcharge	H_q	0	ft
Surcharge	q	0	psf

Average Factor of Safety against pullout 3.8

Reinforcement Level	Grid ID	Depth to Layer, Z (ft)	K_r/K_a	K_r	$\sigma_v=\gamma_r(Z)+q$ (psf)	$\sigma_H=K_r(\sigma_v)$ (psf)	$T_{max}=\sigma_H(S_v)$ (lbs/ft)	t (in)	S_h (in)	b (ft)	$R_c=b/S_h$	F*	L_e (ft)	Pullout Capacity, $P_{C_i}=F^*(\gamma_r)(Z)(L_e)(C)(R_c)\alpha$ (lbs/ft)	$FS_{PO}=P_{C_i}/T_{max}$
1	4W11X1.00W8	2.50	2.3	0.66	355	235	587	0.319	12	2.00	0.33	0.498	28.59	3373	5.8
2	4W11X1.00W8	3.75	2.3	0.64	533	340	849	0.319	12	2.00	0.33	0.482	28.59	4890	5.8
3	5W11X2.50W8	6.25	2.1	0.59	888	525	1313	0.319	30	2.67	0.44	0.179	28.59	4047	3.1
4	5W11X2.50W8	8.75	1.9	0.55	1243	678	1696	0.319	30	2.67	0.44	0.166	28.59	5246	3.1
5	5W11X2.50W8	11.25	1.8	0.50	1598	799	1997	0.319	30	2.67	0.44	0.153	28.59	6206	3.1
6	5W11X2.50W8	13.75	1.6	0.45	1953	887	2217	0.319	30	2.67	0.44	0.140	28.59	6925	3.1
7	5W11X2.50W8	16.25	1.4	0.41	2308	942	2355	0.319	30	2.67	0.44	0.126	28.59	7405	3.1
8	6W11X2.50W8	18.75	1.3	0.36	2663	964	2411	0.319	30	3.33	0.56	0.113	29.43	9836	4.1
9	6W11X2.50W8	21.25	1.2	0.34	3018	1024	2559	0.319	30	3.33	0.56	0.106	30.93	11027	4.3
10	4W20X2.50W11	23.75	1.2	0.34	3373	1144	2860	0.374	30	2.00	0.33	0.125	32.43	9090	3.2
11	4W20X2.50W11	26.25	1.2	0.34	3728	1265	3161	0.374	30	2.00	0.33	0.125	33.93	10511	3.3
12	4W20X2.50W11	28.75	1.2	0.34	4083	1385	3463	0.374	30	2.00	0.33	0.125	35.43	12021	3.5
13	4W20X2.50W11	31.25	1.2	0.34	4438	1505	3764	0.374	30	2.00	0.33	0.125	36.93	13620	3.6

APPENDIX B. LOAD DISPLACEMENT CURVES

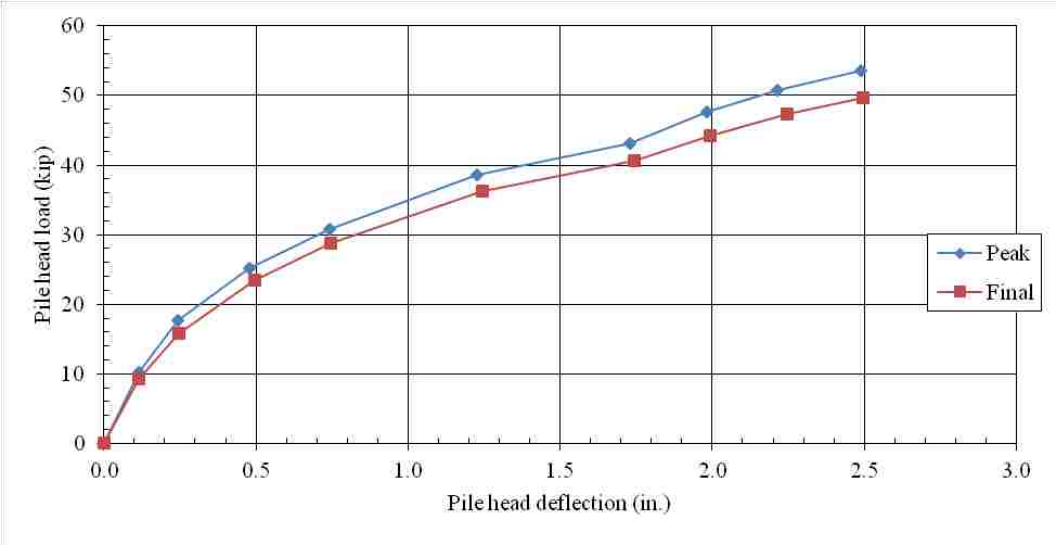


Figure B.1: Load-displacement curve for TP1.

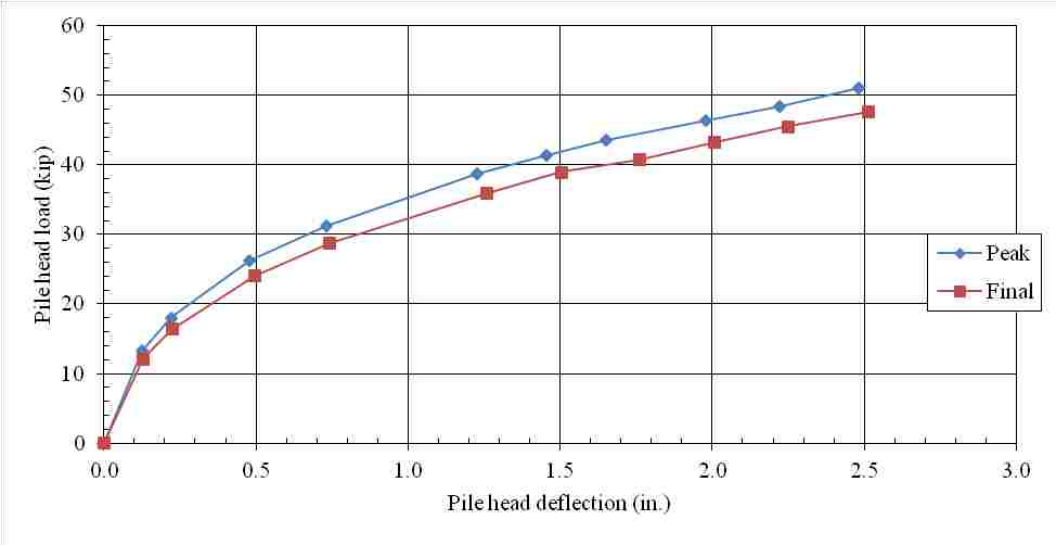


Figure B.2: Load-displacement curve for TP2.

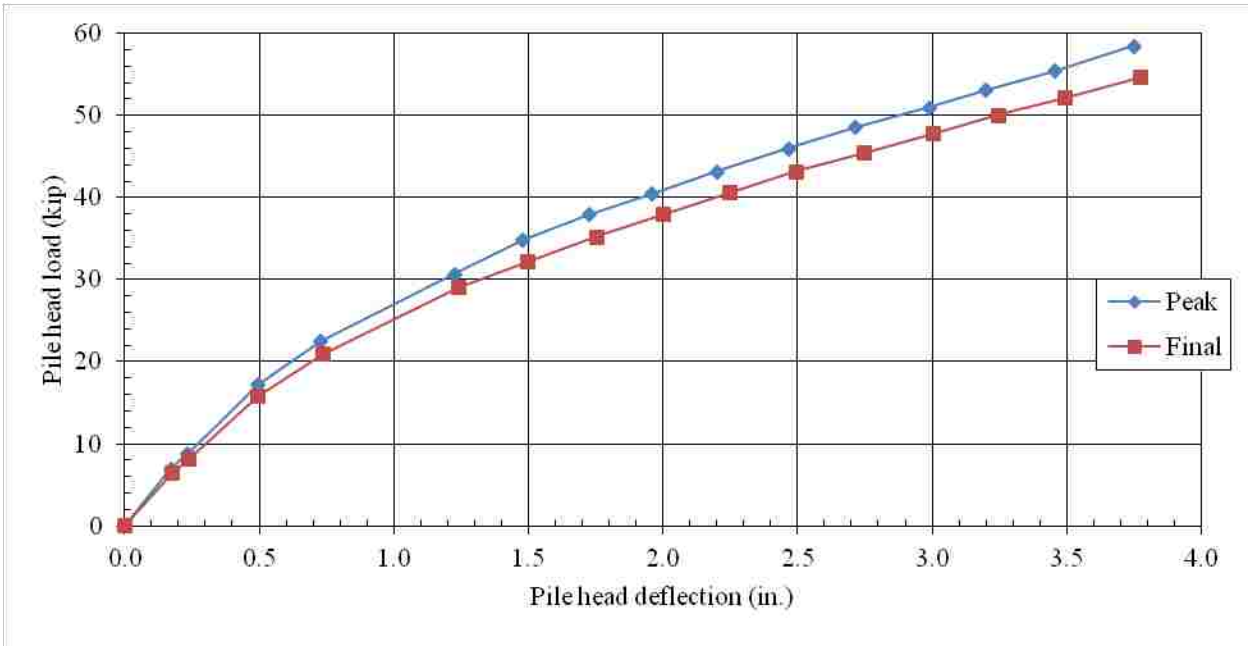


Figure B.3: Load-displacement curve for TP3.

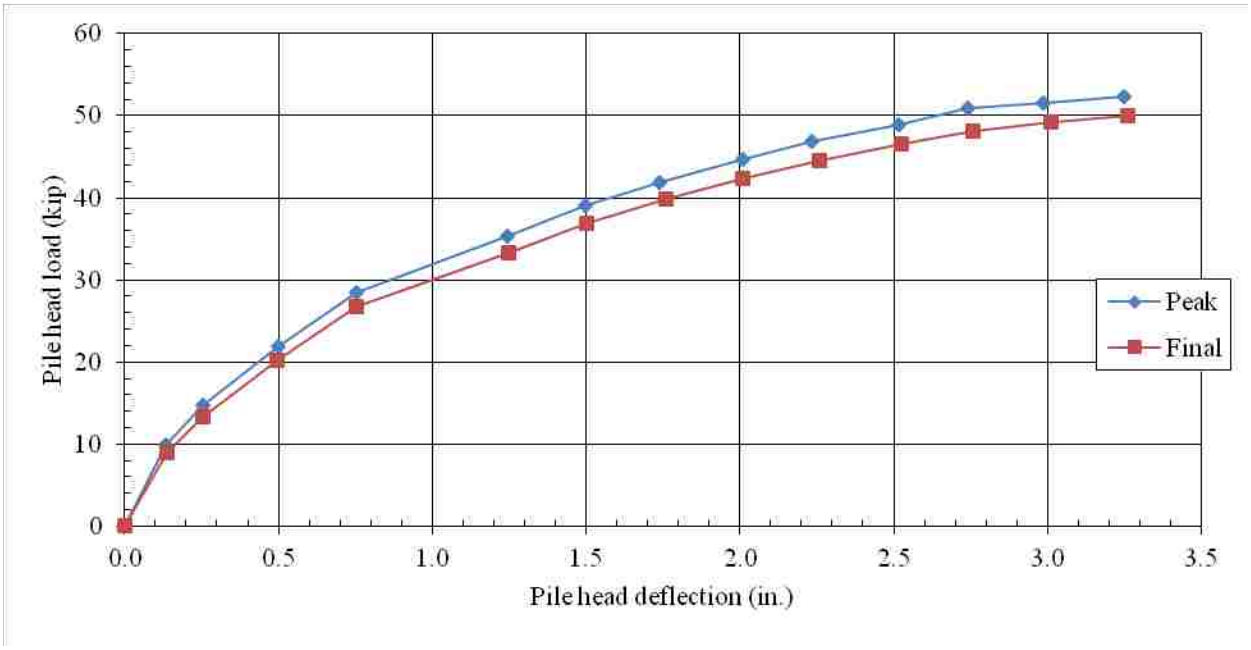


Figure B.4: Load-displacement curve for TP4.

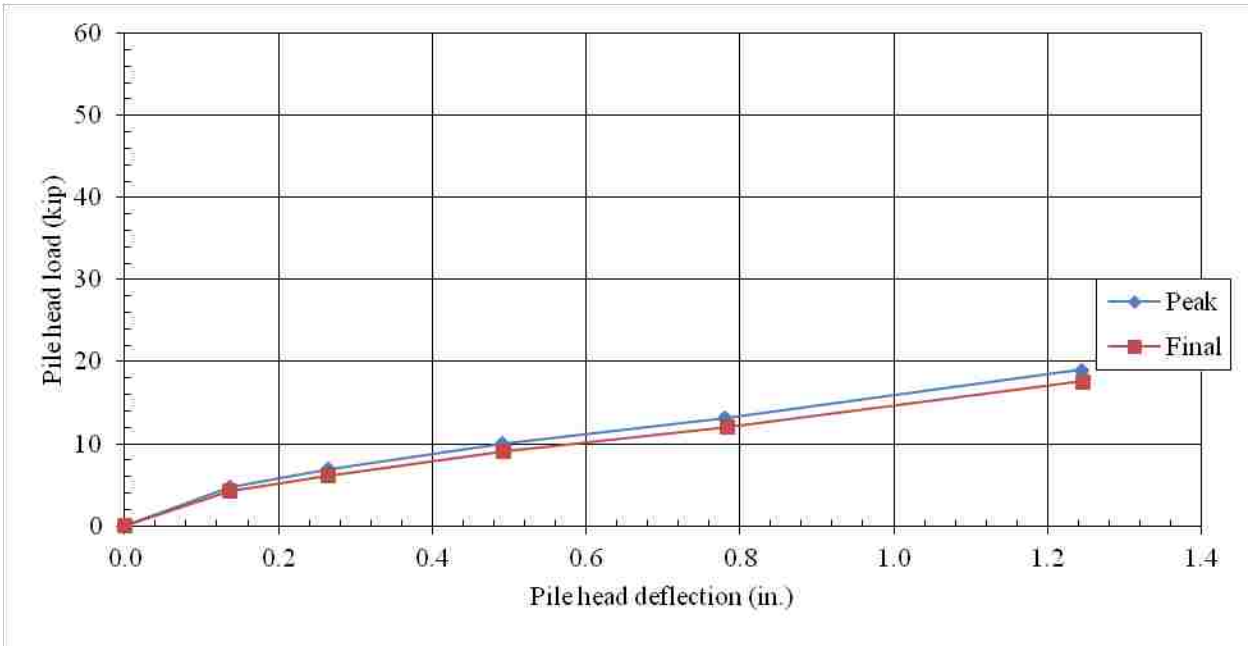


Figure B.5: Load-displacement curve for TP5.

APPENDIX C. INDUCED FORCE IN REINFORCEMENT CURVES

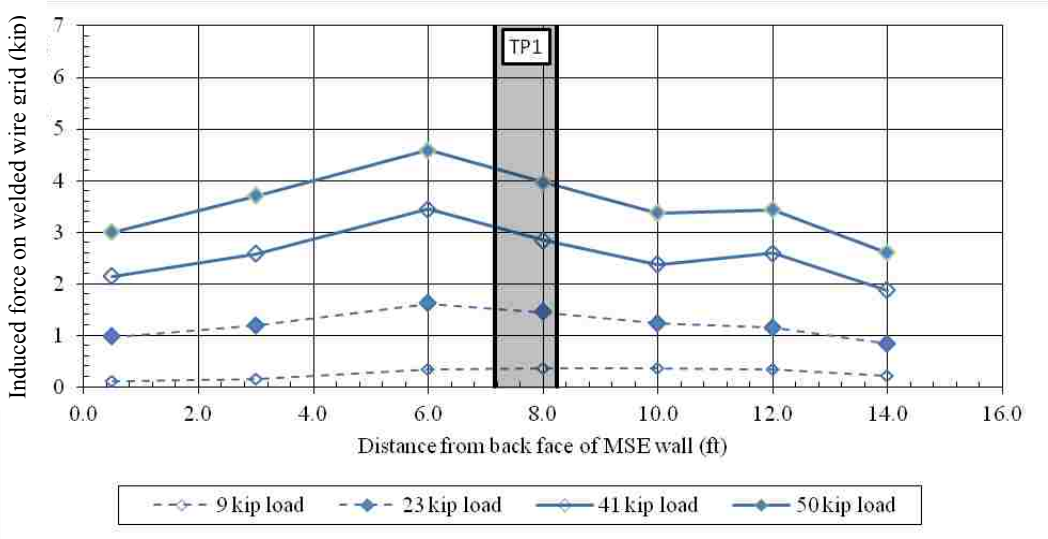


Figure C.1: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire A during loading of TP1 (see Table 4.1).

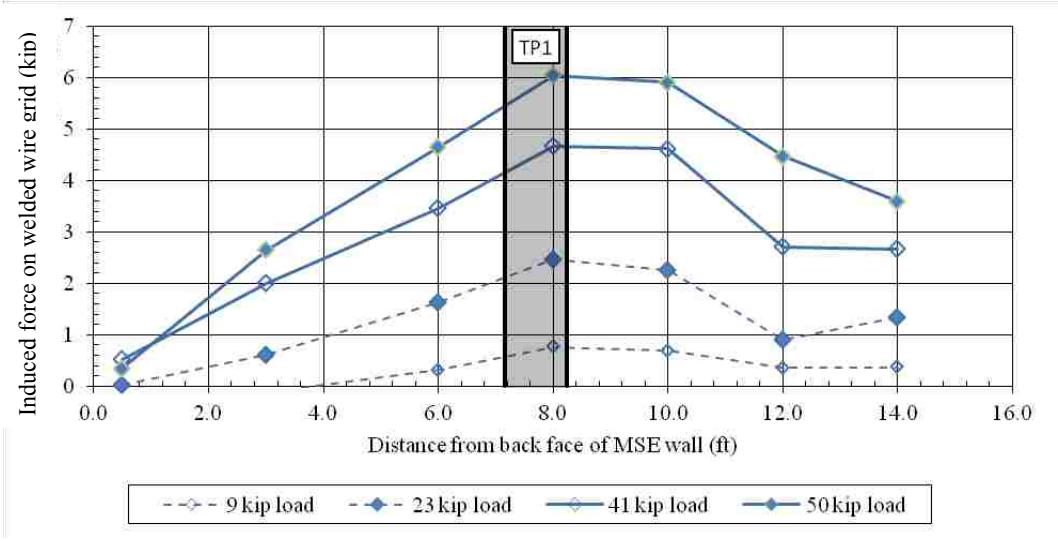


Figure C.2: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire B during loading of TP1 (see Table 4.1).

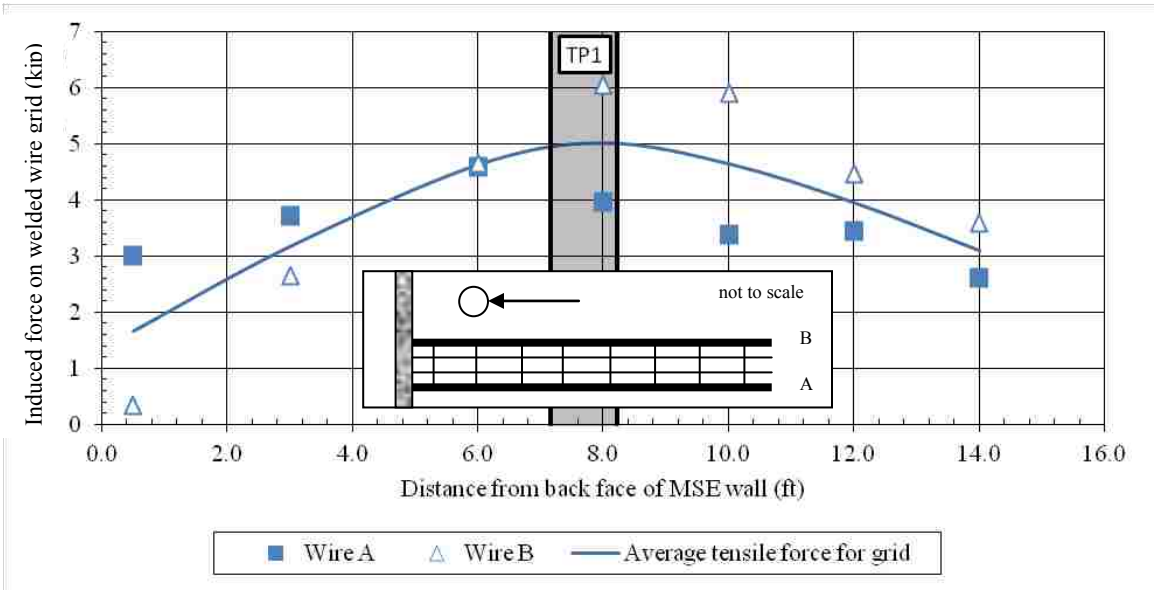


Figure C.3: Average induced load in welded wire grid vs. distance from back face of pile with a 50 kip load applied to the pile.

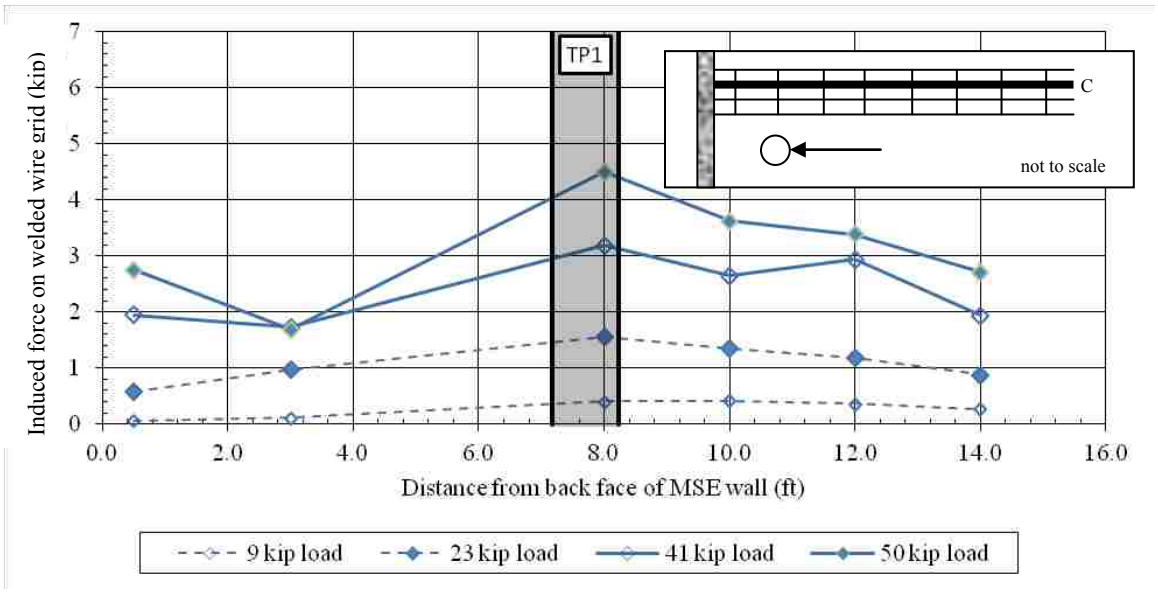


Figure C.4: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire B during loading of TP1 (see Table 4.1).

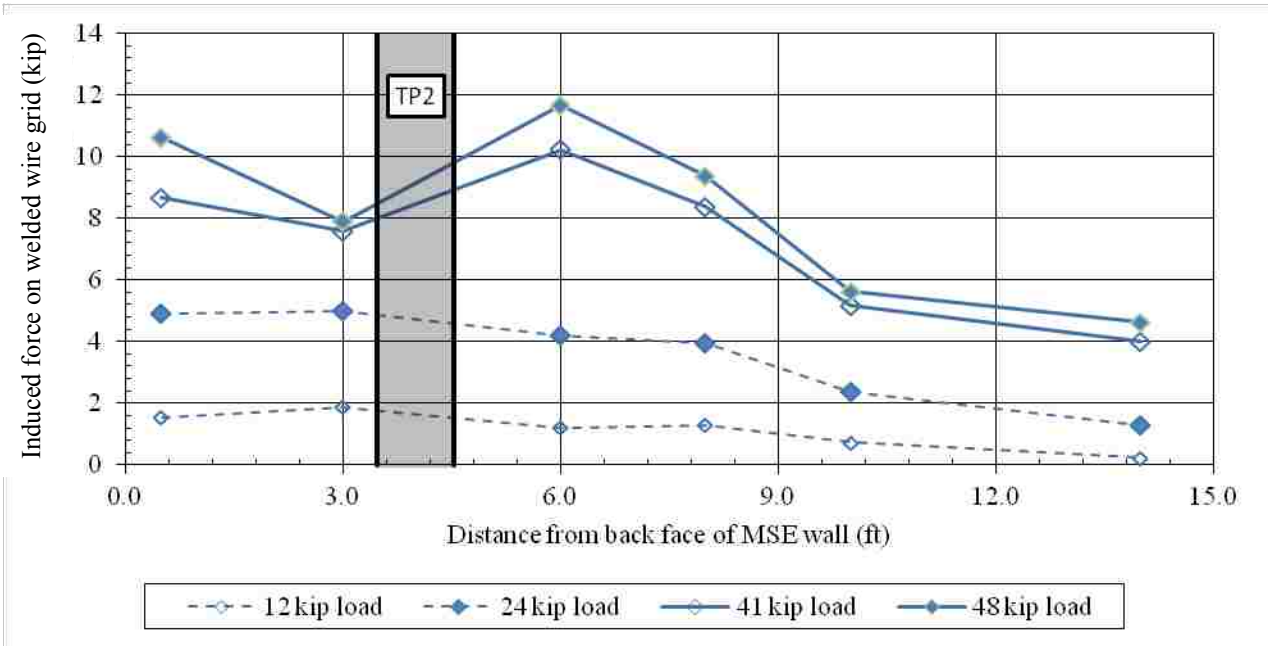


Figure C.5: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire D during loading of TP2 (see Table 4.1).

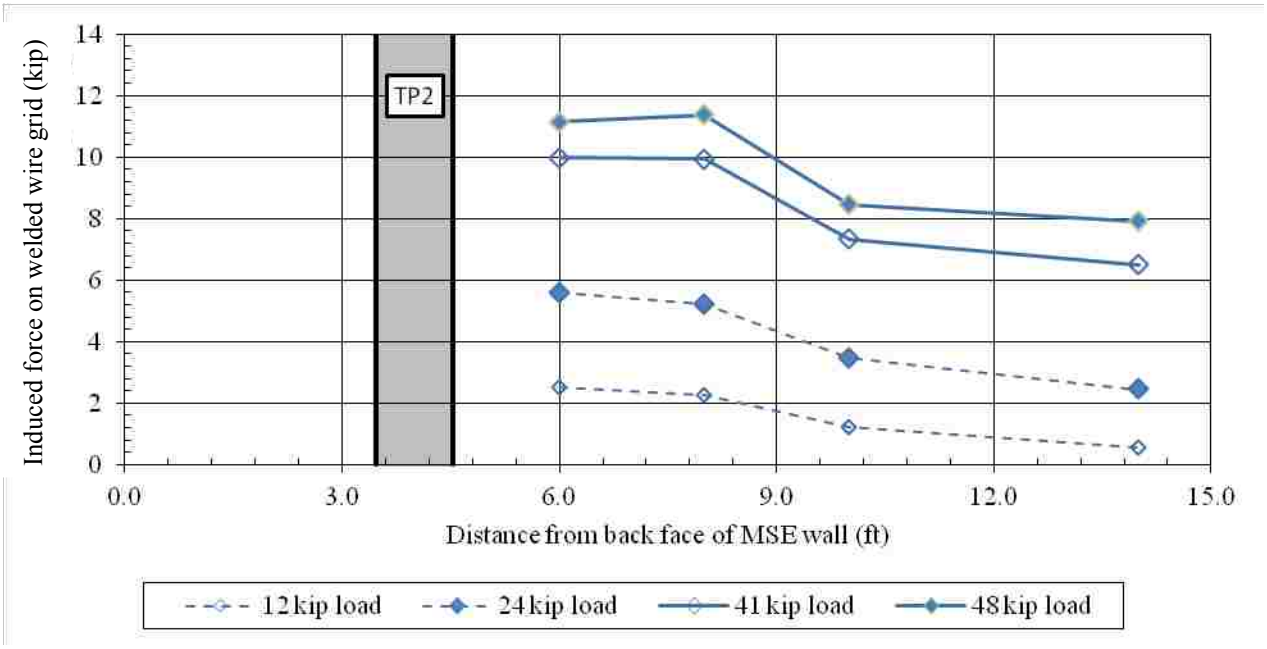


Figure C.6: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire E during loading of TP1 (see Table 4.1).

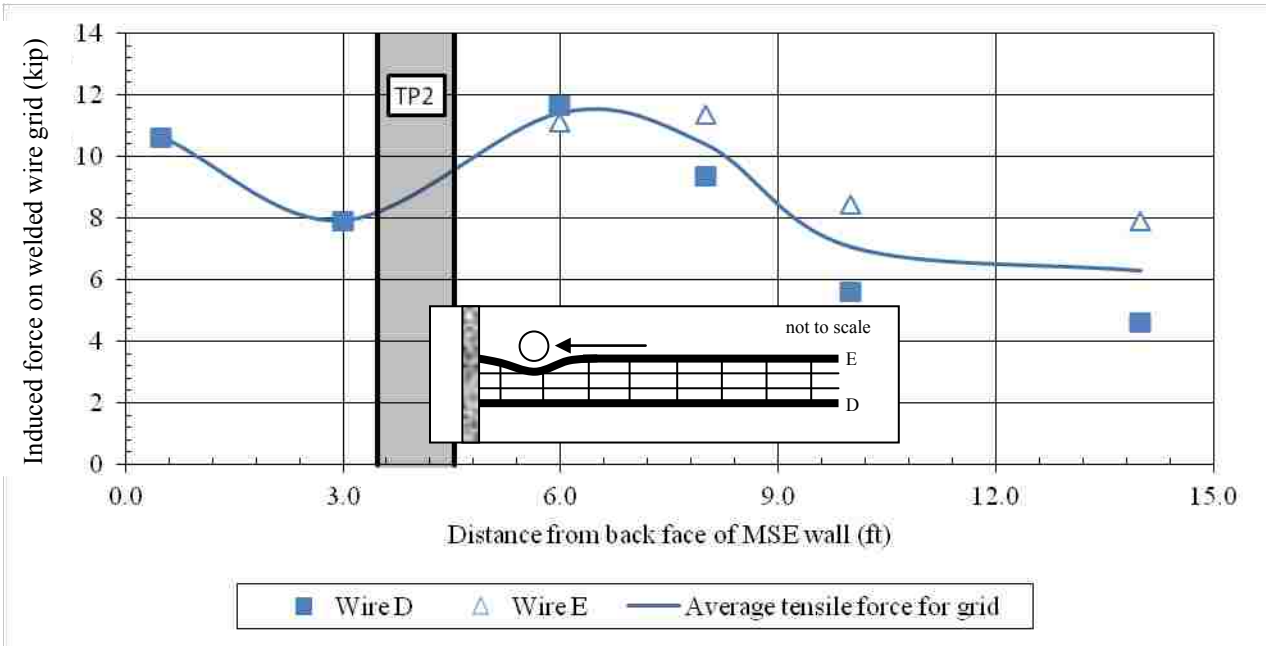


Figure C.7: Average induced load in welded wire grid vs. distance from back face of pile with a 48 kip load applied to pile TP2.

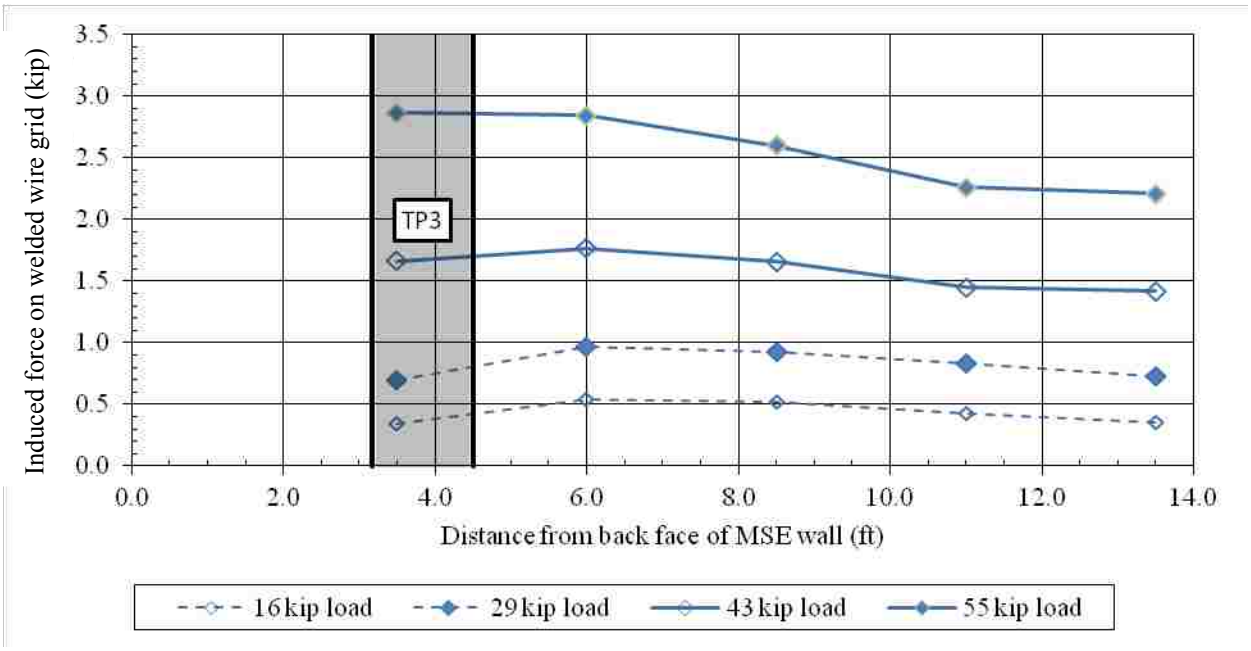


Figure C.8: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire F during loading of TP3 (see Table 4.2).

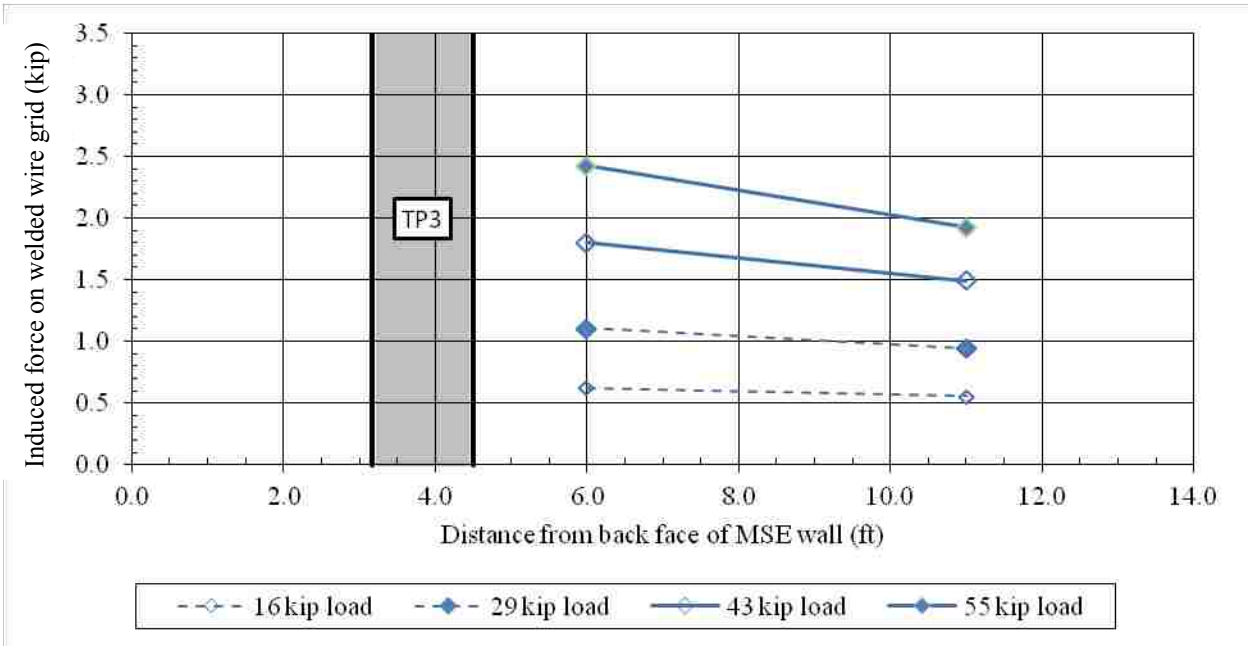


Figure C.9: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire G during loading of TP3 (see Table 4.2).

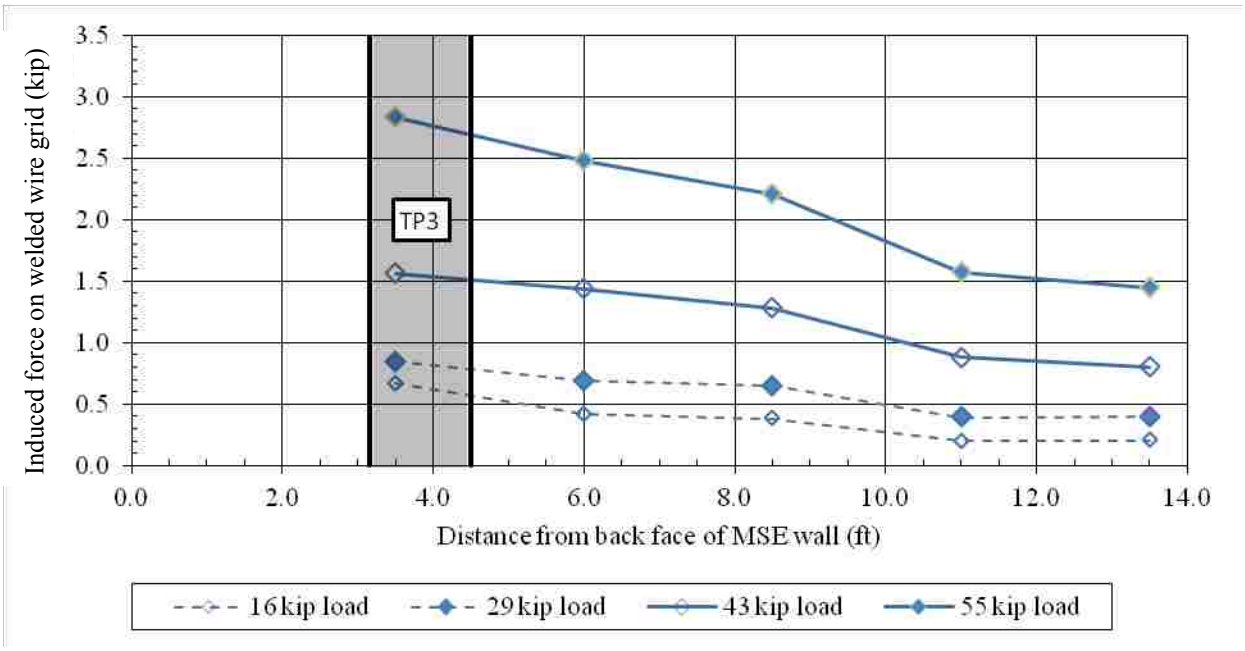


Figure C.10: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire H during loading of TP3 (see Table 4.2).

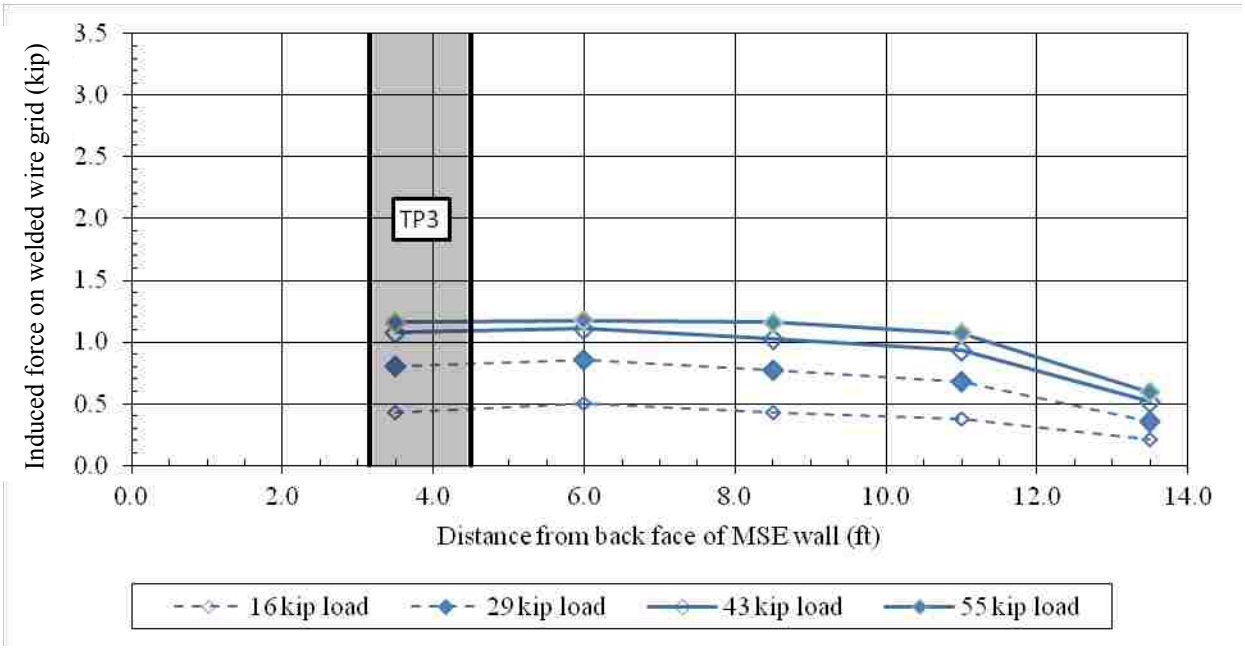


Figure C.11: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire J during loading of TP3 (see Table 4.2).

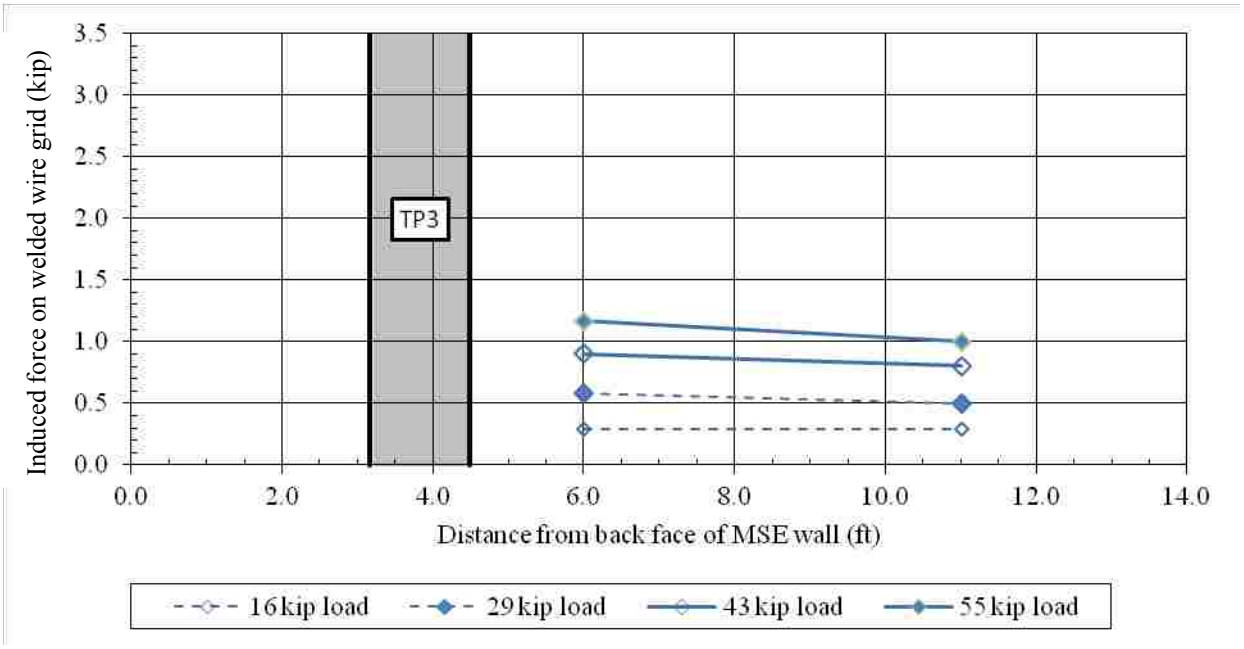


Figure C.12: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire K during loading of TP3 (see Table 4.2).

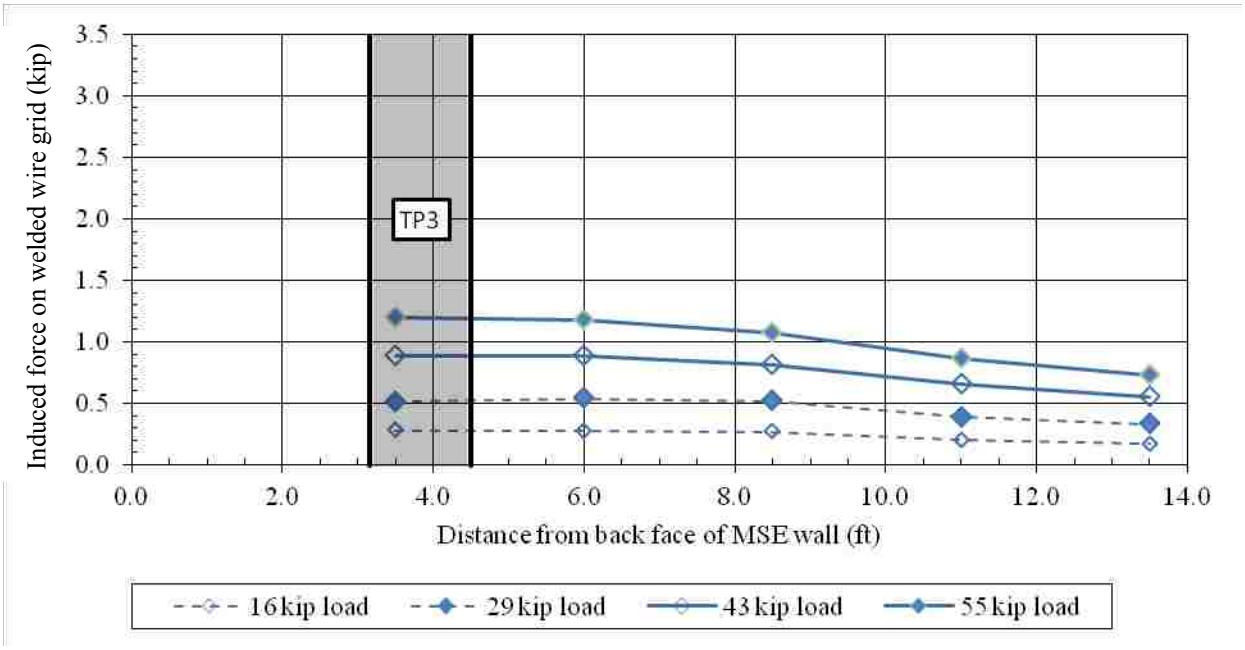


Figure C.13: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire L during loading of TP3 (see Table 4.2).

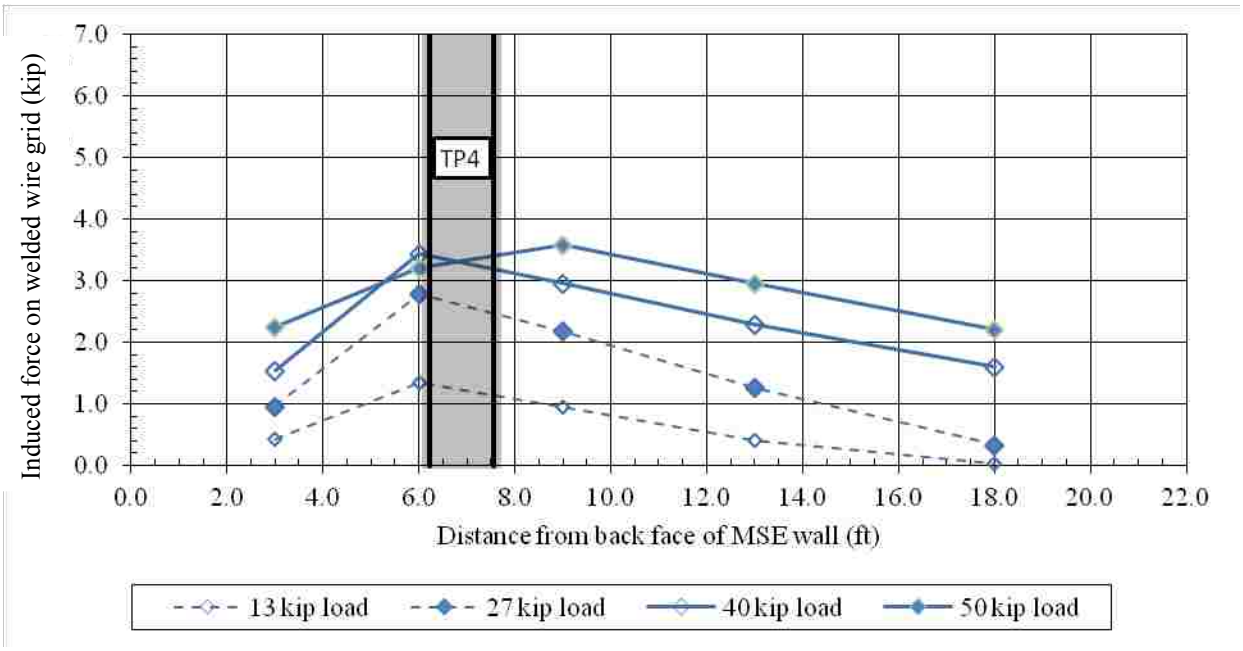


Figure C.14: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire M during loading of TP4 (see Table 4.2).

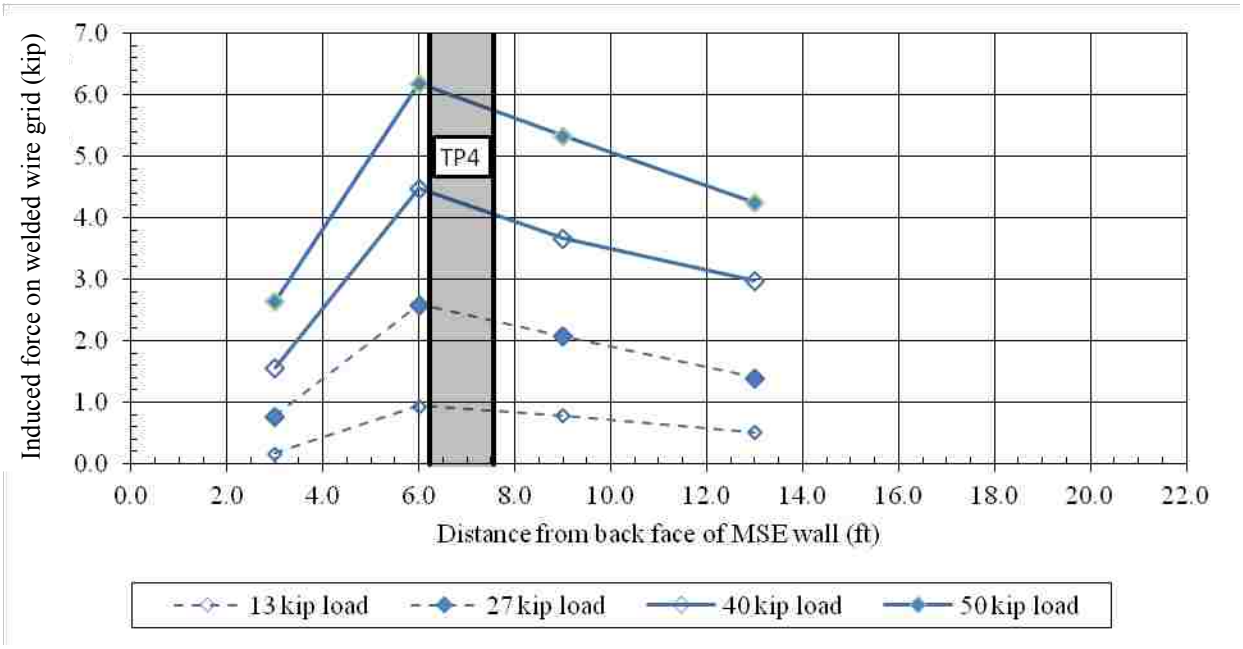


Figure C.15: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire N during loading of TP4 (see Table 4.2).

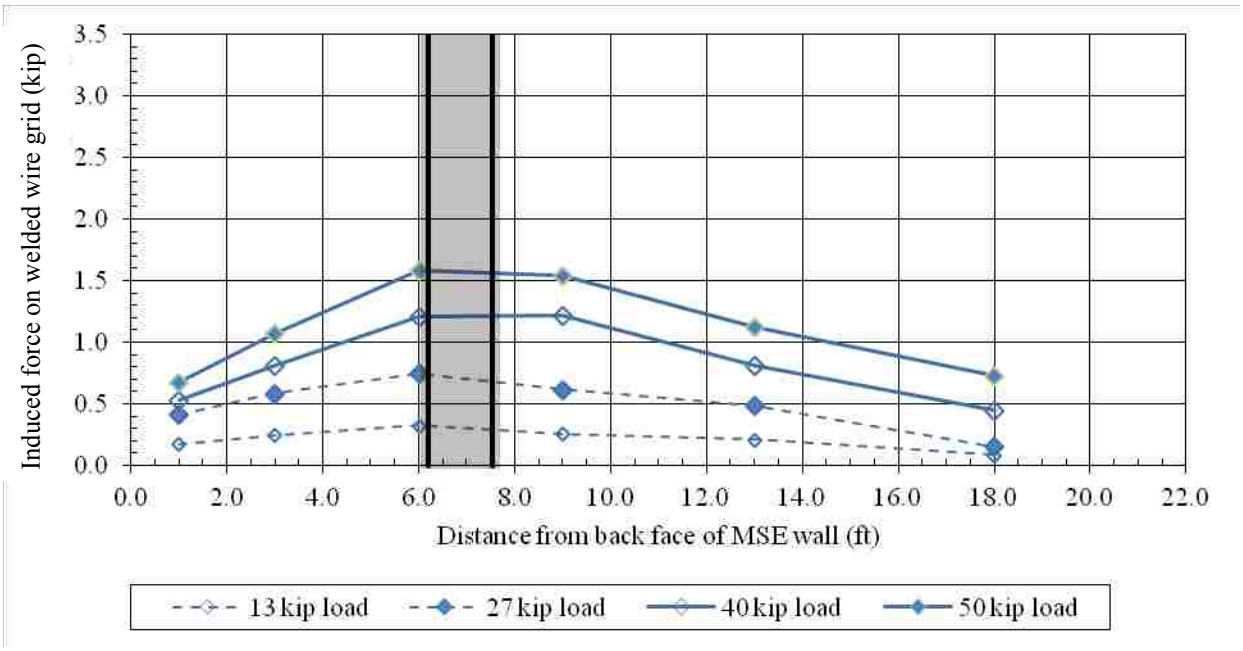


Figure C.16: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire P during loading of TP4 (see Table 4.2).

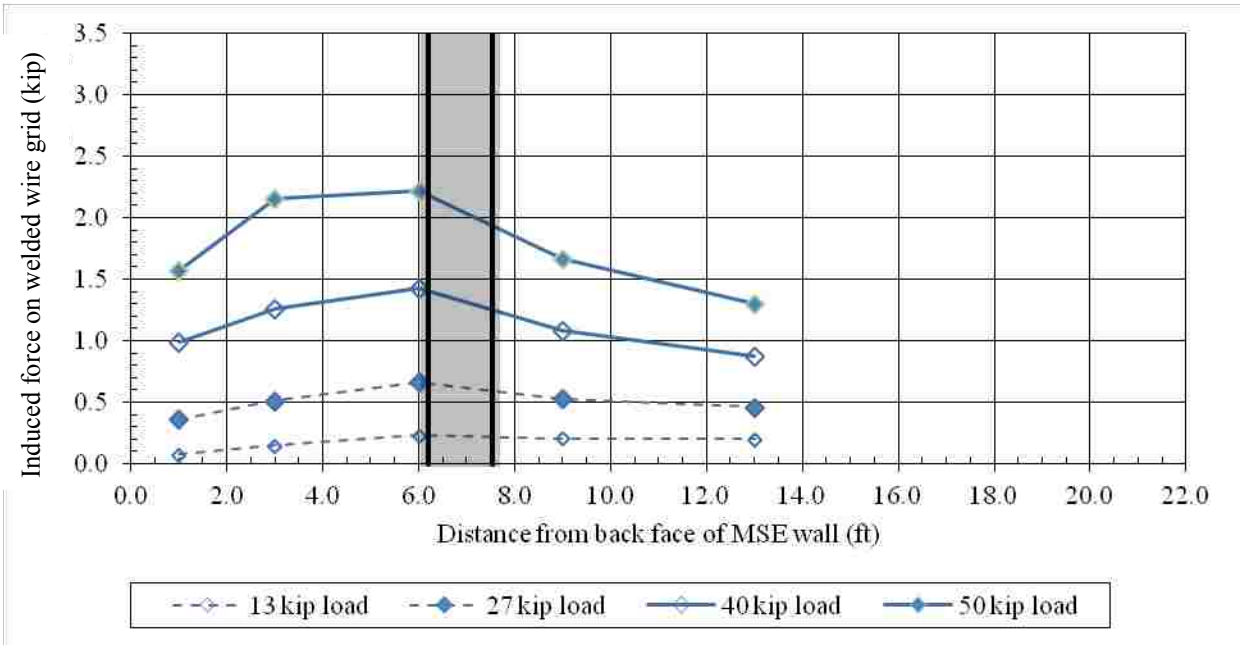


Figure C.17: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire Q during loading of TP4 (see Table 4.2).

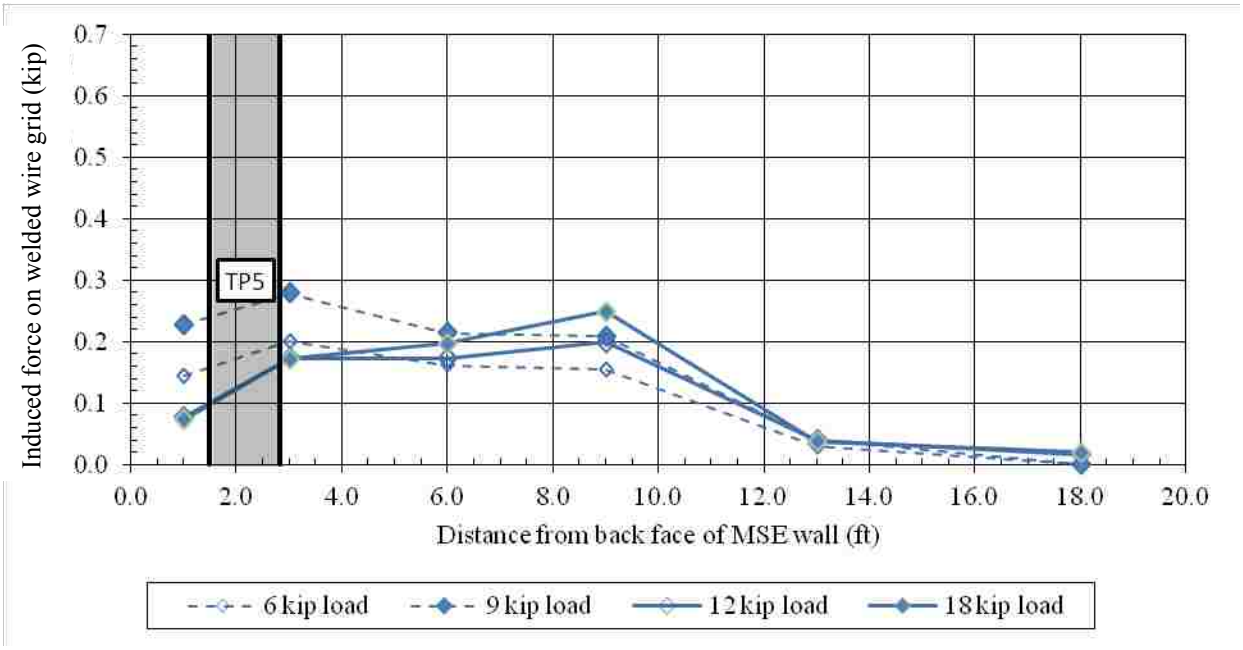


Figure C.18: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire R during loading of TP5 (see Table 4.2).

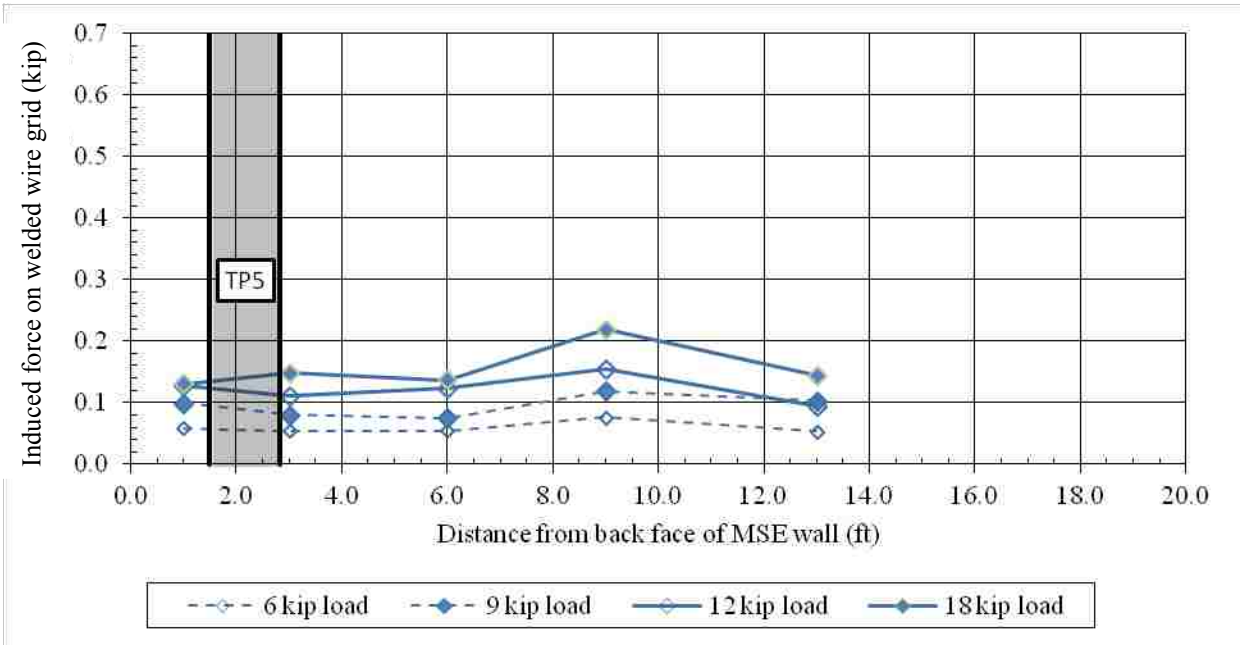


Figure C.19: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire S during loading of TP5 (see Table 4.2).

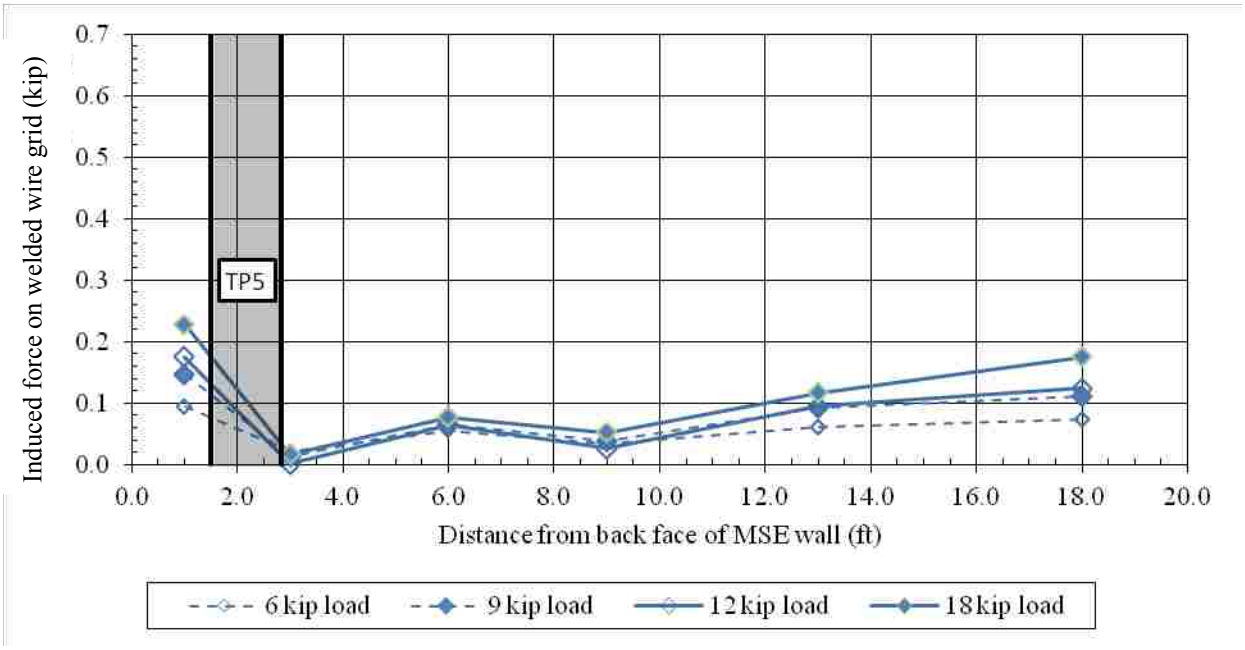


Figure C.20: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire T during loading of TP5 (see Table 4.2).

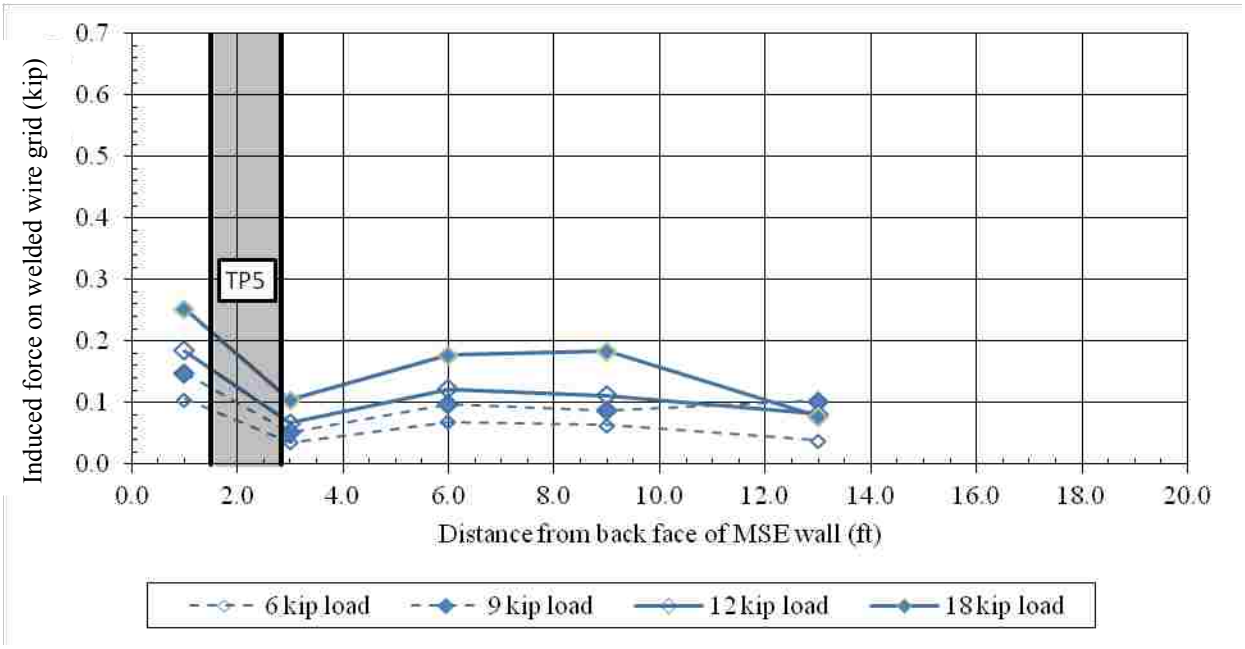


Figure C.21: Induced load in welded wire grid vs. distance from back face of wall as measured by gauges on wire U during loading of TP5 (see Table 4.2).

APPENDIX D. GROUND DISPLACEMENT CURVES

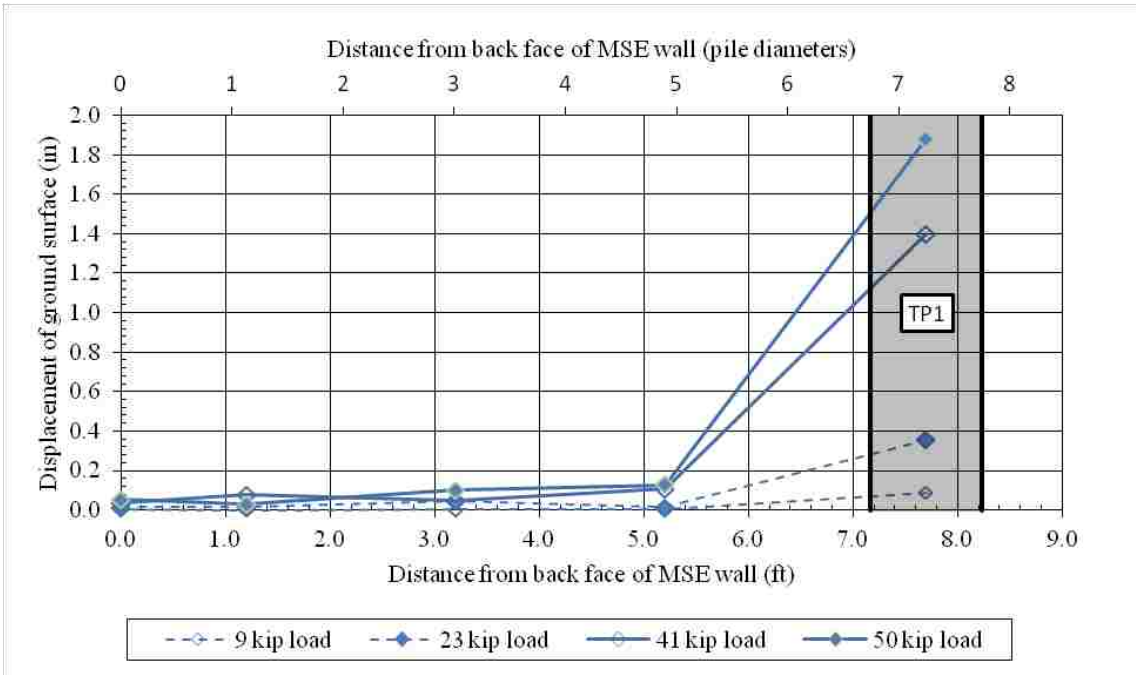


Figure D.1: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP1.

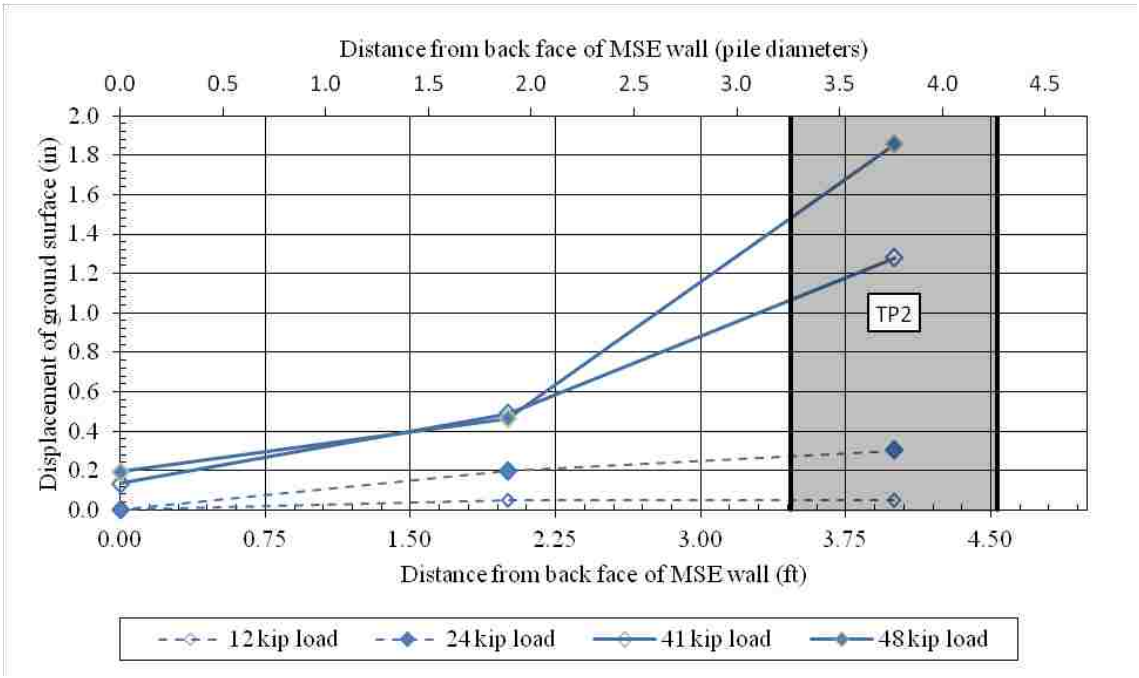


Figure D.2: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP2.

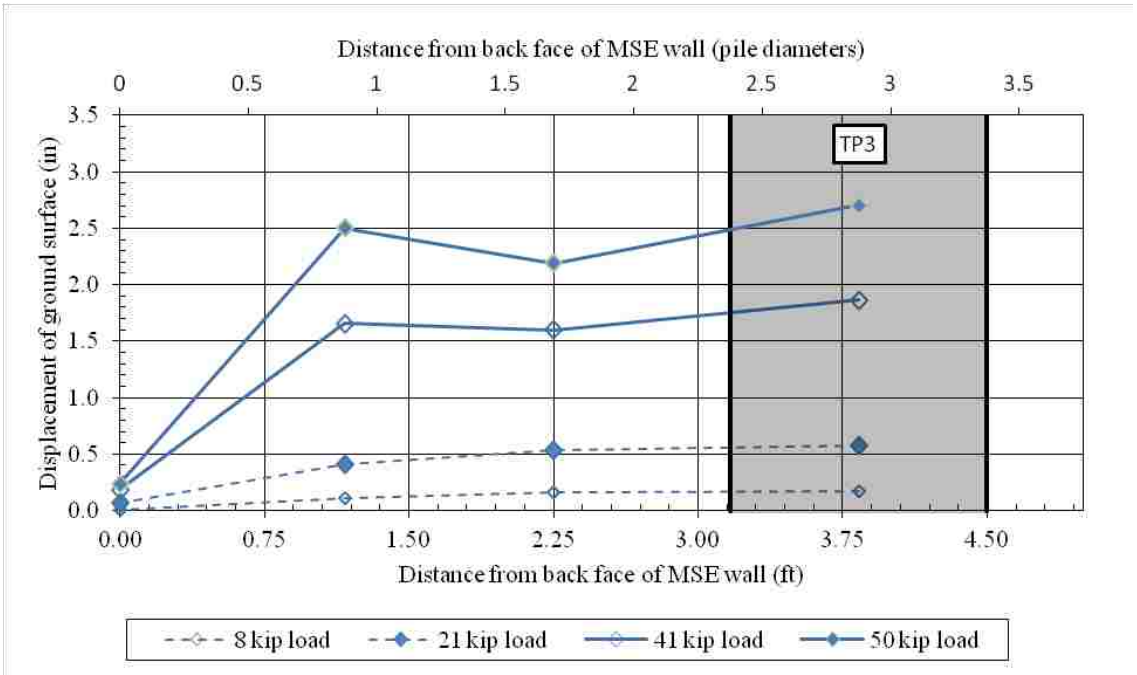


Figure D.3: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP3.

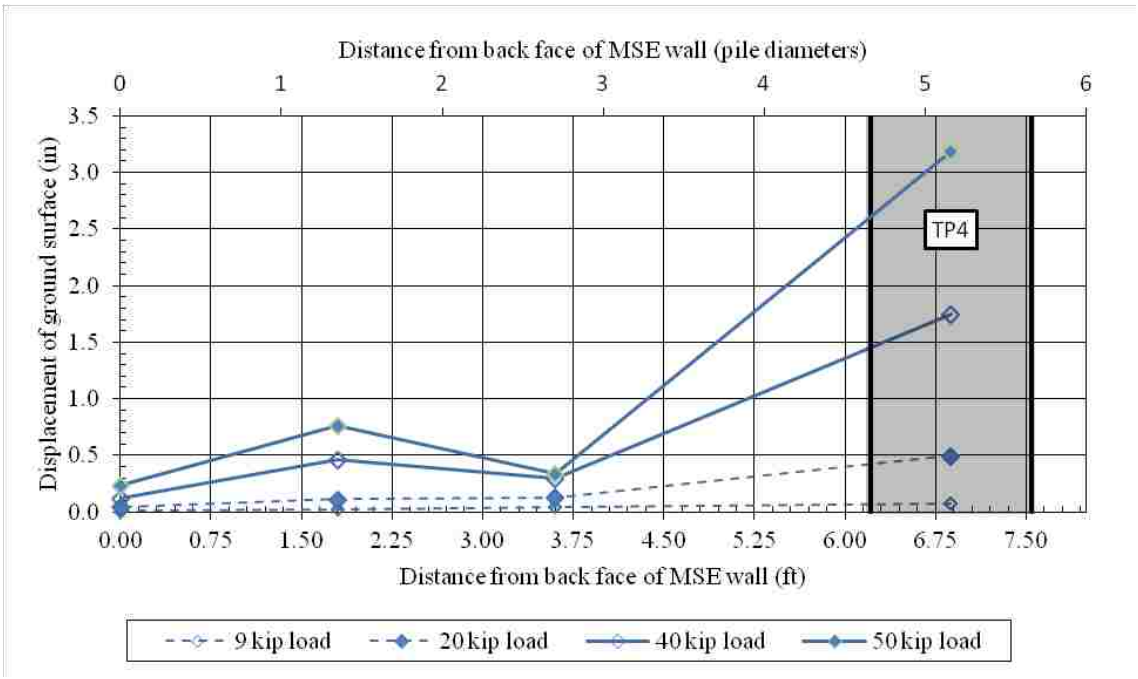


Figure D.4: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP4.

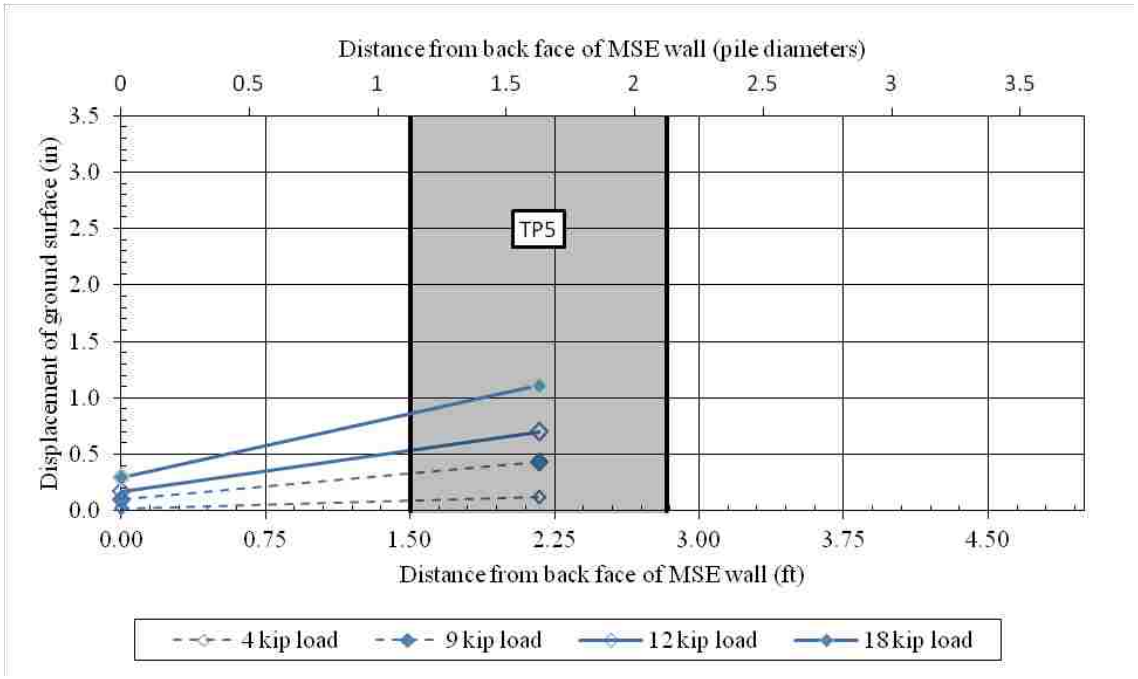


Figure D.5: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP5.

APPENDIX E. LPILE ANALYSIS FOR TP1 AND TP2

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                  LPILE Plus for Windows, Version 5.0 (5.0.47)

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method

                           (c) 1985-2010 by Ensoft, Inc.
                                All Rights Reserved

================================================================================

This program is licensed to:

J Price
RB&G Engineering

--------------------------------------------------------------------------------
                              Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:      C:\Users\jprice\Documents\Thesis\LPILE 2.17.2010\
Name of input data file:     pg 39-800-138.lpd
Name of output file:         pg 39-800-138.lpo
Name of plot output file:    pg 39-800-138.lpp
Name of runtime file:        pg 39-800-138.lpr


--------------------------------------------------------------------------------
                            Time and Date of Analysis
--------------------------------------------------------------------------------

               Date:  April  7, 2012     Time:  10:14:49


--------------------------------------------------------------------------------
                                  Problem Title
--------------------------------------------------------------------------------

New LPILE Plus 5.0 Data File


--------------------------------------------------------------------------------
                                  Program Options
--------------------------------------------------------------------------------

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 3:
- Computation of Nonlinear Bending Stiffness and Ultimate Bending Moment
  Capacity with Pile Response Computed Using Nonlinear EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
- Analysis assumes no soil movements acting on pile
```

- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 200
- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 960.00 in

Depth of ground surface below top of pile = 12.00 in

Slope angle of ground surface = 0.00 deg.

Structural properties of pile defined using 2 points

Point No.	Point Depth in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	12.75000000	279.3400	14.5800	29000000.
2	960.0000	12.75000000	279.3400	14.5800	29000000.

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of moment of inertia and modulus of are not used for any computations other than total stress due to combined axial loading and bending.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by API RP-2A, 1987
Distance from top of pile to top of layer = 12.000 in
Distance from top of pile to bottom of layer = 204.000 in
p-y subgrade modulus k for top of soil layer = 800.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 800.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 204.000 in
Distance from top of pile to bottom of layer = 1000.000 in

(Depth of lowest layer extends 40.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	12.00	0.08000
2	204.00	0.08000
3	204.00	0.06944
4	1000.00	0.06944

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	12.000	0.00000	39.00	------	------
2	204.000	0.00000	39.00	------	------
3	204.000	6.94000	0.00	0.00700	0.0
4	1000.000	6.94000	0.00	0.00700	0.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Loading Type

Static loading criteria was used for computation of p-y curves.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 10000.000 lbs
Bending moment at pile head = 0.000 in-lbs
Axial load at pile head = 0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 20000.000 lbs
Bending moment at pile head = 0.000 in-lbs
Axial load at pile head = 0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 30000.000 lbs
Bending moment at pile head = 0.000 in-lbs
Axial load at pile head = 0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 40000.000 lbs
Bending moment at pile head = 0.000 in-lbs
Axial load at pile head = 0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 50000.000 lbs
Bending moment at pile head = 0.000 in-lbs
Axial load at pile head = 0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Computation of Nonlinear Bending Stiffness for Section 1

Dimensions and Material Properties of Steel Pipe Section:

Outer Diameter of Pipe = 12.75000 in.
Pipe Wall Thickness = 0.37500 in.
Yield Stress of Pipe = 60. ksi
Elastic Modulus = 29000. ksi
Cross-sectional Area = 14.57895 sq. in.
Moment of Inertia = 279.335 in^4
Elastic Bending Stiffness = 8100716. kip-in2

Definition of Run Messages:

Y = part of pipe section has yielded

Axial Thrust Force = 0.000 kips

Bending Curvature rad/in.	Bending Moment in-kip	Bending Stiffness kip-in2	Max Comp Strain in/in	Minimum Strain in/in	Depth to N Axis in	Run Msg
0.00000690	55.87140250	8101353.	0.00004397	-0.00004397	6.37500000	
0.00001379	111.74280	8101353.	0.00008793	-0.00008793	6.37500000	
0.00002069	167.61421	8101353.	0.00013190	-0.00013190	6.37500000	
0.00002759	223.48561	8101353.	0.00017586	-0.00017586	6.37500000	
0.00003448	279.35701	8101353.	0.00021983	-0.00021983	6.37500000	
0.00004138	335.22841	8101353.	0.00026379	-0.00026379	6.37500000	
0.00004828	391.09982	8101353.	0.00030776	-0.00030776	6.37500000	
0.00005517	446.97122	8101353.	0.00035172	-0.00035172	6.37500000	
0.00006207	502.84262	8101353.	0.00039569	-0.00039569	6.37500000	
0.00006897	558.71402	8101353.	0.00043966	-0.00043966	6.37500000	
0.00007586	614.58543	8101353.	0.00048362	-0.00048362	6.37500000	
0.00008276	670.45683	8101353.	0.00052759	-0.00052759	6.37500000	
0.00008966	726.32823	8101353.	0.00057155	-0.00057155	6.37500000	
0.00009655	782.19963	8101353.	0.00061552	-0.00061552	6.37500000	
0.00010345	838.07104	8101353.	0.00065948	-0.00065948	6.37500000	
0.00011034	893.94244	8101353.	0.00070345	-0.00070345	6.37500000	
0.00011724	949.81384	8101353.	0.00074741	-0.00074741	6.37500000	
0.00012414	1005.68524	8101353.	0.00079138	-0.00079138	6.37500000	
0.00013103	1061.55665	8101353.	0.00083534	-0.00083534	6.37500000	
0.00013793	1117.42805	8101353.	0.00087931	-0.00087931	6.37500000	
0.00014483	1173.29945	8101353.	0.00092328	-0.00092328	6.37500000	
0.00015172	1229.17085	8101353.	0.00096724	-0.00096724	6.37500000	
0.00015862	1285.04226	8101353.	0.00101121	-0.00101121	6.37500000	
0.00016552	1340.91366	8101353.	0.00105517	-0.00105517	6.37500000	
0.00017241	1396.78506	8101353.	0.00109914	-0.00109914	6.37500000	
0.00017931	1452.65646	8101353.	0.00114310	-0.00114310	6.37500000	
0.00018621	1508.52787	8101353.	0.00118707	-0.00118707	6.37500000	
0.00019310	1564.39927	8101353.	0.00123103	-0.00123103	6.37500000	
0.00020000	1620.27067	8101353.	0.00127500	-0.00127500	6.37500000	
0.00020690	1676.14207	8101353.	0.00131897	-0.00131897	6.37500000	
0.00021379	1732.01348	8101353.	0.00136293	-0.00136293	6.37500000	
0.00022069	1787.88488	8101353.	0.00140690	-0.00140690	6.37500000	
0.00022759	1843.75628	8101353.	0.00145086	-0.00145086	6.37500000	
0.00023448	1899.62768	8101353.	0.00149483	-0.00149483	6.37500000	
0.00024138	1955.49909	8101353.	0.00153879	-0.00153879	6.37500000	
0.00024828	2011.37049	8101353.	0.00158276	-0.00158276	6.37500000	
0.00025517	2067.24189	8101353.	0.00162672	-0.00162672	6.37500000	
0.00026207	2123.11329	8101353.	0.00167069	-0.00167069	6.37500000	
0.00026897	2178.98470	8101353.	0.00171466	-0.00171466	6.37500000	
0.00027586	2234.85610	8101353.	0.00175862	-0.00175862	6.37500000	
0.00028276	2290.72750	8101353.	0.00180259	-0.00180259	6.37500000	
0.00028966	2346.59890	8101353.	0.00184655	-0.00184655	6.37500000	
0.00029655	2402.47031	8101353.	0.00189052	-0.00189052	6.37500000	
0.00030345	2458.34171	8101353.	0.00193448	-0.00193448	6.37500000	
0.00031034	2514.21311	8101353.	0.00197845	-0.00197845	6.37500000	
0.00031724	2570.08451	8101353.	0.00202241	-0.00202241	6.37500000	
0.00032414	2625.95592	8101353.	0.00206638	-0.00206638	6.37500000	
0.00033103	2680.22343	8096508.	0.00211034	-0.00211034	6.37500000	Y
0.00033793	2729.72986	8077772.	0.00215431	-0.00215431	6.37500000	Y
0.00034483	2772.71103	8040862.	0.00219828	-0.00219828	6.37500000	Y
0.00035172	2809.64863	7988216.	0.00224224	-0.00224224	6.37500000	Y
0.00035862	2842.34592	7925772.	0.00228621	-0.00228621	6.37500000	Y
0.00036552	2871.91649	7857130.	0.00233017	-0.00233017	6.37500000	Y
0.00037241	2898.73618	7783643.	0.00237414	-0.00237414	6.37500000	Y
0.00037931	2923.11499	7706394.	0.00241810	-0.00241810	6.37500000	Y
0.00038621	2945.75816	7627409.	0.00246207	-0.00246207	6.37500000	Y
0.00039310	2966.92113	7547431.	0.00250603	-0.00250603	6.37500000	Y

0.00040000	2986.63564	7466589.	0.00255000	-0.00255000	6.37500000	Y
0.00040690	3004.67239	7384364.	0.00259397	-0.00259397	6.37500000	Y
0.00041379	3021.80484	7302695.	0.00263793	-0.00263793	6.37500000	Y
0.00042069	3037.98561	7221441.	0.00268190	-0.00268190	6.37500000	Y
0.00042759	3052.82383	7139668.	0.00272586	-0.00272586	6.37500000	Y
0.00043448	3067.13516	7059279.	0.00276983	-0.00276983	6.37500000	Y
0.00044138	3080.41805	6979072.	0.00281379	-0.00281379	6.37500000	Y
0.00044828	3093.02630	6899828.	0.00285776	-0.00285776	6.37500000	Y
0.00045517	3105.05019	6821701.	0.00290172	-0.00290172	6.37500000	Y
0.00046207	3116.24552	6744113.	0.00294569	-0.00294569	6.37500000	Y
0.00046897	3127.11859	6668120.	0.00298966	-0.00298966	6.37500000	Y
0.00047586	3137.15012	6592562.	0.00303362	-0.00303362	6.37500000	Y
0.00048276	3146.96968	6518723.	0.00307759	-0.00307759	6.37500000	Y
0.00048966	3156.05272	6445460.	0.00312155	-0.00312155	6.37500000	Y
0.00049655	3164.90691	6373771.	0.00316552	-0.00316552	6.37500000	Y
0.00050345	3173.22845	6302988.	0.00320948	-0.00320948	6.37500000	Y
0.00051034	3181.19755	6233427.	0.00325345	-0.00325345	6.37500000	Y
0.00051724	3188.92037	6165246.	0.00329741	-0.00329741	6.37500000	Y
0.00052414	3196.07786	6097780.	0.00334138	-0.00334138	6.37500000	Y
0.00053103	3203.23536	6032066.	0.00338534	-0.00338534	6.37500000	Y
0.00053793	3209.75711	5966856.	0.00342931	-0.00342931	6.37500000	Y
0.00054483	3216.17052	5903098.	0.00347328	-0.00347328	6.37500000	Y
0.00055172	3222.42077	5840637.	0.00351724	-0.00351724	6.37500000	Y
0.00055862	3228.15234	5778791.	0.00356121	-0.00356121	6.37500000	Y
0.00056552	3233.88391	5718453.	0.00360517	-0.00360517	6.37500000	Y
0.00057241	3239.34039	5659088.	0.00364914	-0.00364914	6.37500000	Y
0.00057931	3244.44769	5600535.	0.00369310	-0.00369310	6.37500000	Y
0.00058621	3249.55498	5543358.	0.00373707	-0.00373707	6.37500000	Y
0.00059310	3254.41192	5487090.	0.00378103	-0.00378103	6.37500000	Y
0.00060000	3258.94829	5431580.	0.00382500	-0.00382500	6.37500000	Y
0.00060690	3263.48465	5377333.	0.00386897	-0.00386897	6.37500000	Y
0.00061379	3267.91164	5324126.	0.00391293	-0.00391293	6.37500000	Y
0.00062069	3271.92660	5271437.	0.00395690	-0.00395690	6.37500000	Y
0.00062759	3275.94156	5219907.	0.00400086	-0.00400086	6.37500000	Y
0.00063448	3279.95651	5169497.	0.00404483	-0.00404483	6.37500000	Y
0.00064138	3283.62550	5119631.	0.00408879	-0.00408879	6.37500000	Y
0.00064828	3287.16510	5070627.	0.00413276	-0.00413276	6.37500000	Y
0.00065517	3290.70470	5022654.	0.00417672	-0.00417672	6.37500000	Y
0.00066207	3294.24430	4975681.	0.00422069	-0.00422069	6.37500000	Y
0.00066897	3297.36801	4929055.	0.00426466	-0.00426466	6.37500000	Y
0.00067586	3300.47512	4883356.	0.00430862	-0.00430862	6.37500000	Y
0.00068276	3303.58222	4838580.	0.00435259	-0.00435259	6.37500000	Y
0.00068966	3306.68932	4794699.	0.00439655	-0.00439655	6.37500000	Y
0.00069655	3309.45299	4751195.	0.00444052	-0.00444052	6.37500000	Y
0.00070345	3312.16753	4708473.	0.00448448	-0.00448448	6.37500000	Y
0.00071034	3314.88207	4666581.	0.00452845	-0.00452845	6.37500000	Y
0.00071724	3317.59661	4625495.	0.00457241	-0.00457241	6.37500000	Y
0.00072414	3320.16018	4584983.	0.00461638	-0.00461638	6.37500000	Y
0.00073103	3322.51936	4544956.	0.00466034	-0.00466034	6.37500000	Y
0.00073793	3324.87855	4505676.	0.00470431	-0.00470431	6.37500000	Y
0.00074483	3327.23773	4467125.	0.00474828	-0.00474828	6.37500000	Y
0.00075172	3329.59692	4429280.	0.00479224	-0.00479224	6.37500000	Y
0.00075862	3331.77625	4391887.	0.00483621	-0.00483621	6.37500000	Y
0.00076552	3333.81477	4354983.	0.00488017	-0.00488017	6.37500000	Y
0.00077241	3335.85329	4318739.	0.00492414	-0.00492414	6.37500000	Y
0.00077931	3337.89181	4283135.	0.00496810	-0.00496810	6.37500000	Y
0.00078621	3339.93034	4248157.	0.00501207	-0.00501207	6.37500000	Y
0.00079310	3341.90473	4213706.	0.00505603	-0.00505603	6.37500000	Y
0.00080000	3343.65491	4179569.	0.00510000	-0.00510000	6.37500000	Y
0.00080690	3345.40509	4146015.	0.00514397	-0.00514397	6.37500000	Y
0.00081379	3347.15527	4113030.	0.00518793	-0.00518793	6.37500000	Y
0.00082069	3348.90545	4080599.	0.00523190	-0.00523190	6.37500000	Y
0.00082759	3350.65562	4048709.	0.00527586	-0.00527586	6.37500000	Y
0.00083448	3352.31894	4017242.	0.00531983	-0.00531983	6.37500000	Y
0.00084138	3353.81088	3986087.	0.00536379	-0.00536379	6.37500000	Y
0.00084828	3355.30282	3955438.	0.00540776	-0.00540776	6.37500000	Y
0.00085517	3356.79477	3925284.	0.00545172	-0.00545172	6.37500000	Y
0.00086207	3358.28671	3895612.	0.00549569	-0.00549569	6.37500000	Y
0.00086897	3359.77865	3866412.	0.00553966	-0.00553966	6.37500000	Y
0.00087586	3361.27059	3837671.	0.00558362	-0.00558362	6.37500000	Y
0.00088276	3362.57513	3809167.	0.00562759	-0.00562759	6.37500000	Y
0.00088966	3363.83685	3781057.	0.00567155	-0.00567155	6.37500000	Y
0.00089655	3365.09857	3753379.	0.00571552	-0.00571552	6.37500000	Y
0.00090345	3366.36028	3726124.	0.00575948	-0.00575948	6.37500000	Y
0.00091034	3367.62200	3699282.	0.00580345	-0.00580345	6.37500000	Y
0.00091724	3368.88372	3672843.	0.00584741	-0.00584741	6.37500000	Y
0.00092414	3370.14544	3646799.	0.00589138	-0.00589138	6.37500000	Y
0.00093103	3371.29563	3621021.	0.00593534	-0.00593534	6.37500000	Y
0.00093793	3372.35316	3595523.	0.00597931	-0.00597931	6.37500000	Y
0.00094483	3373.41069	3570398.	0.00602328	-0.00602328	6.37500000	Y
0.00095172	3374.46823	3545637.	0.00606724	-0.00606724	6.37500000	Y

0.00095862	3375.52576	3521232.	0.00611121	-0.00611121	6.37500000	Y
0.00096552	3376.58329	3497175.	0.00615517	-0.00615517	6.37500000	Y
0.00097241	3377.64083	3473460.	0.00619914	-0.00619914	6.37500000	Y
0.00097931	3378.69836	3450079.	0.00624310	-0.00624310	6.37500000	Y

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Load	Axial Thrust	Interp. Mom. Cap.
1	0.000 kips	3378.7 in-kip

Please note that the values in the above table are not factored by a strength reduction factor for LRFD.

The value of the strength reduction factor depends on the provisions of the LRFD code being used.

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to the LRFD structural design standard being followed.

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 10000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.123941	4.88E-08	10000.	-0.002585	1.11E-09	8.10E+09	0.000	0.000
4.800	0.111534	48000.	10000.	-0.002571	1095.439	8.10E+09	0.000	0.000
9.600	0.099263	96000.	10000.	-0.002528	2190.878	8.10E+09	0.000	0.000
14.400	0.087266	1.44E+05	9916.900	-0.002457	3286.318	8.10E+09	-34.625	1904.537
19.200	0.075678	1.91E+05	9539.780	-0.002358	4363.551	8.10E+09	-122.508	7770.300
24.000	0.064633	2.36E+05	8712.039	-0.002231	5376.368	8.10E+09	-222.384	16515.
28.800	0.054259	2.75E+05	7415.998	-0.002080	6272.253	8.10E+09	-317.633	28099.
33.600	0.044667	3.07E+05	5712.876	-0.001908	7001.123	8.10E+09	-392.001	42126.
38.400	0.035946	3.30E+05	3733.701	-0.001719	7523.874	8.10E+09	-432.655	57773.
43.200	0.028164	3.43E+05	1657.793	-0.001520	7819.131	8.10E+09	-432.306	73678.
48.000	0.021356	3.46E+05	-426.931	-0.001316	7887.077	8.10E+09	-436.329	98071.
52.800	0.015530	3.39E+05	-2498.546	-0.001113	7725.596	8.10E+09	-426.844	1.32E+05
57.600	0.010668	3.22E+05	-4390.852	-0.000918	7339.676	8.10E+09	-361.617	1.63E+05
62.400	0.006720	2.96E+05	-5892.503	-0.000735	6763.614	8.10E+09	-264.072	1.89E+05
67.200	0.003615	2.65E+05	-6906.921	-0.000568	6048.700	8.10E+09	-158.603	2.11E+05
72.000	0.001264	2.30E+05	-7433.050	-0.000422	5250.391	8.10E+09	-60.618	2.30E+05
76.800	-0.000433	1.94E+05	-7524.637	-0.000296	4420.209	8.10E+09	22.457	2.49E+05
81.600	-0.001579	1.58E+05	-7259.868	-0.000192	3601.835	8.10E+09	87.864	2.67E+05
86.400	-0.002277	1.24E+05	-6724.291	-0.000109	2829.660	8.10E+09	135.293	2.85E+05
91.200	-0.002621	93272.	-6001.728	-4.42E-05	2128.624	8.10E+09	165.775	3.04E+05
96.000	-0.002701	66374.	-5169.078	3.12E-06	1514.755	8.10E+09	181.162	3.22E+05
100.800	-0.002591	43649.	-4293.138	3.57E-05	996.142	8.10E+09	183.813	3.40E+05
105.600	-0.002358	25159.	-3428.733	5.61E-05	574.180	8.10E+09	176.356	3.59E+05
110.400	-0.002053	10733.	-2617.953	6.67E-05	244.948	8.10E+09	161.469	3.78E+05
115.200	-0.001717	27.097	-1890.344	6.99E-05	0.618403	8.10E+09	141.702	3.96E+05
120.000	-0.001382	-7414.147	-1263.865	6.77E-05	169.203	8.10E+09	119.331	4.15E+05
124.800	-0.001067	-12106.	-746.424	6.19E-05	276.279	8.10E+09	96.270	4.33E+05
129.600	-0.000787	-14580.	-337.726	5.40E-05	332.735	8.10E+09	74.021	4.52E+05
134.400	-0.000548	-15348.	-31.254	4.52E-05	350.271	8.10E+09	53.676	4.70E+05
139.200	-0.000353	-14880.	183.814	3.62E-05	339.583	8.10E+09	35.936	4.88E+05
144.000	-0.000200	-13584.	320.862	2.78E-05	309.999	8.10E+09	21.167	5.07E+05
148.800	-8.64E-05	-11800.	394.348	2.03E-05	269.286	8.10E+09	9.452	5.25E+05
153.600	-5.85E-06	-9797.826	418.623	1.39E-05	223.603	8.10E+09	0.662637	5.44E+05
158.400	4.68E-05	-7780.802	407.057	8.66E-06	177.571	8.10E+09	-5.482	5.62E+05
163.200	7.73E-05	-5890.077	371.452	4.61E-06	134.421	8.10E+09	-9.354	5.81E+05
168.000	9.11E-05	-4214.866	321.714	1.62E-06	96.190	8.10E+09	-11.370	5.99E+05
172.800	9.29E-05	-2801.618	265.747	-4.58E-07	63.938	8.10E+09	-11.950	6.17E+05
177.600	8.67E-05	-1663.692	209.497	-1.78E-06	37.968	8.10E+09	-11.488	6.36E+05
182.400	7.58E-05	-790.443	157.127	-2.51E-06	18.039	8.10E+09	-10.333	6.54E+05
187.200	6.26E-05	-155.272	111.256	-2.79E-06	3.544	8.10E+09	-8.780	6.73E+05

192.000	4.90E-05	277.610	73.235	-2.75E-06	6.336	8.10E+09	-7.062	6.91E+05
196.800	3.62E-05	547.786	43.432	-2.51E-06	12.501	8.10E+09	-5.356	7.10E+05
201.600	2.50E-05	694.557	21.485	-2.14E-06	15.851	8.10E+09	-3.788	7.28E+05
206.400	1.57E-05	754.045	1.577	-1.71E-06	17.209	8.10E+09	-4.507	1.38E+06
211.200	8.56E-06	709.697	-15.140	-1.28E-06	16.196	8.10E+09	-2.459	1.38E+06
216.000	3.45E-06	608.704	-23.416	-8.85E-07	13.892	8.10E+09	-0.989900	1.38E+06
220.800	6.35E-08	484.903	-25.836	-5.61E-07	11.066	8.10E+09	-0.018224	1.38E+06
225.600	-1.94E-06	360.682	-24.541	-3.11E-07	8.231	8.10E+09	0.557521	1.38E+06
230.400	-2.92E-06	249.306	-21.190	-1.30E-07	5.690	8.10E+09	0.838763	1.38E+06
235.200	-3.19E-06	157.255	-16.978	-9.78E-09	3.589	8.10E+09	0.916443	1.38E+06
240.000	-3.02E-06	86.320	-12.701	6.24E-08	1.970	8.10E+09	0.865721	1.38E+06
244.800	-2.59E-06	35.330	-8.836	9.84E-08	0.806295	8.10E+09	0.744518	1.38E+06
249.600	-2.07E-06	1.494	-5.622	1.09E-07	0.034106	8.10E+09	0.594467	1.38E+06
254.400	-1.54E-06	-18.645	-3.132	1.04E-07	0.425505	8.10E+09	0.443196	1.38E+06
259.200	-1.07E-06	-28.573	-1.331	9.03E-08	0.652080	8.10E+09	0.307148	1.38E+06
264.000	-6.77E-07	-31.424	-0.127399	7.25E-08	0.717153	8.10E+09	0.194431	1.38E+06
268.800	-3.74E-07	-29.796	0.596928	5.43E-08	0.679991	8.10E+09	0.107372	1.38E+06
273.600	-1.55E-07	-25.694	0.961763	3.79E-08	0.586373	8.10E+09	0.044642	1.38E+06
278.400	-1.01E-08	-20.563	1.076	2.42E-08	0.469281	8.10E+09	0.002891	1.38E+06
283.200	7.69E-08	-15.366	1.030	1.36E-08	0.350669	8.10E+09	-0.022069	1.38E+06
288.000	1.20E-07	-10.677	0.894090	5.85E-09	0.243661	8.10E+09	-0.034484	1.38E+06
292.800	1.33E-07	-6.782	0.719697	6.73E-10	0.154784	8.10E+09	-0.038180	1.38E+06
297.600	1.27E-07	-3.768	0.540851	-2.45E-09	0.085984	8.10E+09	-0.036339	1.38E+06
302.400	1.09E-07	-1.590	0.378226	-4.04E-09	0.036291	8.10E+09	-0.031421	1.38E+06
307.200	8.78E-08	-0.136670	0.242322	-4.55E-09	0.003119	8.10E+09	-0.025205	1.38E+06
312.000	6.58E-08	0.736107	0.136522	-4.37E-09	0.016799	8.10E+09	-0.018878	1.38E+06
316.800	4.58E-08	1.174	0.059652	-3.81E-09	0.026791	8.10E+09	-0.013151	1.38E+06
321.600	2.92E-08	1.309	0.007969	-3.07E-09	0.029868	8.10E+09	-0.008383	1.38E+06
326.400	1.63E-08	1.250	-0.023393	-2.31E-09	0.028537	8.10E+09	-0.004684	1.38E+06
331.200	6.99E-09	1.084	-0.039448	-1.62E-09	0.024743	8.10E+09	-0.002006	1.38E+06
336.000	7.40E-10	0.871740	-0.044771	-1.04E-09	0.019895	8.10E+09	-0.000212	1.38E+06
340.800	-3.03E-09	0.654392	-0.043196	-5.91E-10	0.014934	8.10E+09	0.000869	1.38E+06
345.600	-4.93E-09	0.457062	-0.037712	-2.62E-10	0.010431	8.10E+09	0.001416	1.38E+06
350.400	-5.54E-09	0.292353	-0.030499	-3.95E-11	0.006672	8.10E+09	0.001590	1.38E+06
355.200	-5.31E-09	0.164269	-0.023025	9.58E-11	0.003749	8.10E+09	0.001525	1.38E+06
360.000	-4.62E-09	0.071315	-0.016184	1.66E-10	0.001628	8.10E+09	0.001326	1.38E+06
364.800	-3.72E-09	0.008904	-0.010438	1.89E-10	0.000203	8.10E+09	0.001068	1.38E+06
369.600	-2.80E-09	-0.028892	-0.005945	1.83E-10	0.000659	8.10E+09	0.000804	1.38E+06
374.400	-1.96E-09	-0.048167	-0.002665	1.61E-10	0.001099	8.10E+09	0.000563	1.38E+06
379.200	-1.26E-09	-0.054473	-0.000447	1.30E-10	0.001243	8.10E+09	0.000361	1.38E+06
384.000	-7.11E-10	-0.052455	0.000910	9.85E-11	0.001197	8.10E+09	0.000204	1.38E+06
388.800	-3.13E-10	-0.045735	0.001616	6.94E-11	0.001044	8.10E+09	8.98E-05	1.38E+06
393.600	-4.47E-11	-0.036945	0.001862	4.49E-11	0.000843	8.10E+09	1.28E-05	1.38E+06
398.400	1.18E-10	-0.027861	0.001811	2.57E-11	0.000636	8.10E+09	-3.40E-05	1.38E+06
403.200	2.02E-10	-0.019559	0.001590	1.17E-11	0.000446	8.10E+09	-5.81E-05	1.38E+06
408.000	2.30E-10	-0.012595	0.001292	2.14E-12	0.000287	8.10E+09	-6.61E-05	1.38E+06
412.800	2.23E-10	-0.007155	0.000980	-3.71E-12	0.000163	8.10E+09	-6.39E-05	1.38E+06
417.600	1.95E-10	-0.003188	0.000692	-6.78E-12	7.28E-05	8.10E+09	-5.59E-05	1.38E+06
422.400	1.58E-10	-0.000509	0.000449	-7.87E-12	1.16E-05	8.10E+09	-4.53E-05	1.38E+06
427.200	1.19E-10	0.001126	0.000259	-7.69E-12	2.57E-05	8.10E+09	-3.42E-05	1.38E+06
432.000	8.39E-11	0.001973	0.000119	-6.77E-12	4.50E-05	8.10E+09	-2.41E-05	1.38E+06
436.800	5.42E-11	0.002266	2.36E-05	-5.51E-12	5.17E-05	8.10E+09	-1.56E-05	1.38E+06
441.600	3.09E-11	0.002200	-3.51E-05	-4.19E-12	5.02E-05	8.10E+09	-8.89E-06	1.38E+06
446.400	1.40E-11	0.001929	-6.61E-05	-2.97E-12	4.40E-05	8.10E+09	-4.01E-06	1.38E+06
451.200	2.46E-12	0.001565	-7.74E-05	-1.93E-12	3.57E-05	8.10E+09	-7.05E-07	1.38E+06
456.000	-4.60E-12	0.001186	-7.59E-05	-1.12E-12	2.71E-05	8.10E+09	1.32E-06	1.38E+06
460.800	-8.28E-12	0.000837	-6.70E-05	-5.19E-13	1.91E-05	8.10E+09	2.38E-06	1.38E+06
465.600	-9.58E-12	0.000542	-5.47E-05	-1.10E-13	1.24E-05	8.10E+09	2.75E-06	1.38E+06
470.400	-9.34E-12	0.000311	-4.17E-05	1.42E-13	7.10E-06	8.10E+09	2.68E-06	1.38E+06
475.200	-8.21E-12	0.000142	-2.96E-05	2.77E-13	3.24E-06	8.10E+09	2.36E-06	1.38E+06
480.000	-6.68E-12	2.72E-05	-1.93E-05	3.27E-13	6.20E-07	8.10E+09	1.92E-06	1.38E+06
484.800	-5.07E-12	-4.35E-05	-1.12E-05	3.22E-13	9.94E-07	8.10E+09	1.46E-06	1.38E+06
489.600	-3.59E-12	-8.07E-05	-5.27E-06	2.85E-13	1.84E-06	8.10E+09	1.03E-06	1.38E+06
494.400	-2.33E-12	-9.42E-05	-1.19E-06	2.33E-13	2.15E-06	8.10E+09	6.70E-07	1.38E+06
499.200	-1.35E-12	-9.22E-05	1.34E-06	1.78E-13	2.10E-06	8.10E+09	3.86E-07	1.38E+06
504.000	-6.21E-13	-8.13E-05	2.70E-06	1.27E-13	1.86E-06	8.10E+09	1.78E-07	1.38E+06
508.800	-1.28E-13	-6.63E-05	3.21E-06	8.32E-14	1.51E-06	8.10E+09	3.67E-08	1.38E+06
513.600	1.77E-13	-5.05E-05	3.18E-06	4.86E-14	1.15E-06	8.10E+09	-5.08E-08	1.38E+06
518.400	3.38E-13	-3.58E-05	2.82E-06	2.30E-14	8.16E-07	8.10E+09	-9.71E-08	1.38E+06
523.200	3.98E-13	-2.33E-05	2.32E-06	5.51E-15	5.33E-07	8.10E+09	-1.14E-07	1.38E+06
528.000	3.91E-13	-1.35E-05	1.77E-06	-5.41E-15	3.09E-07	8.10E+09	-1.12E-07	1.38E+06
532.800	3.46E-13	-6.32E-06	1.27E-06	-1.13E-14	1.44E-07	8.10E+09	-9.94E-08	1.38E+06
537.600	2.83E-13	-1.39E-06	8.32E-07	-1.36E-14	3.17E-08	8.10E+09	-8.12E-08	1.38E+06
542.400	2.16E-13	1.67E-06	4.88E-07	-1.35E-14	3.81E-08	8.10E+09	-6.19E-08	1.38E+06
547.200	1.53E-13	3.30E-06	2.34E-07	-1.20E-14	7.52E-08	8.10E+09	-4.40E-08	1.38E+06
552.000	1.00E-13	3.91E-06	5.89E-08	-9.88E-15	8.93E-08	8.10E+09	-2.88E-08	1.38E+06
556.800	5.85E-14	3.86E-06	-5.06E-08	-7.58E-15	8.81E-08	8.10E+09	-1.68E-08	1.38E+06
561.600	2.76E-14	3.43E-06	-1.10E-07	-5.42E-15	7.82E-08	8.10E+09	-7.92E-09	1.38E+06
566.400	6.44E-15	2.81E-06	-1.33E-07	-3.58E-15	6.41E-08	8.10E+09	-1.85E-09	1.38E+06
571.200	-6.74E-15	2.15E-06	-1.33E-07	-2.11E-15	4.90E-08	8.10E+09	1.93E-09	1.38E+06
576.000	-1.38E-14	1.53E-06	-1.19E-07	-1.02E-15	3.49E-08	8.10E+09	3.96E-09	1.38E+06

580.800	-1.65E-14	1.00E-06	-9.81E-08	-2.69E-16	2.29E-08	8.10E+09	4.74E-09	1.38E+06
585.600	-1.64E-14	5.88E-07	-7.54E-08	2.02E-16	1.34E-08	8.10E+09	4.71E-09	1.38E+06
590.400	-1.46E-14	2.80E-07	-5.41E-08	4.60E-16	6.39E-09	8.10E+09	4.19E-09	1.38E+06
595.200	-1.20E-14	6.89E-08	-3.58E-08	5.63E-16	1.57E-09	8.10E+09	3.44E-09	1.38E+06
600.000	-9.18E-15	-6.31E-08	-2.12E-08	5.65E-16	1.44E-09	8.10E+09	2.63E-09	1.38E+06
604.800	-6.56E-15	-1.34E-07	-1.03E-08	5.06E-16	3.07E-09	8.10E+09	1.88E-09	1.38E+06
609.600	-4.32E-15	-1.62E-07	-2.85E-09	4.18E-16	3.70E-09	8.10E+09	1.24E-09	1.38E+06
614.400	-2.54E-15	-1.62E-07	1.88E-09	3.22E-16	3.69E-09	8.10E+09	7.29E-10	1.38E+06
619.200	-1.22E-15	-1.44E-07	4.47E-09	2.32E-16	3.29E-09	8.10E+09	3.51E-10	1.38E+06
624.000	-3.16E-16	-1.19E-07	5.53E-09	1.54E-16	2.71E-09	8.10E+09	9.06E-11	1.38E+06
628.800	2.53E-16	-9.13E-08	5.57E-09	9.14E-17	2.08E-09	8.10E+09	-7.26E-11	1.38E+06
633.600	5.62E-16	-6.53E-08	5.01E-09	4.51E-17	1.49E-09	8.10E+09	-1.61E-10	1.38E+06
638.400	6.86E-16	-4.32E-08	4.15E-09	1.29E-17	9.85E-10	8.10E+09	-1.97E-10	1.38E+06
643.200	6.86E-16	-2.55E-08	3.20E-09	-7.44E-18	5.82E-10	8.10E+09	-1.97E-10	1.38E+06
648.000	6.14E-16	-1.24E-08	2.31E-09	-1.87E-17	2.83E-10	8.10E+09	-1.76E-10	1.38E+06
652.800	5.07E-16	-3.35E-09	1.54E-09	-2.33E-17	7.64E-11	8.10E+09	-1.46E-10	1.38E+06
657.600	3.90E-16	2.35E-09	9.18E-10	-2.36E-17	5.36E-11	8.10E+09	-1.12E-10	1.38E+06
662.400	2.80E-16	5.47E-09	4.56E-10	-2.13E-17	1.25E-10	8.10E+09	-8.04E-11	1.38E+06
667.200	1.86E-16	6.73E-09	1.36E-10	-1.77E-17	1.54E-10	8.10E+09	-5.33E-11	1.38E+06
672.000	1.10E-16	6.77E-09	-6.82E-11	-1.37E-17	1.54E-10	8.10E+09	-3.16E-11	1.38E+06
676.800	5.40E-17	6.08E-09	-1.81E-10	-9.89E-18	1.39E-10	8.10E+09	-1.55E-11	1.38E+06
681.600	1.52E-17	5.03E-09	-2.29E-10	-6.60E-18	1.15E-10	8.10E+09	-4.36E-12	1.38E+06
686.400	-9.34E-18	3.88E-09	-2.33E-10	-3.96E-18	8.85E-11	8.10E+09	2.68E-12	1.38E+06
691.200	-2.28E-17	2.79E-09	-2.11E-10	-1.99E-18	6.37E-11	8.10E+09	6.56E-12	1.38E+06
696.000	-2.84E-17	1.85E-09	-1.76E-10	-6.11E-19	4.23E-11	8.10E+09	8.16E-12	1.38E+06
700.800	-2.87E-17	1.11E-09	-1.36E-10	2.67E-19	2.52E-11	8.10E+09	8.24E-12	1.38E+06
705.600	-2.59E-17	5.48E-10	-9.86E-11	7.57E-19	1.25E-11	8.10E+09	7.42E-12	1.38E+06
710.400	-2.14E-17	1.60E-10	-6.60E-11	9.66E-19	3.65E-12	8.10E+09	6.16E-12	1.38E+06
715.200	-1.66E-17	-8.59E-11	-3.98E-11	9.88E-19	1.96E-12	8.10E+09	4.76E-12	1.38E+06
720.000	-1.20E-17	-2.22E-10	-2.01E-11	8.97E-19	5.07E-12	8.10E+09	3.43E-12	1.38E+06
724.800	-7.97E-18	-2.79E-10	-6.38E-12	7.49E-19	6.37E-12	8.10E+09	2.29E-12	1.38E+06
729.600	-4.78E-18	-2.83E-10	2.41E-12	5.82E-19	6.46E-12	8.10E+09	1.37E-12	1.38E+06
734.400	-2.38E-18	-2.56E-10	7.34E-12	4.22E-19	5.84E-12	8.10E+09	6.85E-13	1.38E+06
739.200	-7.21E-19	-2.13E-10	9.48E-12	2.83E-19	4.85E-12	8.10E+09	2.07E-13	1.38E+06
744.000	3.37E-19	-1.65E-10	9.74E-12	1.72E-19	3.76E-12	8.10E+09	-9.68E-14	1.38E+06
748.800	9.27E-19	-1.19E-10	8.87E-12	8.75E-20	2.72E-12	8.10E+09	-2.66E-13	1.38E+06
753.600	1.18E-18	-7.97E-11	7.42E-12	2.86E-20	1.82E-12	8.10E+09	-3.38E-13	1.38E+06
758.400	1.20E-18	-4.79E-11	5.78E-12	-9.24E-21	1.09E-12	8.10E+09	-3.45E-13	1.38E+06
763.200	1.09E-18	-2.41E-11	4.21E-12	-3.06E-20	5.51E-13	8.10E+09	-3.12E-13	1.38E+06
768.000	9.07E-19	-7.54E-12	2.83E-12	-4.00E-20	1.72E-13	8.10E+09	-2.60E-13	1.38E+06
772.800	7.05E-19	3.05E-12	1.72E-12	-4.13E-20	6.97E-14	8.10E+09	-2.02E-13	1.38E+06
777.600	5.11E-19	8.99E-12	8.85E-13	-3.77E-20	2.05E-13	8.10E+09	-1.47E-13	1.38E+06
782.400	3.42E-19	1.15E-11	2.97E-13	-3.16E-20	2.64E-13	8.10E+09	-9.83E-14	1.38E+06
787.200	2.07E-19	1.18E-11	-8.14E-14	-2.47E-20	2.70E-13	8.10E+09	-5.94E-14	1.38E+06
792.000	1.05E-19	1.08E-11	-2.96E-13	-1.80E-20	2.46E-13	8.10E+09	-3.01E-14	1.38E+06
796.800	3.38E-20	9.00E-12	-3.92E-13	-1.22E-20	2.05E-13	8.10E+09	-9.71E-15	1.38E+06
801.600	-1.18E-20	7.00E-12	-4.07E-13	-7.43E-21	1.60E-13	8.10E+09	3.38E-15	1.38E+06
806.400	-3.75E-20	5.09E-12	-3.73E-13	-3.85E-21	1.16E-13	8.10E+09	1.08E-14	1.38E+06
811.200	-4.87E-20	3.42E-12	-3.14E-13	-1.32E-21	7.81E-14	8.10E+09	1.40E-14	1.38E+06
816.000	-5.02E-20	2.08E-12	-2.46E-13	3.04E-22	4.74E-14	8.10E+09	1.44E-14	1.38E+06
820.800	-4.58E-20	1.06E-12	-1.80E-13	1.23E-21	2.42E-14	8.10E+09	1.31E-14	1.38E+06
825.600	-3.84E-20	3.52E-13	-1.22E-13	1.65E-21	8.03E-15	8.10E+09	1.10E-14	1.38E+06
830.400	-2.99E-20	-1.05E-13	-7.45E-14	1.73E-21	2.39E-15	8.10E+09	8.59E-15	1.38E+06
835.200	-2.18E-20	-3.63E-13	-3.89E-14	1.59E-21	8.29E-15	8.10E+09	6.26E-15	1.38E+06
840.000	-1.47E-20	-4.78E-13	-1.37E-14	1.34E-21	1.09E-14	8.10E+09	4.22E-15	1.38E+06
844.800	-8.95E-21	-4.95E-13	2.58E-15	1.05E-21	1.13E-14	8.10E+09	2.57E-15	1.38E+06
849.600	-4.62E-21	-4.53E-13	1.19E-14	7.69E-22	1.03E-14	8.10E+09	1.33E-15	1.38E+06
854.400	-1.57E-21	-3.80E-13	1.62E-14	5.22E-22	8.68E-15	8.10E+09	4.51E-16	1.38E+06
859.200	3.94E-22	-2.97E-13	1.70E-14	3.21E-22	6.79E-15	8.10E+09	-1.13E-16	1.38E+06
864.000	1.51E-21	-2.17E-13	1.57E-14	1.69E-22	4.95E-15	8.10E+09	-4.34E-16	1.38E+06
868.800	2.01E-21	-1.47E-13	1.33E-14	6.10E-23	3.35E-15	8.10E+09	-5.78E-16	1.38E+06
873.600	2.10E-21	-8.98E-14	1.04E-14	-9.14E-24	2.05E-15	8.10E+09	-6.02E-16	1.38E+06
878.400	1.93E-21	-4.67E-14	7.66E-15	-4.96E-23	1.07E-15	8.10E+09	-5.53E-16	1.38E+06
883.200	1.62E-21	-1.63E-14	5.21E-15	-6.82E-23	3.72E-16	8.10E+09	-4.66E-16	1.38E+06
888.000	1.27E-21	3.35E-15	3.22E-15	-7.21E-23	7.66E-17	8.10E+09	-3.65E-16	1.38E+06
892.800	9.30E-22	1.46E-14	1.70E-15	-6.68E-23	3.33E-16	8.10E+09	-2.67E-16	1.38E+06
897.600	6.30E-22	1.97E-14	6.28E-16	-5.66E-23	4.50E-16	8.10E+09	-1.81E-16	1.38E+06
902.400	3.86E-22	2.06E-14	-7.21E-17	-4.46E-23	4.71E-16	8.10E+09	-1.11E-16	1.38E+06
907.200	2.02E-22	1.90E-14	-4.77E-16	-3.29E-23	4.34E-16	8.10E+09	-5.79E-17	1.38E+06
912.000	7.07E-23	1.61E-14	-6.65E-16	-2.25E-23	3.66E-16	8.10E+09	-2.03E-17	1.38E+06
916.800	-1.45E-23	1.26E-14	-7.03E-16	-1.40E-23	2.88E-16	8.10E+09	4.17E-18	1.38E+06
921.600	-6.38E-23	9.30E-15	-6.49E-16	-7.51E-24	2.12E-16	8.10E+09	1.83E-17	1.38E+06
926.400	-8.66E-23	6.39E-15	-5.46E-16	-2.86E-24	1.46E-16	8.10E+09	2.49E-17	1.38E+06
931.200	-9.12E-23	4.06E-15	-4.23E-16	2.39E-25	9.27E-17	8.10E+09	2.62E-17	1.38E+06
936.000	-8.43E-23	2.33E-15	-3.02E-16	2.13E-24	5.32E-17	8.10E+09	2.42E-17	1.38E+06
940.800	-7.08E-23	1.16E-15	-1.95E-16	3.17E-24	2.65E-17	8.10E+09	2.03E-17	1.38E+06
945.600	-5.39E-23	4.55E-16	-1.10E-16	3.64E-24	1.04E-17	8.10E+09	1.55E-17	1.38E+06
950.400	-3.58E-23	1.07E-16	-4.78E-17	3.81E-24	2.45E-18	8.10E+09	1.03E-17	1.38E+06
955.200	-1.73E-23	-3.67E-18	-1.12E-17	3.84E-24	8.38E-20	8.10E+09	4.97E-18	1.38E+06
960.000	1.11E-24	0.000	0.000	3.84E-24	0.000	8.10E+09	-3.19E-19	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	0.12394088 in
Computed slope at pile head	=	-0.00258481
Maximum bending moment	=	345596.24051 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	48.00000000 in
Depth of maximum shear force	=	4.80000000 in
Number of iterations	=	13
Number of zero deflection points	=	16

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 20000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.426219	-1.76E-07	20000.	-0.007496	4.01E-09	8.10E+09	0.000	0.000
4.800	0.390239	96000.	20000.	-0.007468	2190.878	8.10E+09	0.000	0.000
9.600	0.354531	1.92E+05	20000.	-0.007382	4381.757	8.10E+09	0.000	0.000
14.400	0.319369	2.88E+05	19917.	-0.007240	6572.635	8.10E+09	-34.627	520.435
19.200	0.285026	3.83E+05	19539.	-0.007041	8745.307	8.10E+09	-122.701	2066.351
24.000	0.251773	4.76E+05	18707.	-0.006787	10853.	8.10E+09	-224.127	4272.928
28.800	0.219873	5.63E+05	17389.	-0.006479	12844.	8.10E+09	-324.817	7091.025
33.600	0.189573	6.43E+05	15624.	-0.006122	14663.	8.10E+09	-410.685	10399.
38.400	0.161100	7.13E+05	13516.	-0.005721	16267.	8.10E+09	-467.640	13933.
43.200	0.134655	7.72E+05	11238.	-0.005281	17625.	8.10E+09	-481.597	17167.
48.000	0.110406	8.21E+05	8804.466	-0.004809	18729.	8.10E+09	-532.417	23147.
52.800	0.088491	8.57E+05	5935.854	-0.004312	19553.	8.10E+09	-662.838	35954.
57.600	0.069012	8.78E+05	2414.104	-0.003798	20029.	8.10E+09	-804.558	55959.
62.400	0.052030	8.80E+05	-1776.638	-0.003277	20082.	8.10E+09	-941.584	86866.
67.200	0.037550	8.61E+05	-6488.281	-0.002762	19640.	8.10E+09	-1021.600	1.31E+05
72.000	0.025518	8.18E+05	-11256.	-0.002264	18661.	8.10E+09	-964.845	1.81E+05
76.800	0.015811	7.53E+05	-15369.	-0.001799	17174.	8.10E+09	-749.020	2.27E+05
81.600	0.008244	6.70E+05	-18244.	-0.001378	15294.	8.10E+09	-448.692	2.61E+05
86.400	0.002583	5.77E+05	-19689.	-0.001008	13177.	8.10E+09	-153.449	2.85E+05
91.200	-0.001435	4.81E+05	-19839.	-0.000695	10980.	8.10E+09	90.893	3.04E+05
96.000	-0.004086	3.87E+05	-18964.	-0.000438	8830.837	8.10E+09	273.435	3.21E+05
100.800	-0.005636	2.99E+05	-17354.	-0.000234	6825.287	8.10E+09	397.531	3.39E+05
105.600	-0.006335	2.20E+05	-15271.	-8.04E-05	5028.764	8.10E+09	470.515	3.57E+05
110.400	-0.006408	1.52E+05	-12940.	3.00E-05	3479.642	8.10E+09	500.576	3.75E+05
115.200	-0.006047	96125.	-10548.	0.000104	2193.729	8.10E+09	496.106	3.94E+05
120.000	-0.005412	51209.	-8240.346	0.000147	1168.674	8.10E+09	465.474	4.13E+05
124.800	-0.004632	17018.	-6123.077	0.000168	388.369	8.10E+09	416.722	4.32E+05
129.600	-0.003804	-7572.546	-4265.701	0.000170	172.818	8.10E+09	357.185	4.51E+05
134.400	-0.002997	-23933.	-2704.877	0.000161	546.194	8.10E+09	293.158	4.69E+05
139.200	-0.002258	-33539.	-1450.051	0.000144	765.424	8.10E+09	229.686	4.88E+05
144.000	-0.001615	-37854.	-489.584	0.000123	863.882	8.10E+09	170.508	5.07E+05
148.800	-0.001079	-38239.	203.116	0.000100	872.686	8.10E+09	118.116	5.25E+05
153.600	-0.000652	-35904.	663.970	7.83E-05	819.382	8.10E+09	73.906	5.44E+05
158.400	-0.000328	-31865.	933.427	5.82E-05	727.218	8.10E+09	38.367	5.62E+05
163.200	-9.34E-05	-26943.	1052.612	4.08E-05	614.879	8.10E+09	11.293	5.81E+05
168.000	6.42E-05	-21760.	1060.474	2.64E-05	496.603	8.10E+09	-8.017	5.99E+05
172.800	0.000160	-16762.	991.847	1.50E-05	382.542	8.10E+09	-20.578	6.17E+05
177.600	0.000208	-12238.	876.323	6.38E-06	279.302	8.10E+09	-27.557	6.36E+05
182.400	0.000221	-8349.557	737.799	2.85E-07	190.551	8.10E+09	-30.161	6.54E+05
187.200	0.000211	-5155.580	594.519	-3.72E-06	117.659	8.10E+09	-29.539	6.73E+05
192.000	0.000186	-2642.178	459.487	-6.03E-06	60.299	8.10E+09	-26.724	6.91E+05
196.800	0.000153	-744.506	341.095	-7.03E-06	16.991	8.10E+09	-22.606	7.10E+05

201.600	0.000118	632.330	243.845	-7.06E-06	14.431	8.10E+09	-17.915	7.28E+05
206.400	8.51E-05	1596.405	142.203	-6.40E-06	36.433	8.10E+09	-24.436	1.38E+06
211.200	5.67E-05	1997.475	44.519	-5.34E-06	45.586	8.10E+09	-16.266	1.38E+06
216.000	3.39E-05	2023.788	-17.861	-4.15E-06	46.186	8.10E+09	-9.726	1.38E+06
220.800	1.69E-05	1826.014	-52.816	-3.01E-06	41.673	8.10E+09	-4.839	1.38E+06
225.600	5.03E-06	1516.751	-67.892	-2.01E-06	34.615	8.10E+09	-1.443	1.38E+06
230.400	-2.49E-06	1174.246	-69.640	-1.22E-06	26.798	8.10E+09	0.714827	1.38E+06
235.200	-6.67E-06	848.210	-63.331	-6.19E-07	19.358	8.10E+09	1.914	1.38E+06
240.000	-8.43E-06	566.266	-52.931	-2.00E-07	12.923	8.10E+09	2.420	1.38E+06
244.800	-8.58E-06	340.077	-41.209	6.89E-08	7.761	8.10E+09	2.464	1.38E+06
249.600	-7.77E-06	170.656	-29.944	2.20E-07	3.895	8.10E+09	2.230	1.38E+06
254.400	-6.47E-06	52.617	-20.135	2.86E-07	1.201	8.10E+09	1.857	1.38E+06
259.200	-5.02E-06	-22.637	-12.220	2.95E-07	0.516619	8.10E+09	1.441	1.38E+06
264.000	-3.63E-06	-64.693	-6.258	2.69E-07	1.476	8.10E+09	1.043	1.38E+06
268.800	-2.43E-06	-82.710	-2.077	2.26E-07	1.888	8.10E+09	0.698564	1.38E+06
273.600	-1.47E-06	-84.632	0.610745	1.76E-07	1.931	8.10E+09	0.421331	1.38E+06
278.400	-7.43E-07	-76.847	2.134	1.28E-07	1.754	8.10E+09	0.213201	1.38E+06
283.200	-2.36E-07	-64.149	2.808	8.65E-08	1.464	8.10E+09	0.067818	1.38E+06
288.000	8.77E-08	-49.889	2.910	5.27E-08	1.139	8.10E+09	-0.025186	1.38E+06
292.800	2.70E-07	-36.209	2.664	2.72E-08	0.826358	8.10E+09	-0.077455	1.38E+06
297.600	3.49E-07	-24.314	2.238	9.27E-09	0.554892	8.10E+09	-0.100159	1.38E+06
302.400	3.59E-07	-14.727	1.750	-2.29E-09	0.336090	8.10E+09	-0.103009	1.38E+06
307.200	3.27E-07	-7.513	1.278	-8.88E-09	0.171451	8.10E+09	-0.093835	1.38E+06
312.000	2.74E-07	-2.460	0.864070	-1.18E-08	0.056152	8.10E+09	-0.078527	1.38E+06
316.800	2.13E-07	0.782427	0.528702	-1.23E-08	0.017856	8.10E+09	-0.061210	1.38E+06
321.600	1.55E-07	2.615	0.274923	-1.13E-08	0.059680	8.10E+09	-0.044531	1.38E+06
326.400	1.04E-07	3.422	0.096076	-9.54E-09	0.078088	8.10E+09	-0.029988	1.38E+06
331.200	6.35E-08	3.537	-0.019669	-7.48E-09	0.080729	8.10E+09	-0.018239	1.38E+06
336.000	3.27E-08	3.233	-0.085949	-5.47E-09	0.073779	8.10E+09	-0.009378	1.38E+06
340.800	1.10E-08	2.712	-0.116032	-3.71E-09	0.061898	8.10E+09	-0.003157	1.38E+06
345.600	-2.96E-09	2.119	-0.121567	-2.28E-09	0.048358	8.10E+09	0.000850	1.38E+06
350.400	-1.09E-08	1.545	-0.112022	-1.19E-09	0.035265	8.10E+09	0.003127	1.38E+06
355.200	-1.44E-08	1.044	-0.094578	-4.27E-10	0.023815	8.10E+09	0.004142	1.38E+06
360.000	-1.50E-08	0.637278	-0.074308	7.07E-11	0.014544	8.10E+09	0.004304	1.38E+06
364.800	-1.37E-08	0.330187	-0.054505	3.57E-10	0.007535	8.10E+09	0.003947	1.38E+06
369.600	-1.16E-08	0.114032	-0.037065	4.89E-10	0.002602	8.10E+09	0.003320	1.38E+06
374.400	-9.05E-09	-0.025637	-0.022859	5.15E-10	0.000585	8.10E+09	0.002599	1.38E+06
379.200	-6.62E-09	-0.105417	-0.012061	4.76E-10	0.002406	8.10E+09	0.001900	1.38E+06
384.000	-4.48E-09	-0.141420	-0.004412	4.03E-10	0.003227	8.10E+09	0.001287	1.38E+06
388.800	-2.75E-09	-0.147776	0.000570	3.17E-10	0.003372	8.10E+09	0.000789	1.38E+06
393.600	-1.43E-09	-0.135953	0.003452	2.33E-10	0.003103	8.10E+09	0.000412	1.38E+06
398.400	-5.08E-10	-0.114641	0.004790	1.59E-10	0.002616	8.10E+09	0.000146	1.38E+06
403.200	9.33E-11	-0.089972	0.005075	9.85E-11	0.002053	8.10E+09	-2.68E-05	1.38E+06
408.000	4.38E-10	-0.065920	0.004709	5.24E-11	0.001504	8.10E+09	-0.000126	1.38E+06
412.800	5.96E-10	-0.044768	0.003996	1.96E-11	0.001022	8.10E+09	-0.000171	1.38E+06
417.600	6.26E-10	-0.027558	0.003154	-1.87E-12	0.000629	8.10E+09	-0.000180	1.38E+06
422.400	5.78E-10	-0.014490	0.002324	-1.43E-11	0.000331	8.10E+09	-0.000166	1.38E+06
427.200	4.89E-10	-0.005245	0.001589	-2.02E-11	0.000120	8.10E+09	-0.000140	1.38E+06
432.000	3.84E-10	0.000767	0.000988	-2.15E-11	1.75E-05	8.10E+09	-0.000110	1.38E+06
436.800	2.82E-10	0.004237	0.000528	-2.00E-11	9.67E-05	8.10E+09	-8.10E-05	1.38E+06
441.600	1.92E-10	0.005839	0.000201	-1.70E-11	0.000133	8.10E+09	-5.52E-05	1.38E+06
446.400	1.19E-10	0.006170	-1.29E-05	-1.35E-11	0.000141	8.10E+09	-3.41E-05	1.38E+06
451.200	6.29E-11	0.005715	-0.000138	-9.95E-12	0.000130	8.10E+09	-1.81E-05	1.38E+06
456.000	2.33E-11	0.004844	-0.000198	-6.82E-12	0.000111	8.10E+09	-6.68E-06	1.38E+06
460.800	-2.59E-12	0.003819	-0.000212	-4.26E-12	8.72E-05	8.10E+09	7.44E-07	1.38E+06
465.600	-1.76E-11	0.002811	-0.000198	-2.29E-12	6.42E-05	8.10E+09	5.05E-06	1.38E+06
470.400	-2.46E-11	0.001920	-0.000169	-8.90E-13	4.38E-05	8.10E+09	7.06E-06	1.38E+06
475.200	-2.61E-11	0.001191	-0.000134	3.12E-14	2.72E-05	8.10E+09	7.50E-06	1.38E+06
480.000	-2.43E-11	0.000635	-9.91E-05	5.72E-13	1.45E-05	8.10E+09	6.97E-06	1.38E+06
484.800	-2.06E-11	0.000240	-6.81E-05	8.31E-13	5.47E-06	8.10E+09	5.93E-06	1.38E+06
489.600	-1.63E-11	-1.89E-05	-4.27E-05	8.97E-13	4.32E-07	8.10E+09	4.68E-06	1.38E+06
494.400	-1.20E-11	-0.000170	-2.31E-05	8.41E-13	3.87E-06	8.10E+09	3.46E-06	1.38E+06
499.200	-8.24E-12	-0.000241	-9.14E-06	7.19E-13	5.50E-06	8.10E+09	2.37E-06	1.38E+06
504.000	-5.13E-12	-0.000257	7.10E-08	5.72E-13	5.88E-06	8.10E+09	1.47E-06	1.38E+06
508.800	-2.75E-12	-0.000240	5.51E-06	4.24E-13	5.48E-06	8.10E+09	7.91E-07	1.38E+06
513.600	-1.06E-12	-0.000205	8.13E-06	2.92E-13	4.67E-06	8.10E+09	3.05E-07	1.38E+06
518.400	5.17E-14	-0.000162	8.83E-06	1.84E-13	3.70E-06	8.10E+09	-1.48E-08	1.38E+06
523.200	7.03E-13	-0.000120	8.31E-06	1.00E-13	2.74E-06	8.10E+09	-2.02E-07	1.38E+06
528.000	1.01E-12	-8.23E-05	7.13E-06	4.03E-14	1.88E-06	8.10E+09	-2.91E-07	1.38E+06
532.800	1.09E-12	-5.14E-05	5.68E-06	7.15E-16	1.17E-06	8.10E+09	-3.13E-07	1.38E+06
537.600	1.02E-12	-2.78E-05	4.22E-06	-2.28E-14	6.34E-07	8.10E+09	-2.93E-07	1.38E+06
542.400	8.72E-13	-1.09E-05	2.92E-06	-3.42E-14	2.49E-07	8.10E+09	-2.50E-07	1.38E+06
547.200	6.92E-13	2.25E-07	1.84E-06	-3.74E-14	5.13E-09	8.10E+09	-1.99E-07	1.38E+06
552.000	5.13E-13	6.77E-06	1.01E-06	-3.53E-14	1.55E-07	8.10E+09	-1.47E-07	1.38E+06
556.800	3.53E-13	9.92E-06	4.13E-07	-3.04E-14	2.26E-07	8.10E+09	-1.01E-07	1.38E+06
561.600	2.22E-13	1.07E-05	1.72E-08	-2.42E-14	2.45E-07	8.10E+09	-6.36E-08	1.38E+06
566.400	1.20E-13	1.01E-05	-2.18E-07	-1.81E-14	2.30E-07	8.10E+09	-3.46E-08	1.38E+06
571.200	4.81E-14	8.64E-06	-3.35E-07	-1.25E-14	1.97E-07	8.10E+09	-1.38E-08	1.38E+06
576.000	2.73E-16	6.88E-06	-3.68E-07	-7.93E-15	1.57E-07	8.10E+09	-7.83E-11	1.38E+06
580.800	-2.80E-14	5.11E-06	-3.49E-07	-4.38E-15	1.17E-07	8.10E+09	8.04E-09	1.38E+06
585.600	-4.17E-14	3.53E-06	-3.01E-07	-1.82E-15	8.05E-08	8.10E+09	1.20E-08	1.38E+06

590.400	-4.55E-14	2.22E-06	-2.41E-07	-1.17E-16	5.07E-08	8.10E+09	1.31E-08	1.38E+06
595.200	-4.29E-14	1.21E-06	-1.80E-07	9.01E-16	2.77E-08	8.10E+09	1.23E-08	1.38E+06
600.000	-3.68E-14	4.93E-07	-1.25E-07	1.41E-15	1.13E-08	8.10E+09	1.06E-08	1.38E+06
604.800	-2.94E-14	1.50E-08	-7.94E-08	1.56E-15	3.41E-10	8.10E+09	8.43E-09	1.38E+06
609.600	-2.19E-14	-2.69E-07	-4.41E-08	1.48E-15	6.14E-09	8.10E+09	6.28E-09	1.38E+06
614.400	-1.51E-14	-4.08E-07	-1.86E-08	1.28E-15	9.32E-09	8.10E+09	4.34E-09	1.38E+06
619.200	-9.56E-15	-4.48E-07	-1.59E-09	1.03E-15	1.02E-08	8.10E+09	2.74E-09	1.38E+06
624.000	-5.26E-15	-4.24E-07	8.63E-09	7.70E-16	9.67E-09	8.10E+09	1.51E-09	1.38E+06
628.800	-2.17E-15	-3.65E-07	1.37E-08	5.36E-16	8.32E-09	8.10E+09	6.23E-10	1.38E+06
633.600	-1.16E-16	-2.92E-07	1.53E-08	3.42E-16	6.65E-09	8.10E+09	3.34E-11	1.38E+06
638.400	1.11E-15	-2.18E-07	1.46E-08	1.91E-16	4.97E-09	8.10E+09	-3.19E-10	1.38E+06
643.200	1.72E-15	-1.51E-07	1.27E-08	8.17E-17	3.45E-09	8.10E+09	-4.93E-10	1.38E+06
648.000	1.89E-15	-9.58E-08	1.02E-08	8.61E-18	2.19E-09	8.10E+09	-5.44E-10	1.38E+06
652.800	1.80E-15	-5.30E-08	7.66E-09	-3.55E-17	1.21E-09	8.10E+09	-5.17E-10	1.38E+06
657.600	1.55E-15	-2.22E-08	5.35E-09	-5.78E-17	5.07E-10	8.10E+09	-4.46E-10	1.38E+06
662.400	1.24E-15	-1.67E-09	3.42E-09	-6.48E-17	3.82E-11	8.10E+09	-3.57E-10	1.38E+06
667.200	9.31E-16	1.06E-08	1.92E-09	-6.22E-17	2.43E-10	8.10E+09	-2.67E-10	1.38E+06
672.000	6.48E-16	1.68E-08	8.34E-10	-5.41E-17	3.83E-10	8.10E+09	-1.86E-10	1.38E+06
676.800	4.12E-16	1.86E-08	1.04E-10	-4.36E-17	4.25E-10	8.10E+09	-1.18E-10	1.38E+06
681.600	2.30E-16	1.78E-08	-3.39E-10	-3.28E-17	4.06E-10	8.10E+09	-6.59E-11	1.38E+06
686.400	9.76E-17	1.54E-08	-5.64E-10	-2.30E-17	3.51E-10	8.10E+09	-2.80E-11	1.38E+06
691.200	9.36E-18	1.24E-08	-6.38E-10	-1.47E-17	2.82E-10	8.10E+09	-2.69E-12	1.38E+06
696.000	-4.38E-17	9.27E-09	-6.14E-10	-8.32E-18	2.12E-10	8.10E+09	1.26E-11	1.38E+06
700.800	-7.05E-17	6.47E-09	-5.35E-10	-3.66E-18	1.48E-10	8.10E+09	2.02E-11	1.38E+06
705.600	-7.89E-17	4.13E-09	-4.33E-10	-5.21E-19	9.42E-11	8.10E+09	2.26E-11	1.38E+06
710.400	-7.55E-17	2.31E-09	-3.26E-10	1.39E-18	5.28E-11	8.10E+09	2.17E-11	1.38E+06
715.200	-6.56E-17	9.97E-10	-2.29E-10	2.37E-18	2.28E-11	8.10E+09	1.88E-11	1.38E+06
720.000	-5.28E-17	1.15E-10	-1.47E-10	2.70E-18	2.63E-12	8.10E+09	1.52E-11	1.38E+06
724.800	-3.97E-17	-4.18E-10	-8.37E-11	2.61E-18	9.54E-12	8.10E+09	1.14E-11	1.38E+06
729.600	-2.77E-17	-6.89E-10	-3.73E-11	2.28E-18	1.57E-11	8.10E+09	7.96E-12	1.38E+06
734.400	-1.78E-17	-7.76E-10	-5.94E-12	1.85E-18	1.77E-11	8.10E+09	5.10E-12	1.38E+06
739.200	-1.00E-17	-7.46E-10	1.32E-11	1.40E-18	1.70E-11	8.10E+09	2.87E-12	1.38E+06
744.000	-4.38E-18	-6.49E-10	2.31E-11	9.82E-19	1.48E-11	8.10E+09	1.26E-12	1.38E+06
748.800	-5.85E-19	-5.24E-10	2.65E-11	6.34E-19	1.20E-11	8.10E+09	1.68E-13	1.38E+06
753.600	1.71E-18	-3.95E-10	2.58E-11	3.62E-19	9.01E-12	8.10E+09	-4.92E-13	1.38E+06
758.400	2.89E-18	-2.77E-10	2.26E-11	1.63E-19	6.31E-12	8.10E+09	-8.30E-13	1.38E+06
763.200	3.28E-18	-1.78E-10	1.83E-11	2.87E-20	4.06E-12	8.10E+09	-9.42E-13	1.38E+06
768.000	3.17E-18	-1.01E-10	1.39E-11	-5.39E-20	2.30E-12	8.10E+09	-9.09E-13	1.38E+06
772.800	2.77E-18	-4.46E-11	9.79E-12	-9.70E-20	1.02E-12	8.10E+09	-7.94E-13	1.38E+06
777.600	2.24E-18	-6.75E-12	6.35E-12	-1.12E-19	1.54E-13	8.10E+09	-6.42E-13	1.38E+06
782.400	1.69E-18	1.63E-11	3.64E-12	-1.09E-19	3.73E-13	8.10E+09	-4.85E-13	1.38E+06
787.200	1.19E-18	2.82E-11	1.66E-12	-9.61E-20	6.44E-13	8.10E+09	-3.41E-13	1.38E+06
792.000	7.65E-19	3.23E-11	3.17E-13	-7.82E-20	7.37E-13	8.10E+09	-2.20E-13	1.38E+06
796.800	4.36E-19	3.13E-11	-5.10E-13	-5.94E-20	7.14E-13	8.10E+09	-1.25E-13	1.38E+06
801.600	1.95E-19	2.74E-11	-9.46E-13	-4.20E-20	6.25E-13	8.10E+09	-5.61E-14	1.38E+06
806.400	3.28E-20	2.22E-11	-1.10E-12	-2.73E-20	5.07E-13	8.10E+09	-9.42E-15	1.38E+06
811.200	-6.67E-20	1.68E-11	-1.08E-12	-1.58E-20	3.83E-13	8.10E+09	1.92E-14	1.38E+06
816.000	-1.18E-19	1.18E-11	-9.52E-13	-7.27E-21	2.70E-13	8.10E+09	3.40E-14	1.38E+06
820.800	-1.37E-19	7.66E-12	-7.76E-13	-1.49E-21	1.75E-13	8.10E+09	3.92E-14	1.38E+06
825.600	-1.33E-19	4.39E-12	-5.91E-13	2.07E-21	1.00E-13	8.10E+09	3.81E-14	1.38E+06
830.400	-1.17E-19	1.99E-12	-4.19E-13	3.96E-21	4.54E-14	8.10E+09	3.35E-14	1.38E+06
835.200	-9.47E-20	3.65E-13	-2.73E-13	4.66E-21	8.34E-15	8.10E+09	2.72E-14	1.38E+06
840.000	-7.19E-20	-6.33E-13	-1.58E-13	4.58E-21	1.44E-14	8.10E+09	2.06E-14	1.38E+06
844.800	-5.08E-20	-1.16E-12	-7.39E-14	4.05E-21	2.64E-14	8.10E+09	1.46E-14	1.38E+06
849.600	-3.30E-20	-1.34E-12	-1.62E-14	3.31E-21	3.06E-14	8.10E+09	9.46E-15	1.38E+06
854.400	-1.90E-20	-1.31E-12	1.95E-14	2.53E-21	2.99E-14	8.10E+09	5.45E-15	1.38E+06
859.200	-8.71E-21	-1.15E-12	3.86E-14	1.80E-21	2.63E-14	8.10E+09	2.50E-15	1.38E+06
864.000	-1.73E-21	-9.40E-13	4.58E-14	1.17E-21	2.15E-14	8.10E+09	4.96E-16	1.38E+06
868.800	2.57E-21	-7.15E-13	4.52E-14	6.85E-22	1.63E-14	8.10E+09	-7.39E-16	1.38E+06
873.600	4.84E-21	-5.06E-13	4.01E-14	3.23E-22	1.16E-14	8.10E+09	-1.39E-15	1.38E+06
878.400	5.67E-21	-3.30E-13	3.29E-14	7.52E-23	7.52E-15	8.10E+09	-1.63E-15	1.38E+06
883.200	5.57E-21	-1.91E-13	2.51E-14	-7.90E-23	4.35E-15	8.10E+09	-1.60E-15	1.38E+06
888.000	4.92E-21	-8.85E-14	1.79E-14	-1.62E-22	2.02E-15	8.10E+09	-1.41E-15	1.38E+06
892.800	4.01E-21	-1.89E-14	1.17E-14	-1.94E-22	4.31E-16	8.10E+09	-1.15E-15	1.38E+06
897.600	3.06E-21	2.42E-14	6.87E-15	-1.92E-22	5.53E-16	8.10E+09	-8.78E-16	1.38E+06
902.400	2.17E-21	4.71E-14	3.27E-15	-1.71E-22	1.08E-15	8.10E+09	-6.23E-16	1.38E+06
907.200	1.42E-21	5.56E-14	7.99E-16	-1.40E-22	1.27E-15	8.10E+09	-4.07E-16	1.38E+06
912.000	8.24E-22	5.48E-14	-7.46E-16	-1.08E-22	1.25E-15	8.10E+09	-2.37E-16	1.38E+06
916.800	3.85E-22	4.85E-14	-1.58E-15	-7.70E-23	1.11E-15	8.10E+09	-1.11E-16	1.38E+06
921.600	8.43E-23	3.96E-14	-1.90E-15	-5.09E-23	9.04E-16	8.10E+09	-2.42E-17	1.38E+06
926.400	-1.04E-22	3.02E-14	-1.89E-15	-3.02E-23	6.90E-16	8.10E+09	2.98E-17	1.38E+06
931.200	-2.06E-22	2.15E-14	-1.68E-15	-1.49E-23	4.90E-16	8.10E+09	5.91E-17	1.38E+06
936.000	-2.47E-22	1.41E-14	-1.36E-15	-4.37E-24	3.22E-16	8.10E+09	7.09E-17	1.38E+06
940.800	-2.48E-22	8.40E-15	-1.02E-15	2.30E-24	1.92E-16	8.10E+09	7.12E-17	1.38E+06
945.600	-2.25E-22	4.31E-15	-6.97E-16	6.07E-24	9.83E-17	8.10E+09	6.46E-17	1.38E+06
950.400	-1.90E-22	1.71E-15	-4.11E-16	7.85E-24	3.89E-17	8.10E+09	5.44E-17	1.38E+06
955.200	-1.50E-22	3.59E-16	-1.78E-16	8.46E-24	8.18E-18	8.10E+09	4.29E-17	1.38E+06
960.000	-1.08E-22	0.000	0.000	8.57E-24	0.000	8.10E+09	3.11E-17	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above

values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	0.42621948 in
Computed slope at pile head	=	-0.00749602
Maximum bending moment	=	879970.56347 lbs-in
Maximum shear force	=	20000.00000 lbs
Depth of maximum bending moment	=	62.40000000 in
Depth of maximum shear force	=	4.80000000 in
Number of iterations	=	22
Number of zero deflection points	=	15

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 30000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.915446	3.90E-08	30000.	-0.014348	8.91E-10	8.10E+09	0.000	0.000
4.800	0.846574	1.44E+05	30000.	-0.014306	3286.318	8.10E+09	0.000	0.000
9.600	0.778111	2.88E+05	30000.	-0.014178	6572.635	8.10E+09	0.000	0.000
14.400	0.710467	4.32E+05	29917.	-0.013964	9858.953	8.10E+09	-34.627	233.944
19.200	0.644052	5.75E+05	29539.	-0.013666	13127.	8.10E+09	-122.700	914.460
24.000	0.579273	7.16E+05	28707.	-0.013284	16331.	8.10E+09	-224.125	1857.157
28.800	0.516529	8.51E+05	27389.	-0.012820	19416.	8.10E+09	-324.815	3018.440
33.600	0.456204	9.79E+05	25624.	-0.012278	22331.	8.10E+09	-410.681	4321.024
38.400	0.398662	1.10E+06	23516.	-0.011663	25030.	8.10E+09	-467.636	5630.463
43.200	0.344240	1.20E+06	21238.	-0.010981	27483.	8.10E+09	-481.593	6715.211
48.000	0.293242	1.30E+06	18805.	-0.010239	29683.	8.10E+09	-532.418	8714.995
52.800	0.245944	1.38E+06	15935.	-0.009444	31603.	8.10E+09	-663.047	12940.
57.600	0.202584	1.45E+06	12406.	-0.008603	33175.	8.10E+09	-807.710	19138.
62.400	0.163358	1.50E+06	8147.745	-0.007727	34321.	8.10E+09	-966.403	28396.
67.200	0.128409	1.53E+06	3094.712	-0.006827	34960.	8.10E+09	-1139.027	42578.
72.000	0.097816	1.53E+06	-2815.771	-0.005919	34999.	8.10E+09	-1323.674	64955.
76.800	0.071585	1.50E+06	-9600.385	-0.005019	34343.	8.10E+09	-1503.249	1.01E+05
81.600	0.049634	1.44E+06	-17052.	-0.004146	32896.	8.10E+09	-1601.640	1.55E+05
86.400	0.031782	1.34E+06	-24416.	-0.003322	30607.	8.10E+09	-1466.572	2.21E+05
91.200	0.017745	1.21E+06	-30424.	-0.002567	27547.	8.10E+09	-1036.641	2.80E+05
96.000	0.007140	1.05E+06	-34049.	-0.001899	23941.	8.10E+09	-473.855	3.19E+05
100.800	-0.000481	8.80E+05	-35104.	-0.001327	20087.	8.10E+09	34.204	3.41E+05
105.600	-0.005600	7.12E+05	-34022.	-0.000855	16251.	8.10E+09	416.638	3.57E+05
110.400	-0.008693	5.54E+05	-31402.	-0.000480	12633.	8.10E+09	674.789	3.73E+05
115.200	-0.010211	4.11E+05	-27795.	-0.000195	9370.759	8.10E+09	828.281	3.89E+05
120.000	-0.010562	2.87E+05	-23655.	1.18E-05	6543.737	8.10E+09	896.811	4.08E+05
124.800	-0.010098	1.84E+05	-19348.	0.000151	4188.268	8.10E+09	897.871	4.27E+05
129.600	-0.009111	1.01E+05	-15158.	0.000235	2304.909	8.10E+09	847.671	4.47E+05
134.400	-0.007838	38002.	-11296.	0.000277	867.266	8.10E+09	761.577	4.66E+05
139.200	-0.006456	-7446.129	-7899.308	0.000286	169.933	8.10E+09	653.761	4.86E+05
144.000	-0.005095	-37831.	-5042.560	0.000272	863.377	8.10E+09	536.550	5.05E+05
148.800	-0.003843	-55855.	-2747.113	0.000244	1274.697	8.10E+09	419.886	5.25E+05
153.600	-0.002748	-64204.	-992.723	0.000209	1465.236	8.10E+09	311.110	5.43E+05
158.400	-0.001837	-65385.	270.105	0.000171	1492.190	8.10E+09	215.068	5.62E+05
163.200	-0.001111	-61611.	1108.845	0.000133	1406.059	8.10E+09	134.407	5.81E+05
168.000	-0.000561	-54740.	1599.430	9.84E-05	1249.256	8.10E+09	70.003	5.99E+05
172.800	-0.000166	-46256.	1818.766	6.85E-05	1055.644	8.10E+09	21.387	6.17E+05
177.600	9.69E-05	-37280.	1839.297	4.38E-05	850.786	8.10E+09	-12.833	6.36E+05
182.400	0.000254	-28599.	1725.407	2.43E-05	652.676	8.10E+09	-34.621	6.54E+05
187.200	0.000330	-20716.	1531.398	9.65E-06	472.770	8.10E+09	-46.216	6.73E+05
192.000	0.000347	-13898.	1300.699	-6.06E-07	317.165	8.10E+09	-49.909	6.91E+05
196.800	0.000324	-8229.154	1065.986	-7.16E-06	187.803	8.10E+09	-47.888	7.10E+05
201.600	0.000278	-3664.091	849.910	-1.07E-05	83.621	8.10E+09	-42.144	7.28E+05
206.400	0.000221	-70.015	596.244	-1.18E-05	1.598	8.10E+09	-63.551	1.38E+06

211.200	0.000165	2059.850	330.265	-1.12E-05	47.009	8.10E+09	-47.274	1.38E+06
216.000	0.000114	3100.529	138.380	-9.67E-06	70.759	8.10E+09	-32.678	1.38E+06
220.800	7.18E-05	3388.299	10.477	-7.75E-06	77.327	8.10E+09	-20.615	1.38E+06
225.600	3.94E-05	3201.105	-66.161	-5.80E-06	73.054	8.10E+09	-11.318	1.38E+06
230.400	1.61E-05	2753.152	-104.446	-4.03E-06	62.831	8.10E+09	-4.634	1.38E+06
235.200	6.93E-07	2198.423	-116.046	-2.57E-06	50.172	8.10E+09	-0.199075	1.38E+06
240.000	-8.50E-06	1639.107	-110.665	-1.43E-06	37.407	8.10E+09	2.441	1.38E+06
244.800	-1.30E-05	1136.036	-95.823	-6.08E-07	25.926	8.10E+09	3.743	1.38E+06
249.600	-1.43E-05	719.206	-76.958	-5.85E-08	16.413	8.10E+09	4.117	1.38E+06
254.400	-1.36E-05	397.240	-57.706	2.72E-07	9.066	8.10E+09	3.904	1.38E+06
259.200	-1.17E-05	165.232	-40.254	4.39E-07	3.771	8.10E+09	3.367	1.38E+06
264.000	-9.39E-06	10.804	-25.705	4.91E-07	0.246569	8.10E+09	2.695	1.38E+06
268.800	-7.01E-06	-81.532	-14.403	4.70E-07	1.861	8.10E+09	2.014	1.38E+06
273.600	-4.87E-06	-127.468	-6.211	4.08E-07	2.909	8.10E+09	1.399	1.38E+06
278.400	-3.10E-06	-141.160	-0.718639	3.29E-07	3.221	8.10E+09	0.889096	1.38E+06
283.200	-1.72E-06	-134.367	2.601	2.47E-07	3.066	8.10E+09	0.493980	1.38E+06
288.000	-7.26E-07	-116.193	4.287	1.73E-07	2.652	8.10E+09	0.208577	1.38E+06
292.800	-6.29E-08	-93.213	4.831	1.11E-07	2.127	8.10E+09	0.018048	1.38E+06
297.600	3.36E-07	-69.817	4.643	6.23E-08	1.593	8.10E+09	-0.096372	1.38E+06
302.400	5.36E-07	-48.642	4.042	2.73E-08	1.110	8.10E+09	-0.153784	1.38E+06
307.200	5.97E-07	-31.010	3.262	3.65E-09	0.707696	8.10E+09	-0.171480	1.38E+06
312.000	5.71E-07	-17.329	2.457	-1.07E-08	0.395470	8.10E+09	-0.163856	1.38E+06
316.800	4.95E-07	-7.423	1.723	-1.80E-08	0.169400	8.10E+09	-0.142083	1.38E+06
321.600	3.98E-07	-0.790458	1.108	-2.04E-08	0.018040	8.10E+09	-0.114248	1.38E+06
326.400	2.99E-07	3.210	0.627497	-1.97E-08	0.073248	8.10E+09	-0.085769	1.38E+06
331.200	2.09E-07	5.234	0.277868	-1.72E-08	0.119437	8.10E+09	-0.059910	1.38E+06
336.000	1.33E-07	5.877	0.042107	-1.39E-08	0.134126	8.10E+09	-0.038324	1.38E+06
340.800	7.50E-08	5.638	-0.101561	-1.05E-08	0.128663	8.10E+09	-0.021537	1.38E+06
345.600	3.26E-08	4.902	-0.175699	-7.39E-09	0.111875	8.10E+09	-0.009354	1.38E+06
350.400	4.08E-09	3.951	-0.200962	-4.77E-09	0.090169	8.10E+09	-0.001173	1.38E+06
355.200	-1.32E-08	2.973	-0.194699	-2.71E-09	0.067846	8.10E+09	0.003782	1.38E+06
360.000	-2.20E-08	2.082	-0.170479	-1.22E-09	0.047513	8.10E+09	0.006310	1.38E+06
364.800	-2.49E-08	1.336	-0.138207	-2.05E-10	0.030497	8.10E+09	0.007137	1.38E+06
369.600	-2.39E-08	0.755129	-0.104581	4.15E-10	0.017233	8.10E+09	0.006874	1.38E+06
374.400	-2.09E-08	0.332324	-0.073700	7.37E-10	0.007584	8.10E+09	0.005993	1.38E+06
379.200	-1.69E-08	0.047609	-0.047695	8.50E-10	0.001087	8.10E+09	0.004842	1.38E+06
384.000	-1.27E-08	-0.125548	-0.027311	8.27E-10	0.002865	8.10E+09	0.003652	1.38E+06
388.800	-8.93E-09	-0.214573	-0.012394	7.26E-10	0.004897	8.10E+09	0.002564	1.38E+06
393.600	-5.75E-09	-0.244530	-0.002279	5.90E-10	0.005581	8.10E+09	0.001651	1.38E+06
398.400	-3.27E-09	-0.236447	0.003935	4.47E-10	0.005396	8.10E+09	0.000938	1.38E+06
403.200	-1.46E-09	-0.206752	0.007190	3.16E-10	0.004718	8.10E+09	0.000418	1.38E+06
408.000	-2.33E-10	-0.167423	0.008354	2.05E-10	0.003821	8.10E+09	6.70E-05	1.38E+06
412.800	5.13E-10	-0.126550	0.008161	1.18E-10	0.002888	8.10E+09	-0.000147	1.38E+06
417.600	9.00E-10	-0.089074	0.007187	5.42E-11	0.002033	8.10E+09	-0.000259	1.38E+06
422.400	1.03E-09	-0.057554	0.005854	1.08E-11	0.001313	8.10E+09	-0.000297	1.38E+06
427.200	1.00E-09	-0.032873	0.004450	-1.60E-11	0.000750	8.10E+09	-0.000288	1.38E+06
432.000	8.80E-10	-0.014833	0.003152	-3.01E-11	0.000339	8.10E+09	-0.000253	1.38E+06
436.800	7.15E-10	-0.002616	0.002053	-3.53E-11	5.97E-05	8.10E+09	-0.000205	1.38E+06
441.600	5.41E-10	0.004874	0.001188	-3.46E-11	0.000111	8.10E+09	-0.000155	1.38E+06
446.400	3.82E-10	0.008784	0.000551	-3.06E-11	0.000200	8.10E+09	-0.000110	1.38E+06
451.200	2.48E-10	0.010167	0.000118	-2.50E-11	0.000232	8.10E+09	-7.11E-05	1.38E+06
456.000	1.42E-10	0.009912	-0.000151	-1.90E-11	0.000226	8.10E+09	-4.08E-05	1.38E+06
460.800	6.49E-11	0.008717	-0.000294	-1.35E-11	0.000199	8.10E+09	-1.86E-05	1.38E+06
465.600	1.24E-11	0.007092	-0.000347	-8.83E-12	0.000162	8.10E+09	-3.57E-06	1.38E+06
470.400	-1.99E-11	0.005385	-0.000342	-5.13E-12	0.000123	8.10E+09	5.70E-06	1.38E+06
475.200	-3.68E-11	0.003810	-0.000303	-2.41E-12	8.69E-05	8.10E+09	1.06E-05	1.38E+06
480.000	-4.30E-11	0.002478	-0.000248	-5.46E-13	5.65E-05	8.10E+09	1.23E-05	1.38E+06
484.800	-4.21E-11	0.001430	-0.000189	6.11E-13	3.26E-05	8.10E+09	1.21E-05	1.38E+06
489.600	-3.71E-11	0.000660	-0.000135	1.23E-12	1.51E-05	8.10E+09	1.07E-05	1.38E+06
494.400	-3.03E-11	0.000136	-8.83E-05	1.47E-12	3.11E-06	8.10E+09	8.69E-06	1.38E+06
499.200	-2.30E-11	-0.000188	-5.16E-05	1.45E-12	4.28E-06	8.10E+09	6.61E-06	1.38E+06
504.000	-1.63E-11	-0.000359	-2.45E-05	1.29E-12	8.19E-06	8.10E+09	4.69E-06	1.38E+06
508.800	-1.07E-11	-0.000422	-5.87E-06	1.06E-12	9.64E-06	8.10E+09	3.06E-06	1.38E+06
513.600	-6.18E-12	-0.000415	5.73E-06	8.09E-13	9.48E-06	8.10E+09	1.77E-06	1.38E+06
518.400	-2.89E-12	-0.000367	1.20E-05	5.78E-13	8.38E-06	8.10E+09	8.28E-07	1.38E+06
523.200	-6.36E-13	-0.000300	1.44E-05	3.80E-13	6.85E-06	8.10E+09	1.83E-07	1.38E+06
528.000	7.60E-13	-0.000229	1.43E-05	2.23E-13	5.23E-06	8.10E+09	-2.18E-07	1.38E+06
532.800	1.50E-12	-0.000163	1.28E-05	1.07E-13	3.72E-06	8.10E+09	-4.32E-07	1.38E+06
537.600	1.78E-12	-0.000107	1.05E-05	2.69E-14	2.43E-06	8.10E+09	-5.12E-07	1.38E+06
542.400	1.76E-12	-6.21E-05	8.05E-06	-2.30E-14	1.42E-06	8.10E+09	-5.06E-07	1.38E+06
547.200	1.56E-12	-2.93E-05	5.76E-06	-5.01E-14	6.69E-07	8.10E+09	-4.49E-07	1.38E+06
552.000	1.28E-12	-6.85E-06	3.80E-06	-6.08E-14	1.56E-07	8.10E+09	-3.68E-07	1.38E+06
556.800	9.80E-13	7.14E-06	2.24E-06	-6.08E-14	1.63E-07	8.10E+09	-2.81E-07	1.38E+06
561.600	6.98E-13	1.46E-05	1.08E-06	-5.43E-14	3.34E-07	8.10E+09	-2.00E-07	1.38E+06
566.400	4.58E-13	1.75E-05	2.86E-07	-4.48E-14	4.00E-07	8.10E+09	-1.32E-07	1.38E+06
571.200	2.68E-13	1.74E-05	-2.15E-07	-3.44E-14	3.97E-07	8.10E+09	-7.71E-08	1.38E+06
576.000	1.28E-13	1.55E-05	-4.88E-07	-2.47E-14	3.53E-07	8.10E+09	-3.67E-08	1.38E+06
580.800	3.15E-14	1.27E-05	-5.98E-07	-1.63E-14	2.90E-07	8.10E+09	-9.05E-09	1.38E+06
585.600	-2.87E-14	9.74E-06	-5.99E-07	-9.67E-15	2.22E-07	8.10E+09	8.25E-09	1.38E+06
590.400	-6.13E-14	6.96E-06	-5.37E-07	-4.72E-15	1.59E-07	8.10E+09	1.76E-08	1.38E+06
595.200	-7.41E-14	4.58E-06	-4.44E-07	-1.30E-15	1.05E-07	8.10E+09	2.13E-08	1.38E+06

600.000	-7.38E-14	2.70E-06	-3.42E-07	8.55E-16	6.16E-08	8.10E+09	2.12E-08	1.38E+06
604.800	-6.59E-14	1.30E-06	-2.46E-07	2.04E-15	2.96E-08	8.10E+09	1.89E-08	1.38E+06
609.600	-5.42E-14	3.36E-07	-1.63E-07	2.52E-15	7.66E-09	8.10E+09	1.56E-08	1.38E+06
614.400	-4.17E-14	-2.68E-07	-9.71E-08	2.54E-15	6.12E-09	8.10E+09	1.20E-08	1.38E+06
619.200	-2.98E-14	-5.97E-07	-4.79E-08	2.29E-15	1.36E-08	8.10E+09	8.57E-09	1.38E+06
624.000	-1.97E-14	-7.28E-07	-1.37E-08	1.89E-15	1.66E-08	8.10E+09	5.66E-09	1.38E+06
628.800	-1.16E-14	-7.28E-07	7.88E-09	1.46E-15	1.66E-08	8.10E+09	3.34E-09	1.38E+06
633.600	-5.66E-15	-6.52E-07	1.98E-08	1.05E-15	1.49E-08	8.10E+09	1.63E-09	1.38E+06
638.400	-1.53E-15	-5.38E-07	2.48E-08	7.01E-16	1.23E-08	8.10E+09	4.40E-10	1.38E+06
643.200	1.07E-15	-4.14E-07	2.51E-08	4.19E-16	9.45E-09	8.10E+09	-3.07E-10	1.38E+06
648.000	2.49E-15	-2.97E-07	2.26E-08	2.08E-16	6.79E-09	8.10E+09	-7.16E-10	1.38E+06
652.800	3.07E-15	-1.97E-07	1.88E-08	6.20E-17	4.50E-09	8.10E+09	-8.82E-10	1.38E+06
657.600	3.09E-15	-1.17E-07	1.45E-08	-3.10E-17	2.67E-09	8.10E+09	-8.87E-10	1.38E+06
662.400	2.77E-15	-5.74E-08	1.05E-08	-8.27E-17	1.31E-09	8.10E+09	-7.96E-10	1.38E+06
667.200	2.30E-15	-1.62E-08	7.01E-09	-1.05E-16	3.69E-10	8.10E+09	-6.59E-10	1.38E+06
672.000	1.77E-15	9.90E-09	4.21E-09	-1.06E-16	2.26E-10	8.10E+09	-5.08E-10	1.38E+06
676.800	1.27E-15	2.42E-08	2.11E-09	-9.62E-17	5.53E-10	8.10E+09	-3.66E-10	1.38E+06
681.600	8.47E-16	3.02E-08	6.49E-10	-8.01E-17	6.88E-10	8.10E+09	-2.43E-10	1.38E+06
686.400	5.05E-16	3.05E-08	-2.82E-10	-6.22E-17	6.96E-10	8.10E+09	-1.45E-10	1.38E+06
691.200	2.50E-16	2.75E-08	-8.03E-10	-4.50E-17	6.26E-10	8.10E+09	-7.18E-11	1.38E+06
696.000	7.31E-17	2.28E-08	-1.03E-09	-3.01E-17	5.20E-10	8.10E+09	-2.10E-11	1.38E+06
700.800	-3.91E-17	1.76E-08	-1.05E-09	-1.82E-17	4.02E-10	8.10E+09	1.12E-11	1.38E+06
705.600	-1.01E-16	1.27E-08	-9.52E-10	-9.19E-18	2.90E-10	8.10E+09	2.91E-11	1.38E+06
710.400	-1.27E-16	8.47E-09	-7.95E-10	-2.92E-18	1.93E-10	8.10E+09	3.65E-11	1.38E+06
715.200	-1.29E-16	5.07E-09	-6.18E-10	1.10E-18	1.16E-10	8.10E+09	3.71E-11	1.38E+06
720.000	-1.17E-16	2.53E-09	-4.48E-10	3.35E-18	5.78E-11	8.10E+09	3.35E-11	1.38E+06
724.800	-9.71E-17	7.67E-10	-3.01E-10	4.33E-18	1.75E-11	8.10E+09	2.79E-11	1.38E+06
729.600	-7.53E-17	-3.57E-10	-1.82E-10	4.45E-18	8.15E-12	8.10E+09	2.16E-11	1.38E+06
734.400	-5.44E-17	-9.83E-10	-9.29E-11	4.05E-18	2.24E-11	8.10E+09	1.56E-11	1.38E+06
739.200	-3.64E-17	-1.25E-09	-3.04E-11	3.39E-18	2.85E-11	8.10E+09	1.04E-11	1.38E+06
744.000	-2.19E-17	-1.27E-09	9.78E-12	2.64E-18	2.91E-11	8.10E+09	6.28E-12	1.38E+06
748.800	-1.10E-17	-1.16E-09	3.25E-11	1.92E-18	2.64E-11	8.10E+09	3.17E-12	1.38E+06
753.600	-3.45E-18	-9.63E-10	4.24E-11	1.29E-18	2.20E-11	8.10E+09	9.90E-13	1.38E+06
758.400	1.39E-18	-7.48E-10	4.38E-11	7.86E-19	1.71E-11	8.10E+09	-3.99E-13	1.38E+06
763.200	4.10E-18	-5.42E-10	4.01E-11	4.04E-19	1.24E-11	8.10E+09	-1.18E-12	1.38E+06
768.000	5.27E-18	-3.64E-10	3.36E-11	1.36E-19	8.30E-12	8.10E+09	-1.51E-12	1.38E+06
772.800	5.40E-18	-2.20E-10	2.62E-11	-3.70E-20	5.01E-12	8.10E+09	-1.55E-12	1.38E+06
777.600	4.91E-18	-1.12E-10	1.91E-11	-1.35E-19	2.55E-12	8.10E+09	-1.41E-12	1.38E+06
782.400	4.11E-18	-3.60E-11	1.29E-11	-1.79E-19	8.21E-13	8.10E+09	-1.18E-12	1.38E+06
787.200	3.20E-18	1.25E-11	7.89E-12	-1.86E-19	2.85E-13	8.10E+09	-9.18E-13	1.38E+06
792.000	2.32E-18	3.98E-11	4.08E-12	-1.70E-19	9.08E-13	8.10E+09	-6.67E-13	1.38E+06
796.800	1.56E-18	5.17E-11	1.41E-12	-1.43E-19	1.18E-12	8.10E+09	-4.48E-13	1.38E+06
801.600	9.48E-19	5.33E-11	-3.21E-13	-1.12E-19	1.22E-12	8.10E+09	-2.72E-13	1.38E+06
806.400	4.85E-19	4.86E-11	-1.31E-12	-8.20E-20	1.11E-12	8.10E+09	-1.39E-13	1.38E+06
811.200	1.61E-19	4.07E-11	-1.75E-12	-5.55E-20	9.29E-13	8.10E+09	-4.62E-14	1.38E+06
816.000	-4.76E-20	3.18E-11	-1.83E-12	-3.40E-20	7.25E-13	8.10E+09	1.37E-14	1.38E+06
820.800	-1.66E-19	2.31E-11	-1.68E-12	-1.77E-20	5.28E-13	8.10E+09	4.76E-14	1.38E+06
825.600	-2.18E-19	1.56E-11	-1.42E-12	-6.27E-21	3.56E-13	8.10E+09	6.26E-14	1.38E+06
830.400	-2.26E-19	9.51E-12	-1.11E-12	1.17E-21	2.17E-13	8.10E+09	6.48E-14	1.38E+06
835.200	-2.07E-19	4.91E-12	-8.16E-13	5.44E-21	1.12E-13	8.10E+09	5.93E-14	1.38E+06
840.000	-1.74E-19	1.67E-12	-5.54E-13	7.39E-21	3.81E-14	8.10E+09	4.98E-14	1.38E+06
844.800	-1.36E-19	-4.16E-13	-3.41E-13	7.76E-21	9.50E-15	8.10E+09	3.90E-14	1.38E+06
849.600	-9.91E-20	-1.60E-12	-1.79E-13	7.16E-21	3.66E-14	8.10E+09	2.85E-14	1.38E+06
854.400	-6.70E-20	-2.14E-12	-6.48E-14	6.05E-21	4.88E-14	8.10E+09	1.92E-14	1.38E+06
859.200	-4.10E-20	-2.23E-12	9.65E-15	4.76E-21	5.08E-14	8.10E+09	1.18E-14	1.38E+06
864.000	-2.13E-20	-2.04E-12	5.26E-14	3.50E-21	4.67E-14	8.10E+09	6.12E-15	1.38E+06
868.800	-7.44E-21	-1.72E-12	7.24E-14	2.38E-21	3.93E-14	8.10E+09	2.14E-15	1.38E+06
873.600	1.54E-21	-1.35E-12	7.65E-14	1.47E-21	3.08E-14	8.10E+09	-4.41E-16	1.38E+06
878.400	6.68E-21	-9.87E-13	7.08E-14	7.78E-22	2.25E-14	8.10E+09	-1.92E-15	1.38E+06
883.200	9.01E-21	-6.69E-13	6.00E-14	2.88E-22	1.53E-14	8.10E+09	-2.59E-15	1.38E+06
888.000	9.44E-21	-4.11E-13	4.73E-14	-3.24E-23	9.38E-15	8.10E+09	-2.71E-15	1.38E+06
892.800	8.70E-21	-2.15E-13	3.48E-14	-2.18E-22	4.91E-15	8.10E+09	-2.50E-15	1.38E+06
897.600	7.35E-21	-7.69E-14	2.38E-14	-3.04E-22	1.76E-15	8.10E+09	-2.11E-15	1.38E+06
902.400	5.77E-21	1.28E-14	1.47E-14	-3.23E-22	2.93E-16	8.10E+09	-1.66E-15	1.38E+06
907.200	4.24E-21	6.44E-14	7.81E-15	-3.01E-22	1.47E-15	8.10E+09	-1.22E-15	1.38E+06
912.000	2.89E-21	8.78E-14	2.90E-15	-2.56E-22	2.00E-15	8.10E+09	-8.29E-16	1.38E+06
916.800	1.79E-21	9.22E-14	-3.21E-16	-2.02E-22	2.10E-15	8.10E+09	-5.13E-16	1.38E+06
921.600	9.48E-22	8.47E-14	-2.21E-15	-1.50E-22	1.93E-15	8.10E+09	-2.72E-16	1.38E+06
926.400	3.50E-22	7.10E-14	-3.10E-15	-1.04E-22	1.62E-15	8.10E+09	-1.00E-16	1.38E+06
931.200	-4.64E-23	5.50E-14	-3.31E-15	-6.63E-23	1.25E-15	8.10E+09	1.33E-17	1.38E+06
936.000	-2.86E-22	3.93E-14	-3.08E-15	-3.83E-23	8.96E-16	8.10E+09	8.22E-17	1.38E+06
940.800	-4.15E-22	2.54E-14	-2.60E-15	-1.92E-23	5.80E-16	8.10E+09	1.19E-16	1.38E+06
945.600	-4.71E-22	1.43E-14	-1.99E-15	-7.42E-24	3.27E-16	8.10E+09	1.35E-16	1.38E+06
950.400	-4.86E-22	6.34E-15	-1.33E-15	-1.29E-24	1.45E-16	8.10E+09	1.39E-16	1.38E+06
955.200	-4.83E-22	1.57E-15	-6.61E-16	1.05E-24	3.59E-17	8.10E+09	1.39E-16	1.38E+06
960.000	-4.76E-22	0.000	0.000	1.52E-24	0.000	8.10E+09	1.37E-16	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	0.91544593 in
Computed slope at pile head	=	-0.01434839
Maximum bending moment	=	1533600. lbs-in
Maximum shear force	=	-35103.89161 lbs
Depth of maximum bending moment	=	72.00000000 in
Depth of maximum shear force	=	100.80000 in
Number of iterations	=	26
Number of zero deflection points	=	15

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 40000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	1.588	0.000	40000.	-0.022854	0.000	8.10E+09	0.000	0.000
4.800	1.478	1.92E+05	40000.	-0.022797	4381.757	8.10E+09	0.000	0.000
9.600	1.369	3.84E+05	40000.	-0.022626	8763.514	8.10E+09	0.000	0.000
14.400	1.261	5.76E+05	39917.	-0.022342	13145.	8.10E+09	-34.627	131.791
19.200	1.155	7.67E+05	39539.	-0.021944	17509.	8.10E+09	-122.700	510.036
24.000	1.050	9.56E+05	38707.	-0.021434	21808.	8.10E+09	-224.124	1024.083
28.800	0.948975	1.14E+06	37389.	-0.020813	25989.	8.10E+09	-324.814	1642.937
33.600	0.850691	1.31E+06	35624.	-0.020086	29999.	8.10E+09	-410.679	2317.249
38.400	0.756145	1.48E+06	33516.	-0.019258	33794.	8.10E+09	-467.634	2968.538
43.200	0.665810	1.64E+06	31238.	-0.018335	37342.	8.10E+09	-481.590	3471.910
48.000	0.580130	1.78E+06	28805.	-0.017323	40638.	8.10E+09	-532.415	4405.213
52.800	0.499513	1.91E+06	25935.	-0.016228	43653.	8.10E+09	-663.044	6371.427
57.600	0.424336	2.03E+06	22406.	-0.015061	46320.	8.10E+09	-807.705	9136.587
62.400	0.354932	2.13E+06	18148.	-0.013829	48562.	8.10E+09	-966.399	13069.
67.200	0.291579	2.20E+06	13095.	-0.012546	50296.	8.10E+09	-1139.127	18752.
72.000	0.234494	2.25E+06	7178.551	-0.011225	51431.	8.10E+09	-1325.887	27140.
76.800	0.183818	2.27E+06	332.412	-0.009884	51869.	8.10E+09	-1526.671	39866.
81.600	0.139605	2.26E+06	-7510.114	-0.008542	51504.	8.10E+09	-1741.049	59862.
86.400	0.101811	2.20E+06	-16397.	-0.007222	50223.	8.10E+09	-1961.993	92500.
91.200	0.070276	2.10E+06	-26231.	-0.005948	47911.	8.10E+09	-2135.484	1.46E+05
96.000	0.044711	1.95E+06	-36328.	-0.004749	44476.	8.10E+09	-2071.446	2.22E+05
100.800	0.024689	1.75E+06	-45015.	-0.003653	39952.	8.10E+09	-1548.198	3.01E+05
105.600	0.009646	1.52E+06	-50432.	-0.002685	34614.	8.10E+09	-708.861	3.53E+05
110.400	-0.001084	1.27E+06	-51929.	-0.001860	28903.	8.10E+09	85.337	3.78E+05
115.200	-0.008212	1.02E+06	-50115.	-0.001183	23237.	8.10E+09	670.277	3.92E+05
120.000	-0.012445	7.85E+05	-45987.	-0.000649	17924.	8.10E+09	1049.634	4.05E+05
124.800	-0.014444	5.77E+05	-40432.	-0.000246	13162.	8.10E+09	1265.004	4.20E+05
129.600	-0.014802	3.97E+05	-34150.	4.30E-05	9065.361	8.10E+09	1352.601	4.39E+05
134.400	-0.014031	2.49E+05	-27686.	0.000234	5680.053	8.10E+09	1340.770	4.59E+05
139.200	-0.012552	1.31E+05	-21458.	0.000347	2999.737	8.10E+09	1254.144	4.80E+05
144.000	-0.010700	42892.	-15770.	0.000399	978.863	8.10E+09	1115.857	5.01E+05
148.800	-0.008725	-19950.	-10818.	0.000405	455.281	8.10E+09	947.433	5.21E+05
153.600	-0.006807	-60962.	-6701.907	0.000382	1391.255	8.10E+09	767.655	5.41E+05
158.400	-0.005062	-84288.	-3439.869	0.000338	1923.588	8.10E+09	591.528	5.61E+05
163.200	-0.003558	-93985.	-988.561	0.000286	2144.889	8.10E+09	429.850	5.80E+05
168.000	-0.002320	-93778.	737.640	0.000230	2140.170	8.10E+09	289.401	5.99E+05
172.800	-0.001349	-86903.	1848.640	0.000177	1983.281	8.10E+09	173.516	6.17E+05
177.600	-0.000625	-76031.	2463.890	0.000128	1735.155	8.10E+09	82.838	6.36E+05
182.400	-0.000118	-63250.	2701.241	8.70E-05	1443.472	8.10E+09	16.058	6.54E+05
187.200	0.000210	-50099.	2669.199	5.34E-05	1143.346	8.10E+09	-29.409	6.73E+05
192.000	0.000395	-37626.	2462.118	2.74E-05	858.683	8.10E+09	-56.875	6.91E+05
196.800	0.000473	-26463.	2157.755	8.44E-06	603.926	8.10E+09	-69.943	7.10E+05
201.600	0.000476	-16911.	1816.621	-4.41E-06	385.945	8.10E+09	-72.196	7.28E+05
206.400	0.000431	-9023.283	1443.033	-1.21E-05	205.926	8.10E+09	-83.466	9.30E+05
211.200	0.000360	-3058.246	1051.202	-1.57E-05	69.794	8.10E+09	-79.797	1.06E+06
216.000	0.000280	1068.257	679.772	-1.63E-05	24.379	8.10E+09	-74.965	1.28E+06

220.800	0.000204	3467.568	359.452	-1.49E-05	79.136	8.10E+09	-58.502	1.38E+06
225.600	0.000137	4518.992	124.586	-1.26E-05	103.131	8.10E+09	-39.358	1.38E+06
230.400	8.33E-05	4663.597	-27.245	-9.83E-06	106.431	8.10E+09	-23.905	1.38E+06
235.200	4.27E-05	4257.437	-114.038	-7.19E-06	97.162	8.10E+09	-12.259	1.38E+06
240.000	1.42E-05	3568.833	-153.273	-4.87E-06	81.447	8.10E+09	-4.089	1.38E+06
244.800	-4.06E-06	2786.012	-160.289	-2.99E-06	63.581	8.10E+09	1.166	1.38E+06
249.600	-1.44E-05	2030.063	-147.536	-1.56E-06	46.329	8.10E+09	4.147	1.38E+06
254.400	-1.91E-05	1369.662	-124.455	-5.54E-07	31.258	8.10E+09	5.470	1.38E+06
259.200	-1.98E-05	835.295	-97.706	9.88E-08	19.063	8.10E+09	5.675	1.38E+06
264.000	-1.81E-05	431.682	-71.611	4.74E-07	9.852	8.10E+09	5.198	1.38E+06
268.800	-1.52E-05	147.828	-48.653	6.46E-07	3.374	8.10E+09	4.368	1.38E+06
273.600	-1.19E-05	-35.384	-29.967	6.79E-07	0.807531	8.10E+09	3.418	1.38E+06
278.400	-8.69E-06	-139.851	-15.773	6.27E-07	3.192	8.10E+09	2.496	1.38E+06
283.200	-5.88E-06	-186.803	-5.728	5.30E-07	4.263	8.10E+09	1.689	1.38E+06
288.000	-3.60E-06	-194.841	0.807490	4.17E-07	4.447	8.10E+09	1.034	1.38E+06
292.800	-1.88E-06	-179.051	4.582	3.07E-07	4.086	8.10E+09	0.538512	1.38E+06
297.600	-6.58E-07	-150.854	6.328	2.09E-07	3.443	8.10E+09	0.189023	1.38E+06
302.400	1.30E-07	-118.301	6.692	1.29E-07	2.700	8.10E+09	-0.037292	1.38E+06
307.200	5.82E-07	-86.608	6.202	6.85E-08	1.977	8.10E+09	-0.167012	1.38E+06
312.000	7.87E-07	-58.763	5.259	2.54E-08	1.341	8.10E+09	-0.226014	1.38E+06
316.800	8.26E-07	-36.125	4.147	-2.70E-09	0.824441	8.10E+09	-0.237036	1.38E+06
321.600	7.61E-07	-18.949	3.054	-1.90E-08	0.432445	8.10E+09	-0.218560	1.38E+06
326.400	6.43E-07	-6.808	2.086	-2.67E-08	0.155371	8.10E+09	-0.184613	1.38E+06
331.200	5.05E-07	1.079	1.295	-2.83E-08	0.024632	8.10E+09	-0.145106	1.38E+06
336.000	3.71E-07	5.623	0.691140	-2.64E-08	0.128337	8.10E+09	-0.106481	1.38E+06
340.800	2.52E-07	7.714	0.261712	-2.24E-08	0.176053	8.10E+09	-0.072447	1.38E+06
345.600	1.56E-07	8.136	-0.019472	-1.77E-08	0.185675	8.10E+09	-0.044713	1.38E+06
350.400	8.23E-08	7.527	-0.183473	-1.31E-08	0.171787	8.10E+09	-0.023621	1.38E+06
355.200	3.02E-08	6.375	-0.260986	-8.96E-09	0.145478	8.10E+09	-0.008676	1.38E+06
360.000	-3.71E-09	5.022	-0.279252	-5.58E-09	0.114608	8.10E+09	0.001065	1.38E+06
364.800	-2.34E-08	3.694	-0.260606	-3.00E-09	0.084297	8.10E+09	0.006705	1.38E+06
369.600	-3.25E-08	2.520	-0.222125	-1.16E-09	0.057512	8.10E+09	0.009329	1.38E+06
374.400	-3.45E-08	1.561	-0.175988	5.16E-11	0.035632	8.10E+09	0.009895	1.38E+06
379.200	-3.20E-08	0.830587	-0.130192	7.60E-10	0.018955	8.10E+09	0.009187	1.38E+06
384.000	-2.72E-08	0.311496	-0.089424	1.10E-09	0.007109	8.10E+09	0.007800	1.38E+06
388.800	-2.15E-08	-0.027887	-0.055924	1.18E-09	0.000636	8.10E+09	0.006159	1.38E+06
393.600	-1.58E-08	-0.225370	-0.030245	1.11E-09	0.005143	8.10E+09	0.004541	1.38E+06
398.400	-1.08E-08	-0.318239	-0.011893	9.46E-10	0.007263	8.10E+09	0.003106	1.38E+06
403.200	-6.73E-09	-0.339540	0.000199	7.52E-10	0.007749	8.10E+09	0.001932	1.38E+06
408.000	-3.60E-09	-0.316331	0.007319	5.57E-10	0.007219	8.10E+09	0.001035	1.38E+06
412.800	-1.38E-09	-0.269282	0.010752	3.84E-10	0.006145	8.10E+09	0.000396	1.38E+06
417.600	8.09E-11	-0.213115	0.011646	2.41E-10	0.004864	8.10E+09	-2.32E-05	1.38E+06
422.400	9.34E-10	-0.157482	0.010946	1.31E-10	0.003594	8.10E+09	-0.000268	1.38E+06
427.200	1.34E-09	-0.108029	0.009380	5.25E-11	0.002465	8.10E+09	-0.000385	1.38E+06
432.000	1.44E-09	-0.067438	0.007466	4.90E-13	0.001539	8.10E+09	-0.000413	1.38E+06
436.800	1.34E-09	-0.036359	0.005548	-3.03E-11	0.000830	8.10E+09	-0.000386	1.38E+06
441.600	1.15E-09	-0.014172	0.003831	-4.52E-11	0.000323	8.10E+09	-0.000329	1.38E+06
446.400	9.10E-10	0.000423	0.002414	-4.93E-11	9.66E-06	8.10E+09	-0.000261	1.38E+06
451.200	6.74E-10	0.008998	0.001322	-4.65E-11	0.000205	8.10E+09	-0.000194	1.38E+06
456.000	4.64E-10	0.013114	0.000538	-4.00E-11	0.000299	8.10E+09	-0.000133	1.38E+06
460.800	2.91E-10	0.014162	1.82E-05	-3.19E-11	0.000323	8.10E+09	-8.34E-05	1.38E+06
465.600	1.58E-10	0.013288	-0.000291	-2.37E-11	0.000303	8.10E+09	-4.53E-05	1.38E+06
470.400	6.26E-11	0.011372	-0.000442	-1.64E-11	0.000260	8.10E+09	-1.80E-05	1.38E+06
475.200	-1.86E-13	0.009041	-0.000485	-1.04E-11	0.000206	8.10E+09	5.35E-08	1.38E+06
480.000	-3.72E-11	0.006712	-0.000460	-5.73E-12	0.000153	8.10E+09	1.07E-05	1.38E+06
484.800	-5.52E-11	0.004629	-0.000396	-2.37E-12	0.000106	8.10E+09	1.58E-05	1.38E+06
489.600	-6.00E-11	0.002911	-0.000317	-1.34E-13	6.64E-05	8.10E+09	1.72E-05	1.38E+06
494.400	-5.65E-11	0.001590	-0.000236	1.20E-12	3.63E-05	8.10E+09	1.62E-05	1.38E+06
499.200	-4.84E-11	0.000642	-0.000164	1.86E-12	1.46E-05	8.10E+09	1.39E-05	1.38E+06
504.000	-3.86E-11	1.43E-05	-0.000104	2.05E-12	3.25E-07	8.10E+09	1.11E-05	1.38E+06
508.800	-2.87E-11	-0.000358	-5.77E-05	1.95E-12	8.16E-06	8.10E+09	8.25E-06	1.38E+06
513.600	-1.99E-11	-0.000540	-2.42E-05	1.69E-12	1.23E-05	8.10E+09	5.70E-06	1.38E+06
518.400	-1.25E-11	-0.000590	-1.90E-06	1.35E-12	1.35E-05	8.10E+09	3.60E-06	1.38E+06
523.200	-6.89E-12	-0.000558	1.15E-05	1.01E-12	1.27E-05	8.10E+09	1.98E-06	1.38E+06
528.000	-2.83E-12	-0.000480	1.82E-05	7.04E-13	1.10E-05	8.10E+09	8.11E-07	1.38E+06
532.800	-1.30E-13	-0.000383	2.02E-05	4.48E-13	8.75E-06	8.10E+09	3.72E-08	1.38E+06
537.600	1.48E-12	-0.000286	1.93E-05	2.50E-13	6.53E-06	8.10E+09	-4.24E-07	1.38E+06
542.400	2.27E-12	-0.000198	1.67E-05	1.06E-13	4.52E-06	8.10E+09	-6.52E-07	1.38E+06
547.200	2.50E-12	-0.000126	1.34E-05	1.05E-14	2.87E-06	8.10E+09	-7.17E-07	1.38E+06
552.000	2.37E-12	-6.94E-05	1.01E-05	-4.72E-14	1.58E-06	8.10E+09	-6.81E-07	1.38E+06
556.800	2.05E-12	-2.89E-05	7.03E-06	-7.64E-14	6.60E-07	8.10E+09	-5.87E-07	1.38E+06
561.600	1.64E-12	-1.97E-06	4.49E-06	-8.55E-14	4.50E-08	8.10E+09	-4.70E-07	1.38E+06
566.400	1.22E-12	1.42E-05	2.52E-06	-8.19E-14	3.23E-07	8.10E+09	-3.51E-07	1.38E+06
571.200	8.51E-13	2.22E-05	1.09E-06	-7.12E-14	5.06E-07	8.10E+09	-2.44E-07	1.38E+06
576.000	5.41E-13	2.46E-05	1.28E-07	-5.73E-14	5.61E-07	8.10E+09	-1.55E-07	1.38E+06
580.800	3.01E-13	2.34E-05	-4.51E-07	-4.31E-14	5.35E-07	8.10E+09	-8.63E-08	1.38E+06
585.600	1.27E-13	2.03E-05	-7.46E-07	-3.01E-14	4.62E-07	8.10E+09	-3.65E-08	1.38E+06
590.400	1.13E-14	1.63E-05	-8.42E-07	-1.93E-14	3.71E-07	8.10E+09	-3.25E-09	1.38E+06
595.200	-5.83E-14	1.22E-05	-8.09E-07	-1.09E-14	2.78E-07	8.10E+09	1.67E-08	1.38E+06
600.000	-9.32E-14	8.49E-06	-7.05E-07	-4.77E-15	1.94E-07	8.10E+09	2.68E-08	1.38E+06
604.800	-1.04E-13	5.41E-06	-5.69E-07	-6.50E-16	1.24E-07	8.10E+09	2.99E-08	1.38E+06

609.600	-9.95E-14	3.03E-06	-4.29E-07	1.85E-15	6.91E-08	8.10E+09	2.86E-08	1.38E+06
614.400	-8.63E-14	1.30E-06	-3.01E-07	3.13E-15	2.97E-08	8.10E+09	2.48E-08	1.38E+06
619.200	-6.94E-14	1.42E-07	-1.93E-07	3.56E-15	3.23E-09	8.10E+09	1.99E-08	1.38E+06
624.000	-5.21E-14	-5.57E-07	-1.10E-07	3.44E-15	1.27E-08	8.10E+09	1.50E-08	1.38E+06
628.800	-3.64E-14	-9.11E-07	-4.86E-08	3.00E-15	2.08E-08	8.10E+09	1.05E-08	1.38E+06
633.600	-2.33E-14	-1.02E-06	-7.47E-09	2.43E-15	2.34E-08	8.10E+09	6.69E-09	1.38E+06
638.400	-1.31E-14	-9.83E-07	1.76E-08	1.83E-15	2.24E-08	8.10E+09	3.76E-09	1.38E+06
643.200	-5.70E-15	-8.55E-07	3.06E-08	1.29E-15	1.95E-08	8.10E+09	1.64E-09	1.38E+06
648.000	-7.28E-16	-6.89E-07	3.50E-08	8.32E-16	1.57E-08	8.10E+09	2.09E-10	1.38E+06
652.800	2.29E-15	-5.19E-07	3.39E-08	4.74E-16	1.18E-08	8.10E+09	-6.56E-10	1.38E+06
657.600	3.83E-15	-3.63E-07	2.97E-08	2.13E-16	8.29E-09	8.10E+09	-1.10E-09	1.38E+06
662.400	4.33E-15	-2.33E-07	2.41E-08	3.62E-17	5.32E-09	8.10E+09	-1.24E-09	1.38E+06
667.200	4.17E-15	-1.32E-07	1.82E-08	-7.20E-17	3.01E-09	8.10E+09	-1.20E-09	1.38E+06
672.000	3.64E-15	-5.82E-08	1.29E-08	-1.28E-16	1.33E-09	8.10E+09	-1.05E-09	1.38E+06
676.800	2.94E-15	-8.46E-09	8.33E-09	-1.48E-16	1.93E-10	8.10E+09	-8.45E-10	1.38E+06
681.600	2.22E-15	2.18E-08	4.77E-09	-1.44E-16	4.97E-10	8.10E+09	-6.37E-10	1.38E+06
686.400	1.56E-15	3.73E-08	2.17E-09	-1.27E-16	8.52E-10	8.10E+09	-4.47E-10	1.38E+06
691.200	1.00E-15	4.26E-08	4.03E-10	-1.03E-16	9.72E-10	8.10E+09	-2.88E-10	1.38E+06
696.000	5.71E-16	4.12E-08	-6.82E-10	-7.80E-17	9.41E-10	8.10E+09	-1.64E-10	1.38E+06
700.800	2.55E-16	3.60E-08	-1.25E-09	-5.52E-17	8.23E-10	8.10E+09	-7.32E-11	1.38E+06
705.600	4.14E-17	2.92E-08	-1.46E-09	-3.58E-17	6.66E-10	8.10E+09	-1.19E-11	1.38E+06
710.400	-8.91E-17	2.21E-08	-1.42E-09	-2.06E-17	5.04E-10	8.10E+09	2.56E-11	1.38E+06
715.200	-1.57E-16	1.55E-08	-1.25E-09	-9.49E-18	3.55E-10	8.10E+09	4.50E-11	1.38E+06
720.000	-1.80E-16	1.00E-08	-1.02E-09	-1.90E-18	2.29E-10	8.10E+09	5.17E-11	1.38E+06
724.800	-1.75E-16	5.74E-09	-7.76E-10	2.77E-18	1.31E-10	8.10E+09	5.02E-11	1.38E+06
729.600	-1.53E-16	2.60E-09	-5.50E-10	5.24E-18	5.92E-11	8.10E+09	4.41E-11	1.38E+06
734.400	-1.25E-16	4.63E-10	-3.58E-10	6.15E-18	1.06E-11	8.10E+09	3.58E-11	1.38E+06
739.200	-9.44E-17	-8.45E-10	-2.07E-10	6.04E-18	1.93E-11	8.10E+09	2.71E-11	1.38E+06
744.000	-6.67E-17	-1.53E-09	-9.64E-11	5.33E-18	3.49E-11	8.10E+09	1.91E-11	1.38E+06
748.800	-4.32E-17	-1.77E-09	-2.07E-11	4.36E-18	4.04E-11	8.10E+09	1.24E-11	1.38E+06
753.600	-2.48E-17	-1.73E-09	2.62E-11	3.32E-18	3.94E-11	8.10E+09	7.13E-12	1.38E+06
758.400	-1.14E-17	-1.52E-09	5.11E-11	2.36E-18	3.47E-11	8.10E+09	3.26E-12	1.38E+06
763.200	-2.20E-18	-1.24E-09	6.05E-11	1.54E-18	2.82E-11	8.10E+09	6.31E-13	1.38E+06
768.000	3.44E-18	-9.40E-10	5.96E-11	8.97E-19	2.14E-11	8.10E+09	-9.88E-13	1.38E+06
772.800	6.41E-18	-6.65E-10	5.28E-11	4.21E-19	1.52E-11	8.10E+09	-1.84E-12	1.38E+06
777.600	7.49E-18	-4.33E-10	4.32E-11	9.63E-20	9.87E-12	8.10E+09	-2.15E-12	1.38E+06
782.400	7.33E-18	-2.50E-10	3.30E-11	-1.06E-19	5.70E-12	8.10E+09	-2.11E-12	1.38E+06
787.200	6.47E-18	-1.16E-10	2.35E-11	-2.14E-19	2.64E-12	8.10E+09	-1.86E-12	1.38E+06
792.000	5.28E-18	-2.40E-11	1.54E-11	-2.55E-19	5.49E-13	8.10E+09	-1.52E-12	1.38E+06
796.800	4.02E-18	3.25E-11	9.01E-12	-2.53E-19	7.42E-13	8.10E+09	-1.15E-12	1.38E+06
801.600	2.85E-18	6.25E-11	4.28E-12	-2.25E-19	1.43E-12	8.10E+09	-8.18E-13	1.38E+06
806.400	1.86E-18	7.36E-11	1.03E-12	-1.84E-19	1.68E-12	8.10E+09	-5.34E-13	1.38E+06
811.200	1.08E-18	7.24E-11	-9.93E-13	-1.41E-19	1.65E-12	8.10E+09	-3.10E-13	1.38E+06
816.000	5.05E-19	6.41E-11	-2.08E-12	-1.01E-19	1.46E-12	8.10E+09	-1.45E-13	1.38E+06
820.800	1.12E-19	5.24E-11	-2.51E-12	-6.63E-20	1.20E-12	8.10E+09	-3.22E-14	1.38E+06
825.600	-1.32E-19	4.00E-11	-2.50E-12	-3.89E-20	9.12E-13	8.10E+09	3.78E-14	1.38E+06
830.400	-2.62E-19	2.84E-11	-2.22E-12	-1.87E-20	6.49E-13	8.10E+09	7.51E-14	1.38E+06
835.200	-3.11E-19	1.86E-11	-1.83E-12	-4.74E-21	4.25E-13	8.10E+09	8.93E-14	1.38E+06
840.000	-3.07E-19	1.09E-11	-1.40E-12	3.99E-21	2.48E-13	8.10E+09	8.82E-14	1.38E+06
844.800	-2.73E-19	5.13E-12	-1.00E-12	8.72E-21	1.17E-13	8.10E+09	7.83E-14	1.38E+06
849.600	-2.23E-19	1.21E-12	-6.63E-13	1.06E-20	2.75E-14	8.10E+09	6.42E-14	1.38E+06
854.400	-1.71E-19	-1.24E-12	-3.91E-13	1.06E-20	2.82E-14	8.10E+09	4.91E-14	1.38E+06
859.200	-1.22E-19	-2.55E-12	-1.89E-13	9.47E-21	5.82E-14	8.10E+09	3.50E-14	1.38E+06
864.000	-8.00E-20	-3.05E-12	-5.03E-14	7.81E-21	6.97E-14	8.10E+09	2.30E-14	1.38E+06
868.800	-4.69E-20	-3.03E-12	3.71E-14	6.00E-21	6.92E-14	8.10E+09	1.35E-14	1.38E+06
873.600	-2.24E-20	-2.70E-12	8.49E-14	4.31E-21	6.16E-14	8.10E+09	6.43E-15	1.38E+06
878.400	-5.55E-21	-2.22E-12	1.04E-13	2.85E-21	5.06E-14	8.10E+09	1.59E-15	1.38E+06
883.200	4.98E-21	-1.70E-12	1.04E-13	1.69E-21	3.88E-14	8.10E+09	-1.43E-15	1.38E+06
888.000	1.07E-20	-1.21E-12	9.37E-14	8.27E-22	2.77E-14	8.10E+09	-3.07E-15	1.38E+06
892.800	1.29E-20	-8.00E-13	7.74E-14	2.31E-22	1.82E-14	8.10E+09	-3.71E-15	1.38E+06
897.600	1.29E-20	-4.70E-13	5.97E-14	-1.46E-22	1.07E-14	8.10E+09	-3.70E-15	1.38E+06
902.400	1.15E-20	-2.27E-13	4.28E-14	-3.52E-22	5.17E-15	8.10E+09	-3.31E-15	1.38E+06
907.200	9.51E-21	-5.92E-14	2.84E-14	-4.37E-22	1.35E-15	8.10E+09	-2.73E-15	1.38E+06
912.000	7.33E-21	4.54E-14	1.67E-14	-4.41E-22	1.04E-15	8.10E+09	-2.10E-15	1.38E+06
916.800	5.28E-21	1.02E-13	8.06E-15	-3.97E-22	2.32E-15	8.10E+09	-1.52E-15	1.38E+06
921.600	3.52E-21	1.23E-13	2.00E-15	-3.31E-22	2.80E-15	8.10E+09	-1.01E-15	1.38E+06
926.400	2.10E-21	1.21E-13	-1.87E-15	-2.59E-22	2.76E-15	8.10E+09	-6.03E-16	1.38E+06
931.200	1.03E-21	1.05E-13	-4.03E-15	-1.92E-22	2.39E-15	8.10E+09	-2.96E-16	1.38E+06
936.000	2.60E-22	8.21E-14	-4.92E-15	-1.36E-22	1.87E-15	8.10E+09	-7.46E-17	1.38E+06
940.800	-2.78E-22	5.76E-14	-4.91E-15	-9.51E-23	1.32E-15	8.10E+09	8.00E-17	1.38E+06
945.600	-6.53E-22	3.50E-14	-4.26E-15	-6.76E-23	7.99E-16	8.10E+09	1.87E-16	1.38E+06
950.400	-9.28E-22	1.67E-14	-3.17E-15	-5.23E-23	3.81E-16	8.10E+09	2.66E-16	1.38E+06
955.200	-1.16E-21	4.53E-15	-1.74E-15	-4.60E-23	1.03E-16	8.10E+09	3.32E-16	1.38E+06
960.000	-1.37E-21	0.000	0.000	-4.47E-23	0.000	8.10E+09	3.93E-16	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection	=	1.58807189 in
Computed slope at pile head	=	-0.02285388
Maximum bending moment	=	2272783. lbs-in
Maximum shear force	=	-51928.53651 lbs
Depth of maximum bending moment	=	76.80000000 in
Depth of maximum shear force	=	110.40000 in
Number of iterations	=	29
Number of zero deflection points	=	15

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 50000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	2.545	-3.12E-07	50000.	-0.034087	7.13E-09	8.10E+09	0.000	0.000
4.800	2.381	2.40E+05	50000.	-0.034016	5477.196	8.10E+09	0.000	0.000
9.600	2.218	4.80E+05	50000.	-0.033803	10954.	8.10E+09	0.000	0.000
14.400	2.056	7.20E+05	49917.	-0.033447	16432.	8.10E+09	-34.627	80.823
19.200	1.897	9.59E+05	49539.	-0.032950	21891.	8.10E+09	-122.699	310.480
24.000	1.740	1.20E+06	48707.	-0.032311	27285.	8.10E+09	-224.124	618.227
28.800	1.587	1.43E+06	47389.	-0.031534	32562.	8.10E+09	-324.813	982.586
33.600	1.437	1.65E+06	45624.	-0.030623	37668.	8.10E+09	-410.678	1371.407
38.400	1.293	1.86E+06	43516.	-0.029581	42557.	8.10E+09	-467.633	1736.321
43.200	1.153	2.07E+06	41238.	-0.028416	47201.	8.10E+09	-481.588	2004.156
48.000	1.020	2.26E+06	38805.	-0.027134	51592.	8.10E+09	-532.413	2505.574
52.800	0.892932	2.44E+06	35936.	-0.025741	55703.	8.10E+09	-663.040	3564.208
57.600	0.772846	2.61E+06	32406.	-0.024246	59465.	8.10E+09	-807.700	5016.474
62.400	0.660171	2.75E+06	28148.	-0.022654	62803.	8.06E+09	-966.393	7026.497
67.200	0.555363	2.88E+06	23095.	-0.020955	65632.	7.85E+09	-1139.118	9845.393
72.000	0.459001	2.97E+06	17179.	-0.019126	67863.	7.52E+09	-1325.876	13865.
76.800	0.371749	3.04E+06	10333.	-0.017165	69396.	7.21E+09	-1526.667	19712.
81.600	0.294220	3.07E+06	2489.050	-0.015102	70126.	7.02E+09	-1741.489	28411.
86.400	0.226769	3.06E+06	-6419.342	-0.013012	69941.	7.07E+09	-1970.341	41706.
91.200	0.169301	3.01E+06	-16459.	-0.010990	68720.	7.35E+09	-2212.961	62742.
96.000	0.121268	2.91E+06	-27683.	-0.009108	66335.	7.76E+09	-2463.432	97507.
100.800	0.081867	2.75E+06	-39987.	-0.007391	62655.	8.06E+09	-2663.509	1.56E+05
105.600	0.050310	2.52E+06	-52530.	-0.005827	57574.	8.10E+09	-2562.644	2.44E+05
110.400	0.025927	2.24E+06	-63044.	-0.004416	51146.	8.10E+09	-1818.192	3.37E+05
115.200	0.007919	1.92E+06	-68960.	-0.003184	43762.	8.10E+09	-646.820	3.92E+05
120.000	-0.004636	1.58E+06	-69554.	-0.002148	36038.	8.10E+09	399.228	4.13E+05
124.800	-0.012701	1.25E+06	-65909.	-0.001310	28524.	8.10E+09	1119.782	4.23E+05
129.600	-0.017210	9.46E+05	-59484.	-0.000659	21598.	8.10E+09	1557.012	4.34E+05
134.400	-0.019028	6.79E+05	-51470.	-0.000178	15491.	8.10E+09	1782.476	4.50E+05
139.200	-0.018916	4.52E+05	-42757.	0.000157	10322.	8.10E+09	1847.671	4.69E+05
144.000	-0.017517	2.68E+05	-34027.	0.000371	6123.759	8.10E+09	1789.769	4.90E+05
148.800	-0.015355	1.26E+05	-25794.	0.000488	2866.806	8.10E+09	1640.798	5.13E+05
153.600	-0.012836	20708.	-18421.	0.000531	472.601	8.10E+09	1431.350	5.35E+05
158.400	-0.010258	-51223.	-12129.	0.000522	1168.984	8.10E+09	1190.091	5.57E+05
163.200	-0.007826	-95734.	-7013.081	0.000478	2184.806	8.10E+09	941.715	5.78E+05
168.000	-0.005666	-1.19E+05	-3060.220	0.000415	2705.464	8.10E+09	705.310	5.97E+05
172.800	-0.003843	-1.25E+05	-182.230	0.000343	2855.263	8.10E+09	493.852	6.17E+05
177.600	-0.002376	-1.20E+05	1758.267	0.000270	2745.389	8.10E+09	314.688	6.36E+05
182.400	-0.001251	-1.08E+05	2922.903	0.000202	2470.048	8.10E+09	170.577	6.54E+05
187.200	-0.000434	-92238.	3478.388	0.000143	2105.016	8.10E+09	60.875	6.73E+05
192.000	0.000120	-74840.	3582.865	9.34E-05	1707.976	8.10E+09	-17.343	6.91E+05
196.800	0.000462	-57842.	3377.185	5.41E-05	1320.054	8.10E+09	-68.356	7.10E+05
201.600	0.000640	-42419.	2980.227	2.44E-05	968.075	8.10E+09	-97.043	7.28E+05
206.400	0.000697	-29232.	2521.431	3.17E-06	667.123	8.10E+09	-94.122	6.49E+05
211.200	0.000670	-18213.	2071.813	-1.09E-05	415.660	8.10E+09	-93.219	6.68E+05
216.000	0.000592	-9342.606	1631.188	-1.90E-05	213.214	8.10E+09	-90.375	7.33E+05
220.800	0.000487	-2554.021	1207.690	-2.26E-05	58.287	8.10E+09	-86.083	8.48E+05
225.600	0.000375	2251.214	807.543	-2.27E-05	51.376	8.10E+09	-80.645	1.03E+06

230.400	0.000270	5198.391	435.783	-2.05E-05	118.636	8.10E+09	-74.255	1.32E+06
235.200	0.000179	6434.728	134.189	-1.70E-05	146.851	8.10E+09	-51.409	1.38E+06
240.000	0.000107	6486.609	-62.624	-1.32E-05	148.035	8.10E+09	-30.597	1.38E+06
244.800	5.25E-05	5833.541	-172.251	-9.53E-06	133.131	8.10E+09	-15.081	1.38E+06
249.600	1.51E-05	4832.999	-218.836	-6.37E-06	110.297	8.10E+09	-4.329	1.38E+06
254.400	-8.63E-06	3732.716	-223.281	-3.83E-06	85.187	8.10E+09	2.477	1.38E+06
259.200	-2.17E-05	2689.504	-202.371	-1.93E-06	61.379	8.10E+09	6.235	1.38E+06
264.000	-2.72E-05	1789.953	-168.692	-6.03E-07	40.850	8.10E+09	7.797	1.38E+06
268.800	-2.75E-05	1070.056	-131.023	2.44E-07	24.420	8.10E+09	7.898	1.38E+06
273.600	-2.48E-05	532.134	-94.967	7.19E-07	12.144	8.10E+09	7.125	1.38E+06
278.400	-2.06E-05	158.375	-63.664	9.23E-07	3.614	8.10E+09	5.918	1.38E+06
283.200	-1.60E-05	-79.042	-38.468	9.47E-07	1.804	8.10E+09	4.581	1.38E+06
288.000	-1.15E-05	-210.918	-19.534	8.61E-07	4.813	8.10E+09	3.308	1.38E+06
292.800	-7.69E-06	-266.566	-6.293	7.19E-07	6.083	8.10E+09	2.208	1.38E+06
297.600	-4.62E-06	-271.332	2.189	5.60E-07	6.192	8.10E+09	1.326	1.38E+06
302.400	-2.32E-06	-245.547	6.968	4.07E-07	5.604	8.10E+09	0.665101	1.38E+06
307.200	-7.13E-07	-204.439	9.056	2.74E-07	4.666	8.10E+09	0.204714	1.38E+06
312.000	3.09E-07	-158.614	9.334	1.66E-07	3.620	8.10E+09	-0.088745	1.38E+06
316.800	8.80E-07	-114.833	8.514	8.49E-08	2.621	8.10E+09	-0.252694	1.38E+06
321.600	1.12E-06	-76.875	7.133	2.82E-08	1.754	8.10E+09	-0.322879	1.38E+06
326.400	1.15E-06	-46.356	5.565	-8.35E-09	1.058	8.10E+09	-0.330295	1.38E+06
331.200	1.04E-06	-23.447	4.053	-2.90E-08	0.535094	8.10E+09	-0.299860	1.38E+06
336.000	8.72E-07	-7.446	2.733	-3.82E-08	0.169938	8.10E+09	-0.250281	1.38E+06
340.800	6.78E-07	2.788	1.665	-3.96E-08	0.063616	8.10E+09	-0.194621	1.38E+06
345.600	4.92E-07	8.537	0.858910	-3.62E-08	0.194837	8.10E+09	-0.141238	1.38E+06
350.400	3.30E-07	11.033	0.292357	-3.04E-08	0.251793	8.10E+09	-0.094826	1.38E+06
355.200	2.00E-07	11.344	-0.073036	-2.38E-08	0.258889	8.10E+09	-0.057422	1.38E+06
360.000	1.02E-07	10.332	-0.281122	-1.74E-08	0.235791	8.10E+09	-0.029280	1.38E+06
364.800	3.34E-08	8.645	-0.374375	-1.17E-08	0.197298	8.10E+09	-0.009575	1.38E+06
369.600	-1.07E-08	6.738	-0.389986	-7.18E-09	0.153770	8.10E+09	0.003071	1.38E+06
374.400	-3.56E-08	4.901	-0.358100	-3.73E-09	0.111857	8.10E+09	0.010215	1.38E+06
379.200	-4.65E-08	3.300	-0.301524	-1.30E-09	0.075315	8.10E+09	0.013358	1.38E+06
384.000	-4.81E-08	2.007	-0.236332	2.70E-10	0.045797	8.10E+09	0.013806	1.38E+06
388.800	-4.39E-08	1.031	-0.172923	1.17E-09	0.023538	8.10E+09	0.012615	1.38E+06
393.600	-3.69E-08	0.346664	-0.117250	1.58E-09	0.007911	8.10E+09	0.010582	1.38E+06
398.400	-2.88E-08	-0.094229	-0.072014	1.65E-09	0.002150	8.10E+09	0.008266	1.38E+06
403.200	-2.10E-08	-0.344666	-0.037709	1.52E-09	0.007866	8.10E+09	0.006027	1.38E+06
408.000	-1.42E-08	-0.456233	-0.013476	1.29E-09	0.010412	8.10E+09	0.004070	1.38E+06
412.800	-8.65E-09	-0.474031	0.002256	1.01E-09	0.010818	8.10E+09	0.002485	1.38E+06
417.600	-4.48E-09	-0.434577	0.011308	7.41E-10	0.009918	8.10E+09	0.001287	1.38E+06
422.400	-1.55E-09	-0.365472	0.015462	5.04E-10	0.008341	8.10E+09	0.000444	1.38E+06
427.200	3.51E-10	-0.286140	0.016286	3.10E-10	0.006530	8.10E+09	-0.000101	1.38E+06
432.000	1.43E-09	-0.209131	0.015055	1.64E-10	0.004773	8.10E+09	-0.000412	1.38E+06
436.800	1.92E-09	-0.141610	0.012742	5.98E-11	0.003232	8.10E+09	-0.000552	1.38E+06
441.600	2.01E-09	-0.086809	0.010033	-7.83E-12	0.001981	8.10E+09	-0.000577	1.38E+06
446.400	1.85E-09	-0.045297	0.007375	-4.70E-11	0.001034	8.10E+09	-0.000531	1.38E+06
451.200	1.56E-09	-0.016007	0.005029	-6.51E-11	0.000365	8.10E+09	-0.000447	1.38E+06
456.000	1.22E-09	0.002977	0.003113	-6.90E-11	6.79E-05	8.10E+09	-0.000351	1.38E+06
460.800	8.96E-10	0.013875	0.001653	-6.40E-11	0.000317	8.10E+09	-0.000257	1.38E+06
465.600	6.08E-10	0.018848	0.000617	-5.43E-11	0.000430	8.10E+09	-0.000175	1.38E+06
470.400	3.74E-10	0.019798	-5.99E-05	-4.29E-11	0.000452	8.10E+09	-0.000107	1.38E+06
475.200	1.97E-10	0.018272	-0.000453	-3.16E-11	0.000417	8.10E+09	-5.65E-05	1.38E+06
480.000	7.11E-11	0.015445	-0.000638	-2.16E-11	0.000352	8.10E+09	-2.04E-05	1.38E+06
484.800	-1.05E-11	0.012148	-0.000680	-1.34E-11	0.000277	8.10E+09	3.02E-06	1.38E+06
489.600	-5.77E-11	0.008920	-0.000633	-7.17E-12	0.000204	8.10E+09	1.66E-05	1.38E+06
494.400	-7.94E-11	0.006074	-0.000538	-2.73E-12	0.000139	8.10E+09	2.28E-05	1.38E+06
499.200	-8.39E-11	0.003753	-0.000426	1.80E-13	8.56E-05	8.10E+09	2.41E-05	1.38E+06
504.000	-7.77E-11	0.001986	-0.000314	1.88E-12	4.53E-05	8.10E+09	2.23E-05	1.38E+06
508.800	-6.58E-11	0.000734	-0.000216	2.69E-12	1.68E-05	8.10E+09	1.89E-05	1.38E+06
513.600	-5.19E-11	-8.30E-05	-0.000134	2.88E-12	1.89E-06	8.10E+09	1.49E-05	1.38E+06
518.400	-3.82E-11	-0.000557	-7.24E-05	2.69E-12	1.27E-05	8.10E+09	1.10E-05	1.38E+06
523.200	-2.61E-11	-0.000778	-2.81E-05	2.29E-12	1.78E-05	8.10E+09	7.49E-06	1.38E+06
528.000	-1.62E-11	-0.000826	1.02E-06	1.82E-12	1.89E-05	8.10E+09	4.64E-06	1.38E+06
532.800	-8.62E-12	-0.000768	1.81E-05	1.35E-12	1.75E-05	8.10E+09	2.48E-06	1.38E+06
537.600	-3.25E-12	-0.000653	2.63E-05	9.25E-13	1.49E-05	8.10E+09	9.34E-07	1.38E+06
542.400	2.62E-13	-0.000516	2.84E-05	5.79E-13	1.18E-05	8.10E+09	-7.52E-08	1.38E+06
547.200	2.31E-12	-0.000380	2.66E-05	3.14E-13	8.68E-06	8.10E+09	-6.63E-07	1.38E+06
552.000	3.28E-12	-0.000260	2.27E-05	1.24E-13	5.94E-06	8.10E+09	-9.40E-07	1.38E+06
556.800	3.50E-12	-0.000162	1.81E-05	-1.14E-15	3.70E-06	8.10E+09	-1.00E-06	1.38E+06
561.600	3.26E-12	-8.70E-05	1.34E-05	-7.49E-14	1.99E-06	8.10E+09	-9.37E-07	1.38E+06
566.400	2.78E-12	-3.35E-05	9.24E-06	-1.11E-13	7.64E-07	8.10E+09	-7.98E-07	1.38E+06
571.200	2.20E-12	1.68E-06	5.80E-06	-1.20E-13	3.84E-08	8.10E+09	-6.32E-07	1.38E+06
576.000	1.63E-12	2.23E-05	3.16E-06	-1.13E-13	5.08E-07	8.10E+09	-4.68E-07	1.38E+06
580.800	1.12E-12	3.21E-05	1.27E-06	-9.69E-14	7.32E-07	8.10E+09	-3.21E-07	1.38E+06
585.600	6.99E-13	3.45E-05	2.09E-08	-7.71E-14	7.87E-07	8.10E+09	-2.01E-07	1.38E+06
590.400	3.77E-13	3.23E-05	-7.20E-07	-5.74E-14	7.36E-07	8.10E+09	-1.08E-07	1.38E+06
595.200	1.48E-13	2.76E-05	-1.08E-06	-3.96E-14	6.29E-07	8.10E+09	-4.24E-08	1.38E+06
600.000	-3.26E-15	2.19E-05	-1.18E-06	-2.50E-14	4.99E-07	8.10E+09	9.37E-10	1.38E+06
604.800	-9.22E-14	1.62E-05	-1.12E-06	-1.37E-14	3.70E-07	8.10E+09	2.65E-08	1.38E+06
609.600	-1.35E-13	1.12E-05	-9.60E-07	-5.61E-15	2.55E-07	8.10E+09	3.87E-08	1.38E+06
614.400	-1.46E-13	7.00E-06	-7.66E-07	-2.27E-16	1.60E-07	8.10E+09	4.19E-08	1.38E+06

619.200	-1.37E-13	3.81E-06	-5.71E-07	2.97E-15	8.68E-08	8.10E+09	3.94E-08	1.38E+06
624.000	-1.17E-13	1.52E-06	-3.96E-07	4.55E-15	3.46E-08	8.10E+09	3.37E-08	1.38E+06
628.800	-9.34E-14	6.56E-09	-2.50E-07	5.00E-15	1.50E-10	8.10E+09	2.68E-08	1.38E+06
633.600	-6.94E-14	-8.86E-07	-1.38E-07	4.74E-15	2.02E-08	8.10E+09	1.99E-08	1.38E+06
638.400	-4.79E-14	-1.32E-06	-5.74E-08	4.09E-15	3.01E-08	8.10E+09	1.38E-08	1.38E+06
643.200	-3.02E-14	-1.44E-06	-3.62E-09	3.27E-15	3.28E-08	8.10E+09	8.66E-09	1.38E+06
648.000	-1.65E-14	-1.36E-06	2.85E-08	2.44E-15	3.09E-08	8.10E+09	4.74E-09	1.38E+06
652.800	-6.69E-15	-1.16E-06	4.45E-08	1.70E-15	2.66E-08	8.10E+09	1.92E-09	1.38E+06
657.600	-1.94E-16	-9.28E-07	4.92E-08	1.08E-15	2.12E-08	8.10E+09	5.58E-11	1.38E+06
662.400	3.66E-15	-6.91E-07	4.69E-08	5.99E-16	1.58E-08	8.10E+09	-1.05E-09	1.38E+06
667.200	5.55E-15	-4.78E-07	4.05E-08	2.52E-16	1.09E-08	8.10E+09	-1.59E-09	1.38E+06
672.000	6.08E-15	-3.02E-07	3.25E-08	2.13E-17	6.89E-09	8.10E+09	-1.75E-09	1.38E+06
676.800	5.76E-15	-1.66E-07	2.43E-08	-1.17E-16	3.79E-09	8.10E+09	-1.65E-09	1.38E+06
681.600	4.96E-15	-6.85E-08	1.69E-08	-1.87E-16	1.56E-09	8.10E+09	-1.42E-09	1.38E+06
686.400	3.96E-15	-3.58E-09	1.08E-08	-2.08E-16	8.18E-11	8.10E+09	-1.14E-09	1.38E+06
691.200	2.96E-15	3.51E-08	6.03E-09	-1.99E-16	8.02E-10	8.10E+09	-8.49E-10	1.38E+06
696.000	2.05E-15	5.43E-08	2.58E-09	-1.73E-16	1.24E-09	8.10E+09	-5.89E-10	1.38E+06
700.800	1.30E-15	5.99E-08	2.69E-10	-1.39E-16	1.37E-09	8.10E+09	-3.73E-10	1.38E+06
705.600	7.20E-16	5.69E-08	-1.12E-09	-1.04E-16	1.30E-09	8.10E+09	-2.07E-10	1.38E+06
710.400	3.01E-16	4.91E-08	-1.83E-09	-7.27E-17	1.12E-09	8.10E+09	-8.65E-11	1.38E+06
715.200	2.24E-17	3.93E-08	-2.05E-09	-4.65E-17	8.98E-10	8.10E+09	-6.42E-12	1.38E+06
720.000	-1.45E-16	2.94E-08	-1.97E-09	-2.61E-17	6.72E-10	8.10E+09	4.16E-11	1.38E+06
724.800	-2.28E-16	2.05E-08	-1.71E-09	-1.13E-17	4.67E-10	8.10E+09	6.55E-11	1.38E+06
729.600	-2.53E-16	1.30E-08	-1.38E-09	-1.40E-18	2.97E-10	8.10E+09	7.28E-11	1.38E+06
734.400	-2.42E-16	7.25E-09	-1.04E-09	4.61E-18	1.66E-10	8.10E+09	6.94E-11	1.38E+06
739.200	-2.09E-16	3.08E-09	-7.25E-10	7.67E-18	7.03E-11	8.10E+09	6.01E-11	1.38E+06
744.000	-1.68E-16	2.92E-10	-4.65E-10	8.67E-18	6.67E-12	8.10E+09	4.82E-11	1.38E+06
748.800	-1.26E-16	-1.39E-09	-2.63E-10	8.35E-18	3.16E-11	8.10E+09	3.62E-11	1.38E+06
753.600	-8.78E-17	-2.23E-09	-1.15E-10	7.28E-18	5.09E-11	8.10E+09	2.52E-11	1.38E+06
758.400	-5.61E-17	-2.49E-09	-1.63E-11	5.88E-18	5.69E-11	8.10E+09	1.61E-11	1.38E+06
763.200	-3.14E-17	-2.39E-09	4.40E-11	4.43E-18	5.45E-11	8.10E+09	9.02E-12	1.38E+06
768.000	-1.35E-17	-2.07E-09	7.49E-11	3.11E-18	4.73E-11	8.10E+09	3.88E-12	1.38E+06
772.800	-1.55E-18	-1.67E-09	8.53E-11	2.00E-18	3.81E-11	8.10E+09	4.44E-13	1.38E+06
777.600	5.69E-18	-1.25E-09	8.25E-11	1.14E-18	2.86E-11	8.10E+09	-1.63E-12	1.38E+06
782.400	9.37E-18	-8.76E-10	7.21E-11	5.06E-19	2.00E-11	8.10E+09	-2.69E-12	1.38E+06
787.200	1.06E-17	-5.61E-10	5.83E-11	8.02E-20	1.28E-11	8.10E+09	-3.03E-12	1.38E+06
792.000	1.01E-17	-3.16E-10	4.41E-11	-1.80E-19	7.22E-12	8.10E+09	-2.91E-12	1.38E+06
796.800	8.82E-18	-1.38E-10	3.10E-11	-3.14E-19	3.15E-12	8.10E+09	-2.53E-12	1.38E+06
801.600	7.12E-18	-1.83E-11	2.00E-11	-3.61E-19	4.19E-13	8.10E+09	-2.04E-12	1.38E+06
806.400	5.36E-18	5.43E-11	1.14E-11	-3.50E-19	1.24E-12	8.10E+09	-1.54E-12	1.38E+06
811.200	3.76E-18	9.15E-11	5.16E-12	-3.07E-19	2.09E-12	8.10E+09	-1.08E-12	1.38E+06
816.000	2.42E-18	1.04E-10	9.00E-13	-2.49E-19	2.37E-12	8.10E+09	-6.94E-13	1.38E+06
820.800	1.37E-18	1.00E-10	-1.71E-12	-1.89E-19	2.29E-12	8.10E+09	-3.93E-13	1.38E+06
825.600	6.05E-19	8.74E-11	-3.07E-12	-1.33E-19	1.99E-12	8.10E+09	-1.74E-13	1.38E+06
830.400	9.10E-20	7.07E-11	-3.55E-12	-8.62E-20	1.61E-12	8.10E+09	-2.61E-14	1.38E+06
835.200	-2.22E-19	5.34E-11	-3.46E-12	-4.95E-20	1.22E-12	8.10E+09	6.38E-14	1.38E+06
840.000	-3.84E-19	3.75E-11	-3.04E-12	-2.26E-20	8.56E-13	8.10E+09	1.10E-13	1.38E+06
844.800	-4.39E-19	2.42E-11	-2.47E-12	-4.29E-21	5.52E-13	8.10E+09	1.26E-13	1.38E+06
849.600	-4.25E-19	1.38E-11	-1.88E-12	6.95E-21	3.14E-13	8.10E+09	1.22E-13	1.38E+06
854.400	-3.72E-19	6.17E-12	-1.33E-12	1.29E-20	1.41E-13	8.10E+09	1.07E-13	1.38E+06
859.200	-3.02E-19	1.03E-12	-8.63E-13	1.50E-20	2.35E-14	8.10E+09	8.66E-14	1.38E+06
864.000	-2.28E-19	-2.11E-12	-4.98E-13	1.47E-20	4.82E-14	8.10E+09	6.55E-14	1.38E+06
868.800	-1.61E-19	-3.75E-12	-2.29E-13	1.29E-20	8.55E-14	8.10E+09	4.62E-14	1.38E+06
873.600	-1.04E-19	-4.32E-12	-4.69E-14	1.05E-20	9.85E-14	8.10E+09	2.99E-14	1.38E+06
878.400	-5.96E-20	-4.20E-12	6.58E-14	8.03E-21	9.58E-14	8.10E+09	1.71E-14	1.38E+06
883.200	-2.70E-20	-3.68E-12	1.25E-13	5.69E-21	8.41E-14	8.10E+09	7.75E-15	1.38E+06
888.000	-4.91E-21	-2.99E-12	1.47E-13	3.71E-21	6.83E-14	8.10E+09	1.41E-15	1.38E+06
892.800	8.66E-21	-2.27E-12	1.45E-13	2.16E-21	5.18E-14	8.10E+09	-2.49E-15	1.38E+06
897.600	1.58E-20	-1.60E-12	1.28E-13	1.01E-21	3.66E-14	8.10E+09	-4.53E-15	1.38E+06
902.400	1.84E-20	-1.04E-12	1.04E-13	2.27E-22	2.37E-14	8.10E+09	-5.27E-15	1.38E+06
907.200	1.80E-20	-5.99E-13	7.95E-14	-2.58E-22	1.37E-14	8.10E+09	-5.16E-15	1.38E+06
912.000	1.59E-20	-2.77E-13	5.61E-14	-5.17E-22	6.31E-15	8.10E+09	-4.56E-15	1.38E+06
916.800	1.30E-20	-5.97E-14	3.62E-14	-6.17E-22	1.36E-15	8.10E+09	-3.73E-15	1.38E+06
921.600	9.96E-21	7.12E-14	2.04E-14	-6.13E-22	1.62E-15	8.10E+09	-2.86E-15	1.38E+06
926.400	7.12E-21	1.36E-13	8.62E-15	-5.52E-22	3.11E-15	8.10E+09	-2.04E-15	1.38E+06
931.200	4.67E-21	1.54E-13	5.02E-16	-4.66E-22	3.51E-15	8.10E+09	-1.34E-15	1.38E+06
936.000	2.65E-21	1.41E-13	-4.54E-15	-3.79E-22	3.22E-15	8.10E+09	-7.60E-16	1.38E+06
940.800	1.03E-21	1.10E-13	-7.07E-15	-3.04E-22	2.52E-15	8.10E+09	-2.96E-16	1.38E+06
945.600	-2.71E-22	7.30E-14	-7.60E-15	-2.50E-22	1.67E-15	8.10E+09	7.79E-17	1.38E+06
950.400	-1.37E-21	3.75E-14	-6.47E-15	-2.17E-22	8.55E-16	8.10E+09	3.92E-16	1.38E+06
955.200	-2.35E-21	1.10E-14	-3.90E-15	-2.03E-22	2.50E-16	8.10E+09	6.76E-16	1.38E+06
960.000	-3.31E-21	0.000	0.000	-1.99E-22	0.000	8.10E+09	9.51E-16	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 5:

Pile-head deflection	=	2.54456359 in
Computed slope at pile head	=	-0.03408693
Maximum bending moment	=	3072796. lbs-in
Maximum shear force	=	-69554.29645 lbs
Depth of maximum bending moment	=	81.60000000 in
Depth of maximum shear force	=	120.00000 in
Number of iterations	=	40
Number of zero deflection points	=	15

Summary of Pile Response(s)

Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment, y = pile-head displacment in
Type 2 = Shear and Slope, M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness, V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment, S = Pile-head Slope, radians
Type 5 = Deflection and Slope, R = Rot. Stiffness of Pile-head in-lbs/rad

Load Type	Pile-Head Condition 1	Pile-Head Condition 2	Axial Load lbs	Pile-Head Deflection in	Maximum Moment in-lbs	Maximum Shear lbs
1	V= 10000.	M= 0.000	0.0000	0.1239409	345596.	10000.0000
1	V= 20000.	M= 0.000	0.0000	0.4262195	879971.	20000.0000
1	V= 30000.	M= 0.000	0.0000	0.9154459	1533600.	-35103.8916
1	V= 40000.	M= 0.000	0.0000	1.5881	2272783.	-51928.5365
1	V= 50000.	M= 0.000	0.0000	2.5446	3072796.	-69554.2964

The analysis ended normally.

APPENDIX F. LPILE ANALYSIS FOR TP4

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================================================================================

                  LPILE Plus for Windows, Version 5.0 (5.0.47)

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method

                           (c) 1985-2010 by Ensoft, Inc.
                                All Rights Reserved

================================================================================

This program is licensed to:

J Price
RB&G Engineering

--------------------------------------------------------------------------------
                             Files Used for Analysis
--------------------------------------------------------------------------------

Path  to  file  locations:              C:\Users\jprice\Documents\Thesis\LPILE  03.23.11\Pioneer
Crossing\Peak Plus 1 Min\
Name of input data file:     phi28.k150.gam138.2.lpd
Name of output file:         phi28.k150.gam138.2.lpo
Name of plot output file:    phi28.k150.gam138.2.lpp
Name of runtime file:        phi28.k150.gam138.2.lpr


--------------------------------------------------------------------------------
                           Time and Date of Analysis
--------------------------------------------------------------------------------

               Date:  May  5, 2012     Time:   1:53:59


--------------------------------------------------------------------------------
                                 Problem Title
--------------------------------------------------------------------------------

New LPILE Plus 5.0 Data File


--------------------------------------------------------------------------------
                                 Program Options
--------------------------------------------------------------------------------

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 3:
- Computation of Nonlinear Bending Stiffness and Ultimate Bending Moment
  Capacity with Pile Response Computed Using Nonlinear EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
```

- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 200
- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 960.00 in

Depth of ground surface below top of pile = 12.00 in

Slope angle of ground surface = 0.00 deg.

Structural properties of pile defined using 2 points

Point No.	Point Depth in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	16.00000000	562.0800	18.4100	29000000.
2	960.0000	16.00000000	562.0800	18.4100	29000000.

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of moment of inertia and modulus of are not used for any computations other than total stress due to combined axial loading and bending.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by API RP-2A, 1987
Distance from top of pile to top of layer = 12.000 in
Distance from top of pile to bottom of layer = 480.000 in
p-y subgrade modulus k for top of soil layer = 150.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 150.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 480.000 in
Distance from top of pile to bottom of layer = 1000.000 in

(Depth of lowest layer extends 40.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	12.00	0.08000
2	480.00	0.08000
3	480.00	0.06944
4	1000.00	0.06944

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	12.000	0.00000	28.00	------	------
2	480.000	0.00000	28.00	------	------
3	480.000	6.94444	0.00	0.00700	0.0
4	1000.000	6.94444	0.00	0.00700	0.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Loading Type

Static loading criteria was used for computation of p-y curves.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   10000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   20000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   30000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   40000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   50000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Computation of Nonlinear Bending Stiffness for Section 1

Dimensions and Material Properties of Steel Pipe Section:

Outer Diameter of Pipe = 16.00000 in.
Pipe Wall Thickness = 0.37500 in.
Yield Stress of Pipe = 60. ksi
Elastic Modulus = 29000. ksi
Cross-sectional Area = 18.40777 sq. in.
Moment of Inertia = 562.084 in^4
Elastic Bending Stiffness = 16300439. kip-in2

Definition of Run Messages:

Y = part of pipe section has yielded

Axial Thrust Force = 0.000 kips

Bending Curvature rad/in.	Bending Moment in-kip	Bending Stiffness kip-in2	Max Comp Strain in/in	Minimum Strain in/in	Depth to N Axis in	Run Msg
0.00000550	89.57501530	16299140.	0.00004397	-0.00004397	8.00000000	
0.00001099	179.15003	16299140.	0.00008793	-0.00008793	8.00000000	
0.00001649	268.72505	16299140.	0.00013190	-0.00013190	8.00000000	
0.00002198	358.30006	16299140.	0.00017586	-0.00017586	8.00000000	
0.00002748	447.87508	16299140.	0.00021983	-0.00021983	8.00000000	
0.00003297	537.45009	16299140.	0.00026379	-0.00026379	8.00000000	
0.00003847	627.02511	16299140.	0.00030776	-0.00030776	8.00000000	
0.00004397	716.60012	16299140.	0.00035172	-0.00035172	8.00000000	
0.00004946	806.17514	16299140.	0.00039569	-0.00039569	8.00000000	
0.00005496	895.75015	16299140.	0.00043966	-0.00043966	8.00000000	
0.00006045	985.32517	16299140.	0.00048362	-0.00048362	8.00000000	
0.00006595	1074.90018	16299140.	0.00052759	-0.00052759	8.00000000	
0.00007144	1164.47520	16299140.	0.00057155	-0.00057155	8.00000000	
0.00007694	1254.05021	16299140.	0.00061552	-0.00061552	8.00000000	
0.00008244	1343.62523	16299140.	0.00065948	-0.00065948	8.00000000	
0.00008793	1433.20024	16299140.	0.00070345	-0.00070345	8.00000000	
0.00009343	1522.77526	16299140.	0.00074741	-0.00074741	8.00000000	
0.00009892	1612.35028	16299140.	0.00079138	-0.00079138	8.00000000	
0.00010442	1701.92529	16299140.	0.00083534	-0.00083534	8.00000000	
0.00010991	1791.50031	16299140.	0.00087931	-0.00087931	8.00000000	
0.00011541	1881.07532	16299140.	0.00092328	-0.00092328	8.00000000	
0.00012091	1970.65034	16299140.	0.00096724	-0.00096724	8.00000000	
0.00012640	2060.22535	16299140.	0.00101121	-0.00101121	8.00000000	
0.00013190	2149.80037	16299140.	0.00105517	-0.00105517	8.00000000	
0.00013739	2239.37538	16299140.	0.00109914	-0.00109914	8.00000000	
0.00014289	2328.95040	16299140.	0.00114310	-0.00114310	8.00000000	
0.00014838	2418.52541	16299140.	0.00118707	-0.00118707	8.00000000	
0.00015388	2508.10043	16299140.	0.00123103	-0.00123103	8.00000000	
0.00015938	2597.67544	16299140.	0.00127500	-0.00127500	8.00000000	
0.00016487	2687.25046	16299140.	0.00131897	-0.00131897	8.00000000	
0.00017037	2776.82547	16299140.	0.00136293	-0.00136293	8.00000000	
0.00017586	2866.40049	16299140.	0.00140690	-0.00140690	8.00000000	
0.00018136	2955.97550	16299140.	0.00145086	-0.00145086	8.00000000	
0.00018685	3045.55052	16299140.	0.00149483	-0.00149483	8.00000000	
0.00019235	3135.12554	16299140.	0.00153879	-0.00153879	8.00000000	
0.00019784	3224.70055	16299140.	0.00158276	-0.00158276	8.00000000	
0.00020334	3314.27557	16299140.	0.00162672	-0.00162672	8.00000000	
0.00020884	3403.85058	16299140.	0.00167069	-0.00167069	8.00000000	
0.00021433	3493.42560	16299140.	0.00171466	-0.00171466	8.00000000	
0.00021983	3583.00061	16299140.	0.00175862	-0.00175862	8.00000000	
0.00022532	3672.57563	16299140.	0.00180259	-0.00180259	8.00000000	
0.00023082	3762.15064	16299140.	0.00184655	-0.00184655	8.00000000	
0.00023631	3851.72566	16299140.	0.00189052	-0.00189052	8.00000000	
0.00024181	3941.30067	16299140.	0.00193448	-0.00193448	8.00000000	
0.00024731	4030.87569	16299140.	0.00197845	-0.00197845	8.00000000	
0.00025280	4120.45070	16299140.	0.00202241	-0.00202241	8.00000000	
0.00025830	4210.02572	16299140.	0.00206638	-0.00206638	8.00000000	
0.00026379	4296.43113	16287124.	0.00211034	-0.00211034	8.00000000	Y
0.00026929	4373.42773	16240660.	0.00215431	-0.00215431	8.00000000	Y
0.00027478	4439.00035	16154479.	0.00219828	-0.00219828	8.00000000	Y
0.00028028	4495.55846	16039516.	0.00224224	-0.00224224	8.00000000	Y
0.00028578	4546.13334	15908038.	0.00228621	-0.00228621	8.00000000	Y
0.00029127	4592.05610	15765549.	0.00233017	-0.00233017	8.00000000	Y
0.00029677	4633.81340	15614302.	0.00237414	-0.00237414	8.00000000	Y
0.00030226	4671.83655	15456200.	0.00241810	-0.00241810	8.00000000	Y
0.00030776	4707.19007	15295071.	0.00246207	-0.00246207	8.00000000	Y

0.00031325	4740.26069	15132308.	0.00250603	-0.00250603	8.00000000	Y
0.00031875	4771.09192	14968131.	0.00255000	-0.00255000	8.00000000	Y
0.00032425	4799.32117	14801495.	0.00259397	-0.00259397	8.00000000	Y
0.00032974	4826.14536	14636153.	0.00263793	-0.00263793	8.00000000	Y
0.00033524	4851.49019	14471819.	0.00268190	-0.00268190	8.00000000	Y
0.00034073	4874.74421	14306649.	0.00272586	-0.00272586	8.00000000	Y
0.00034623	4897.17687	14144351.	0.00276983	-0.00276983	8.00000000	Y
0.00035172	4918.00554	13982564.	0.00281379	-0.00281379	8.00000000	Y
0.00035722	4937.78073	13822807.	0.00285776	-0.00285776	8.00000000	Y
0.00036272	4956.64343	13665374.	0.00290172	-0.00290172	8.00000000	Y
0.00036821	4974.21101	13509124.	0.00294569	-0.00294569	8.00000000	Y
0.00037371	4991.27486	13356122.	0.00298966	-0.00298966	8.00000000	Y
0.00037920	5007.02214	13204082.	0.00303362	-0.00303362	8.00000000	Y
0.00038470	5022.43782	13055524.	0.00307759	-0.00307759	8.00000000	Y
0.00039019	5036.70038	12908196.	0.00312155	-0.00312155	8.00000000	Y
0.00039569	5050.60468	12764055.	0.00316552	-0.00316552	8.00000000	Y
0.00040119	5063.67451	12621783.	0.00320948	-0.00320948	8.00000000	Y
0.00040668	5076.19222	12481999.	0.00325345	-0.00325345	8.00000000	Y
0.00041218	5088.32389	12345005.	0.00329741	-0.00329741	8.00000000	Y
0.00041767	5099.56942	12209495.	0.00334138	-0.00334138	8.00000000	Y
0.00042317	5110.81496	12077505.	0.00338534	-0.00338534	8.00000000	Y
0.00042866	5121.06351	11946573.	0.00342931	-0.00342931	8.00000000	Y
0.00043416	5131.14214	11818565.	0.00347328	-0.00347328	8.00000000	Y
0.00043966	5140.96479	11693174.	0.00351724	-0.00351724	8.00000000	Y
0.00044515	5149.97368	11569052.	0.00356121	-0.00356121	8.00000000	Y
0.00045065	5158.98257	11447957.	0.00360517	-0.00360517	8.00000000	Y
0.00045614	5167.55970	11328834.	0.00364914	-0.00364914	8.00000000	Y
0.00046164	5175.58878	11211359.	0.00369310	-0.00369310	8.00000000	Y
0.00046713	5183.61786	11096649.	0.00373707	-0.00373707	8.00000000	Y
0.00047263	5191.25387	10983774.	0.00378103	-0.00378103	8.00000000	Y
0.00047813	5198.38655	10872442.	0.00382500	-0.00382500	8.00000000	Y
0.00048362	5205.51924	10763640.	0.00386897	-0.00386897	8.00000000	Y
0.00048912	5212.48015	10656932.	0.00391293	-0.00391293	8.00000000	Y
0.00049461	5218.79394	10551287.	0.00395690	-0.00395690	8.00000000	Y
0.00050011	5225.10773	10447963.	0.00400086	-0.00400086	8.00000000	Y
0.00050560	5231.42152	10346886.	0.00404483	-0.00404483	8.00000000	Y
0.00051110	5237.19181	10246919.	0.00408879	-0.00408879	8.00000000	Y
0.00051659	5242.75882	10148686.	0.00413276	-0.00413276	8.00000000	Y
0.00052209	5248.32584	10052521.	0.00417672	-0.00417672	8.00000000	Y
0.00052759	5253.89285	9958359.	0.00422069	-0.00422069	8.00000000	Y
0.00053308	5258.80636	9864912.	0.00426466	-0.00426466	8.00000000	Y
0.00053858	5263.69376	9773325.	0.00430862	-0.00430862	8.00000000	Y
0.00054407	5268.58116	9683587.	0.00435259	-0.00435259	8.00000000	Y
0.00054957	5273.46856	9595644.	0.00439655	-0.00439655	8.00000000	Y
0.00055506	5277.81618	9508471.	0.00444052	-0.00444052	8.00000000	Y
0.00056056	5282.08657	9422869.	0.00448448	-0.00448448	8.00000000	Y
0.00056606	5286.35697	9338928.	0.00452845	-0.00452845	8.00000000	Y
0.00057155	5290.62736	9256603.	0.00457241	-0.00457241	8.00000000	Y
0.00057705	5294.66043	9175434.	0.00461638	-0.00461638	8.00000000	Y
0.00058254	5298.37219	9095245.	0.00466034	-0.00466034	8.00000000	Y
0.00058804	5302.08395	9016554.	0.00470431	-0.00470431	8.00000000	Y
0.00059353	5305.79571	8939322.	0.00474828	-0.00474828	8.00000000	Y
0.00059903	5309.50748	8863506.	0.00479224	-0.00479224	8.00000000	Y
0.00060453	5312.93644	8788601.	0.00483621	-0.00483621	8.00000000	Y
0.00061002	5316.14401	8714682.	0.00488017	-0.00488017	8.00000000	Y
0.00061552	5319.35157	8642084.	0.00492414	-0.00492414	8.00000000	Y
0.00062101	5322.55913	8570770.	0.00496810	-0.00496810	8.00000000	Y
0.00062651	5325.76669	8500708.	0.00501207	-0.00501207	8.00000000	Y
0.00063200	5328.87341	8431704.	0.00505603	-0.00505603	8.00000000	Y
0.00063750	5331.62752	8363337.	0.00510000	-0.00510000	8.00000000	Y
0.00064300	5334.38163	8296139.	0.00514397	-0.00514397	8.00000000	Y
0.00064849	5337.13574	8230079.	0.00518793	-0.00518793	8.00000000	Y
0.00065399	5339.88985	8165130.	0.00523190	-0.00523190	8.00000000	Y
0.00065948	5342.64396	8101264.	0.00527586	-0.00527586	8.00000000	Y
0.00066498	5345.26145	8038247.	0.00531983	-0.00531983	8.00000000	Y
0.00067047	5347.60938	7975862.	0.00536379	-0.00536379	8.00000000	Y
0.00067597	5349.95732	7914491.	0.00540776	-0.00540776	8.00000000	Y
0.00068147	5352.30525	7854110.	0.00545172	-0.00545172	8.00000000	Y
0.00068696	5354.65319	7794695.	0.00549569	-0.00549569	8.00000000	Y
0.00069246	5357.00112	7736223.	0.00553966	-0.00553966	8.00000000	Y
0.00069795	5359.34906	7678672.	0.00558362	-0.00558362	8.00000000	Y
0.00070345	5361.40220	7621601.	0.00562759	-0.00562759	8.00000000	Y
0.00070894	5363.38797	7565320.	0.00567155	-0.00567155	8.00000000	Y
0.00071444	5365.37374	7509905.	0.00571552	-0.00571552	8.00000000	Y
0.00071994	5367.35952	7455335.	0.00575948	-0.00575948	8.00000000	Y
0.00072543	5369.34529	7401593.	0.00580345	-0.00580345	8.00000000	Y
0.00073093	5371.33107	7348659.	0.00584741	-0.00584741	8.00000000	Y
0.00073642	5373.31684	7296514.	0.00589138	-0.00589138	8.00000000	Y
0.00074192	5375.12714	7244906.	0.00593534	-0.00593534	8.00000000	Y
0.00074741	5376.79167	7193862.	0.00597931	-0.00597931	8.00000000	Y
0.00075291	5378.45620	7143563.	0.00602328	-0.00602328	8.00000000	Y

0.00075841	5380.12073	7093992.	0.00606724	-0.00606724	8.00000000	Y
0.00076390	5381.78526	7045136.	0.00611121	-0.00611121	8.00000000	Y
0.00076940	5383.44979	6996977.	0.00615517	-0.00615517	8.00000000	Y
0.00077489	5385.11432	6949501.	0.00619914	-0.00619914	8.00000000	Y
0.00078039	5386.77885	6902694.	0.00624310	-0.00624310	8.00000000	Y

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Load	Axial Thrust	Interp. Mom. Cap.
1	0.000 kips	5386.8 in-kip

Please note that the values in the above table are not factored by a strength reduction factor for LRFD.

The value of the strength reduction factor depends on the provisions of the LRFD code being used.

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to the LRFD structural design standard being followed.

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 10000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.170551	2.16E-07	10000.	-0.002473	3.07E-09	1.63E+10	0.000	0.000
4.800	0.158681	48000.	10000.	-0.002466	683.177	1.63E+10	0.000	0.000
9.600	0.146878	96000.	10000.	-0.002445	1366.354	1.63E+10	0.000	0.000
14.400	0.135212	1.44E+05	9945.495	-0.002409	2049.530	1.63E+10	-22.710	806.212
19.200	0.123748	1.91E+05	9718.894	-0.002360	2725.260	1.63E+10	-71.707	2781.407
24.000	0.112556	2.37E+05	9256.521	-0.002297	3377.475	1.63E+10	-120.948	5157.889
28.800	0.101699	2.80E+05	8567.938	-0.002221	3990.028	1.63E+10	-165.961	7833.076
33.600	0.091238	3.20E+05	7681.122	-0.002132	4548.158	1.63E+10	-203.545	10708.
38.400	0.081229	3.54E+05	6636.593	-0.002033	5039.541	1.63E+10	-231.675	13690.
43.200	0.071721	3.83E+05	5482.362	-0.001925	5454.951	1.63E+10	-249.254	16682.
48.000	0.062754	4.07E+05	4270.322	-0.001808	5788.625	1.63E+10	-255.762	19563.
52.800	0.054362	4.24E+05	3054.611	-0.001686	6038.428	1.63E+10	-250.784	22143.
57.600	0.046570	4.36E+05	1836.492	-0.001559	6205.993	1.63E+10	-256.766	26465.
62.400	0.039394	4.42E+05	600.520	-0.001430	6289.358	1.63E+10	-258.223	31463.
67.200	0.032843	4.42E+05	-615.153	-0.001300	6288.045	1.63E+10	-248.308	36290.
72.000	0.026916	4.36E+05	-1760.995	-0.001171	6205.306	1.63E+10	-229.126	40860.
76.800	0.021606	4.25E+05	-2798.739	-0.001044	6047.431	1.63E+10	-203.267	45158.
81.600	0.016897	4.09E+05	-3702.322	-0.000921	5822.900	1.63E+10	-173.226	49210.
86.400	0.012765	3.89E+05	-4456.754	-0.000803	5541.563	1.63E+10	-141.121	53065.
91.200	0.009184	3.66E+05	-5056.139	-0.000692	5213.949	1.63E+10	-108.623	56770.
96.000	0.006121	3.41E+05	-5501.597	-0.000588	4850.716	1.63E+10	-76.985	60371.
100.800	0.003540	3.14E+05	-5799.453	-0.000492	4462.237	1.63E+10	-47.121	63900.
105.600	0.001401	2.85E+05	-5959.762	-0.000403	4058.306	1.63E+10	-19.674	67387.
110.400	-0.000334	2.56E+05	-5995.156	-0.000324	3647.923	1.63E+10	4.926	70848.
115.200	-0.001707	2.28E+05	-5919.936	-0.000252	3239.155	1.63E+10	26.416	74296.
120.000	-0.002758	1.99E+05	-5749.344	-0.000190	2839.050	1.63E+10	44.665	77741.
124.800	-0.003527	1.72E+05	-5498.982	-0.000135	2453.592	1.63E+10	59.653	81186.
129.600	-0.004052	1.47E+05	-5184.330	-8.79E-05	2087.695	1.63E+10	71.452	84633.
134.400	-0.004371	1.23E+05	-4820.359	-4.82E-05	1745.229	1.63E+10	80.203	88084.
139.200	-0.004515	1.00E+05	-4421.207	-1.54E-05	1429.063	1.63E+10	86.110	91538.
144.000	-0.004518	80176.	-3999.937	1.12E-05	1141.136	1.63E+10	89.419	94995.
148.800	-0.004408	62007.	-3568.347	3.21E-05	882.531	1.63E+10	90.410	98454.
153.600	-0.004210	45920.	-3136.848	4.80E-05	653.573	1.63E+10	89.382	1.02E+05
158.400	-0.003947	31893.	-2714.388	5.95E-05	453.926	1.63E+10	86.643	1.05E+05
163.200	-0.003639	19862.	-2308.436	6.71E-05	282.692	1.63E+10	82.503	1.09E+05
168.000	-0.003302	9731.870	-1924.999	7.15E-05	138.512	1.63E+10	77.262	1.12E+05
172.800	-0.002952	1381.933	-1568.681	7.31E-05	19.669	1.63E+10	71.204	1.16E+05
177.600	-0.002601	-5327.464	-1242.769	7.25E-05	75.825	1.63E+10	64.592	1.19E+05
182.400	-0.002256	-10549.	-949.349	7.02E-05	150.137	1.63E+10	57.666	1.23E+05

187.200	-0.001927	-14441.	-689.429	6.65E-05	205.540	1.63E+10	50.634	1.26E+05
192.000	-0.001618	-17167.	-463.077	6.19E-05	244.338	1.63E+10	43.679	1.30E+05
196.800	-0.001333	-18887.	-269.565	5.65E-05	268.812	1.63E+10	36.951	1.33E+05
201.600	-0.001075	-19755.	-107.510	5.09E-05	281.170	1.63E+10	30.572	1.37E+05
206.400	-0.000845	-19919.	24.987	4.50E-05	283.502	1.63E+10	24.635	1.40E+05
211.200	-0.000643	-19515.	130.213	3.92E-05	277.756	1.63E+10	19.209	1.43E+05
216.000	-0.000468	-18669.	210.718	3.36E-05	265.710	1.63E+10	14.335	1.47E+05
220.800	-0.000320	-17492.	269.211	2.83E-05	248.964	1.63E+10	10.037	1.50E+05
225.600	-0.000197	-16084.	308.462	2.33E-05	228.927	1.63E+10	6.318	1.54E+05
230.400	-9.66E-05	-14531.	331.223	1.88E-05	206.817	1.63E+10	3.166	1.57E+05
235.200	-1.66E-05	-12905.	340.159	1.48E-05	183.670	1.63E+10	0.557250	1.61E+05
240.000	4.51E-05	-11265.	337.794	1.12E-05	160.340	1.63E+10	-1.543	1.64E+05
244.800	9.09E-05	-9661.824	326.469	8.13E-06	137.515	1.63E+10	-3.176	1.68E+05
249.600	0.000123	-8131.362	308.315	5.51E-06	115.732	1.63E+10	-4.388	1.71E+05
254.400	0.000144	-6702.004	285.234	3.32E-06	95.389	1.63E+10	-5.229	1.75E+05
259.200	0.000155	-5393.119	258.889	1.54E-06	76.759	1.63E+10	-5.748	1.78E+05
264.000	0.000159	-4216.669	230.705	1.26E-07	60.015	1.63E+10	-5.995	1.81E+05
268.800	0.000156	-3178.348	201.874	-9.63E-07	45.237	1.63E+10	-6.018	1.85E+05
273.600	0.000149	-2278.677	173.365	-1.77E-06	32.432	1.63E+10	-5.861	1.88E+05
278.400	0.000139	-1514.040	145.943	-2.32E-06	21.549	1.63E+10	-5.565	1.92E+05
283.200	0.000127	-877.625	120.183	-2.68E-06	12.491	1.63E+10	-5.168	1.95E+05
288.000	0.000114	-360.280	96.496	-2.86E-06	5.128	1.63E+10	-4.702	1.99E+05
292.800	9.96E-05	48.737	75.144	-2.91E-06	0.693661	1.63E+10	-4.195	2.02E+05
297.600	8.57E-05	361.106	56.268	-2.84E-06	5.140	1.63E+10	-3.671	2.06E+05
302.400	7.23E-05	588.907	39.902	-2.70E-06	8.382	1.63E+10	-3.148	2.09E+05
307.200	5.97E-05	744.167	26.000	-2.51E-06	10.592	1.63E+10	-2.644	2.13E+05
312.000	4.82E-05	838.508	14.449	-2.28E-06	11.934	1.63E+10	-2.169	2.16E+05
316.800	3.79E-05	882.879	5.089	-2.02E-06	12.566	1.63E+10	-1.731	2.19E+05
321.600	2.88E-05	887.362	-2.274	-1.76E-06	12.630	1.63E+10	-1.337	2.23E+05
326.400	2.10E-05	861.048	-7.854	-1.50E-06	12.255	1.63E+10	-0.988264	2.26E+05
331.200	1.43E-05	811.964	-11.874	-1.26E-06	11.557	1.63E+10	-0.686825	2.30E+05
336.000	8.88E-06	747.055	-14.559	-1.03E-06	10.633	1.63E+10	-0.431647	2.33E+05
340.800	4.47E-06	672.202	-16.124	-8.19E-07	9.567	1.63E+10	-0.220686	2.37E+05
345.600	1.02E-06	592.263	-16.776	-6.33E-07	8.430	1.63E+10	-0.050926	2.40E+05
350.400	-1.60E-06	511.152	-16.703	-4.70E-07	7.275	1.63E+10	0.081315	2.44E+05
355.200	-3.50E-06	431.914	-16.076	-3.32E-07	6.147	1.63E+10	0.180131	2.47E+05
360.000	-4.79E-06	356.826	-15.044	-2.15E-07	5.079	1.63E+10	0.249809	2.51E+05
364.800	-5.57E-06	287.494	-13.737	-1.21E-07	4.092	1.63E+10	0.294647	2.54E+05
369.600	-5.94E-06	224.950	-12.265	-4.52E-08	3.202	1.63E+10	0.318812	2.57E+05
374.400	-6.00E-06	169.752	-10.717	1.30E-08	2.416	1.63E+10	0.326232	2.61E+05
379.200	-5.82E-06	122.070	-9.164	5.59E-08	1.737	1.63E+10	0.320519	2.64E+05
384.000	-5.46E-06	81.773	-7.663	8.59E-08	1.164	1.63E+10	0.304916	2.68E+05
388.800	-4.99E-06	48.502	-6.254	1.05E-07	0.690318	1.63E+10	0.282268	2.71E+05
393.600	-4.46E-06	21.733	-4.965	1.15E-07	0.309329	1.63E+10	0.255018	2.75E+05
398.400	-3.89E-06	0.840794	-3.812	1.19E-07	0.011967	1.63E+10	0.225212	2.78E+05
403.200	-3.31E-06	-14.863	-2.805	1.17E-07	0.211542	1.63E+10	0.194516	2.82E+05
408.000	-2.77E-06	-26.085	-1.944	1.11E-07	0.371265	1.63E+10	0.164245	2.85E+05
412.800	-2.25E-06	-33.523	-1.225	1.02E-07	0.477128	1.63E+10	0.135400	2.89E+05
417.600	-1.79E-06	-37.841	-0.638763	9.14E-08	0.538590	1.63E+10	0.108700	2.92E+05
422.400	-1.37E-06	-39.655	-0.174791	8.00E-08	0.564406	1.63E+10	0.084622	2.95E+05
427.200	-1.02E-06	-39.519	0.180561	6.83E-08	0.562472	1.63E+10	0.063442	2.99E+05
432.000	-7.19E-07	-37.922	0.441466	5.69E-08	0.539735	1.63E+10	0.045268	3.02E+05
436.800	-4.72E-07	-35.281	0.622298	4.62E-08	0.502152	1.63E+10	0.030079	3.06E+05
441.600	-2.75E-07	-31.948	0.737081	3.63E-08	0.454707	1.63E+10	0.017748	3.09E+05
446.400	-1.24E-07	-28.205	0.799057	2.74E-08	0.401441	1.63E+10	0.008076	3.13E+05
451.200	-1.23E-08	-24.277	0.820391	1.97E-08	0.345527	1.63E+10	0.000813	3.16E+05
456.000	6.49E-08	-20.329	0.811963	1.31E-08	0.289347	1.63E+10	-0.004325	3.20E+05
460.800	1.13E-07	-16.482	0.783247	7.69E-09	0.234584	1.63E+10	-0.007640	3.23E+05
465.600	1.39E-07	-12.810	0.742256	3.37E-09	0.182327	1.63E+10	-0.009439	3.27E+05
470.400	1.46E-07	-9.356	0.695529	1.10E-10	0.133166	1.63E+10	-0.010030	3.30E+05
475.200	1.40E-07	-6.133	0.648146	-2.17E-09	0.087294	1.63E+10	-0.009712	3.34E+05
480.000	1.25E-07	-3.134	0.538629	-3.54E-09	0.044606	1.63E+10	-0.035920	1.38E+06
484.800	1.06E-07	-0.962419	0.379443	-4.14E-09	0.013698	1.63E+10	-0.030408	1.38E+06
489.600	8.53E-08	0.508609	0.247653	-4.21E-09	0.007239	1.63E+10	-0.024505	1.38E+06
494.400	6.55E-08	1.415	0.143701	-3.92E-09	0.020140	1.63E+10	-0.018808	1.38E+06
499.200	4.76E-08	1.888	0.065712	-3.44E-09	0.026874	1.63E+10	-0.013687	1.38E+06
504.000	3.25E-08	2.046	0.010468	-2.86E-09	0.029119	1.63E+10	-0.009332	1.38E+06
508.800	2.02E-08	1.989	-0.025867	-2.26E-09	0.028304	1.63E+10	-0.005808	1.38E+06
513.600	1.08E-08	1.798	-0.047224	-1.71E-09	0.025584	1.63E+10	-0.003091	1.38E+06
518.400	3.85E-09	1.535	-0.057294	-1.21E-09	0.021851	1.63E+10	-0.001105	1.38E+06
523.200	-8.99E-10	1.248	-0.059325	-8.05E-10	0.017756	1.63E+10	0.000258	1.38E+06
528.000	-3.88E-09	0.965756	-0.056030	-4.79E-10	0.013745	1.63E+10	0.001115	1.38E+06
532.800	-5.50E-09	0.709656	-0.049565	-2.32E-10	0.010100	1.63E+10	0.001579	1.38E+06
537.600	-6.11E-09	0.489936	-0.041563	-5.55E-11	0.006973	1.63E+10	0.001755	1.38E+06
542.400	-6.03E-09	0.310652	-0.033194	6.24E-11	0.004421	1.63E+10	0.001732	1.38E+06
547.200	-5.51E-09	0.171274	-0.025238	1.33E-10	0.002438	1.63E+10	0.001583	1.38E+06
552.000	-4.75E-09	0.068367	-0.018165	1.69E-10	0.000973	1.63E+10	0.001364	1.38E+06
556.800	-3.89E-09	-0.003106	-0.012207	1.78E-10	4.42E-05	1.63E+10	0.001118	1.38E+06
561.600	-3.04E-09	-0.048823	-0.007430	1.71E-10	0.000695	1.63E+10	0.000873	1.38E+06
566.400	-2.25E-09	-0.074432	-0.003782	1.52E-10	0.001059	1.63E+10	0.000647	1.38E+06
571.200	-1.57E-09	-0.085126	-0.001142	1.29E-10	0.001212	1.63E+10	0.000452	1.38E+06

576.000	-1.02E-09	-0.085400	0.000643	1.04E-10	0.001215	1.63E+10	0.000292	1.38E+06
580.800	-5.77E-10	-0.078951	0.001742	7.96E-11	0.001124	1.63E+10	0.000166	1.38E+06
585.600	-2.51E-10	-0.068681	0.002313	5.79E-11	0.000978	1.63E+10	7.21E-05	1.38E+06
590.400	-2.15E-11	-0.056750	0.002501	3.94E-11	0.000808	1.63E+10	6.19E-06	1.38E+06
595.200	1.28E-10	-0.044676	0.002427	2.45E-11	0.000636	1.63E+10	-3.67E-05	1.38E+06
600.000	2.14E-10	-0.033447	0.002192	1.30E-11	0.000476	1.63E+10	-6.14E-05	1.38E+06
604.800	2.52E-10	-0.023633	0.001871	4.59E-12	0.000336	1.63E+10	-7.25E-05	1.38E+06
609.600	2.58E-10	-0.015489	0.001519	-1.17E-12	0.000220	1.63E+10	-7.40E-05	1.38E+06
614.400	2.41E-10	-0.009051	0.001175	-4.78E-12	0.000129	1.63E+10	-6.93E-05	1.38E+06
619.200	2.12E-10	-0.004209	0.000863	-6.74E-12	5.99E-05	1.63E+10	-6.09E-05	1.38E+06
624.000	1.77E-10	-0.000769	0.000595	-7.47E-12	1.09E-05	1.63E+10	-5.07E-05	1.38E+06
628.800	1.40E-10	0.001502	0.000377	-7.36E-12	2.14E-05	1.63E+10	-4.03E-05	1.38E+06
633.600	1.06E-10	0.002846	0.000207	-6.72E-12	4.05E-05	1.63E+10	-3.04E-05	1.38E+06
638.400	7.56E-11	0.003490	8.19E-05	-5.79E-12	4.97E-05	1.63E+10	-2.17E-05	1.38E+06
643.200	5.03E-11	0.003633	-4.87E-06	-4.74E-12	5.17E-05	1.63E+10	-1.44E-05	1.38E+06
648.000	3.01E-11	0.003443	-6.03E-05	-3.70E-12	4.90E-05	1.63E+10	-8.65E-06	1.38E+06
652.800	1.48E-11	0.003054	-9.13E-05	-2.74E-12	4.35E-05	1.63E+10	-4.25E-06	1.38E+06
657.600	3.81E-12	0.002567	-0.000104	-1.91E-12	3.65E-05	1.63E+10	-1.09E-06	1.38E+06
662.400	-3.55E-12	0.002055	-0.000104	-1.23E-12	2.92E-05	1.63E+10	1.02E-06	1.38E+06
667.200	-8.01E-12	0.001566	-9.63E-05	-6.98E-13	2.23E-05	1.63E+10	2.30E-06	1.38E+06
672.000	-1.03E-11	0.001130	-8.37E-05	-3.01E-13	1.61E-05	1.63E+10	2.95E-06	1.38E+06
676.800	-1.09E-11	0.000762	-6.91E-05	-2.28E-14	1.08E-05	1.63E+10	3.13E-06	1.38E+06
681.600	-1.05E-11	0.000467	-5.44E-05	1.58E-13	6.64E-06	1.63E+10	3.01E-06	1.38E+06
686.400	-9.39E-12	0.000240	-4.07E-05	2.62E-13	3.42E-06	1.63E+10	2.70E-06	1.38E+06
691.200	-7.96E-12	7.61E-05	-2.87E-05	3.09E-13	1.08E-06	1.63E+10	2.29E-06	1.38E+06
696.000	-6.43E-12	-3.53E-05	-1.88E-05	3.15E-13	5.03E-07	1.63E+10	1.85E-06	1.38E+06
700.800	-4.94E-12	-0.000104	-1.10E-05	2.94E-13	1.48E-06	1.63E+10	1.42E-06	1.38E+06
705.600	-3.60E-12	-0.000140	-5.07E-06	2.58E-13	2.00E-06	1.63E+10	1.03E-06	1.38E+06
710.400	-2.46E-12	-0.000153	-8.87E-07	2.15E-13	2.18E-06	1.63E+10	7.07E-07	1.38E+06
715.200	-1.54E-12	-0.000149	1.87E-06	1.71E-13	2.12E-06	1.63E+10	4.41E-07	1.38E+06
720.000	-8.23E-13	-0.000135	3.50E-06	1.29E-13	1.92E-06	1.63E+10	2.37E-07	1.38E+06
724.800	-3.01E-13	-0.000115	4.27E-06	9.19E-14	1.64E-06	1.63E+10	8.64E-08	1.38E+06
729.600	5.84E-14	-9.39E-05	4.44E-06	6.10E-14	1.34E-06	1.63E+10	-1.68E-08	1.38E+06
734.400	2.85E-13	-7.28E-05	4.20E-06	3.65E-14	1.04E-06	1.63E+10	-8.19E-08	1.38E+06
739.200	4.08E-13	-5.36E-05	3.72E-06	1.78E-14	7.63E-07	1.63E+10	-1.17E-07	1.38E+06
744.000	4.56E-13	-3.71E-05	3.13E-06	4.49E-15	5.28E-07	1.63E+10	-1.31E-07	1.38E+06
748.800	4.52E-13	-2.36E-05	2.50E-06	-4.45E-15	3.36E-07	1.63E+10	-1.30E-07	1.38E+06
753.600	4.14E-13	-1.31E-05	1.90E-06	-9.85E-15	1.86E-07	1.63E+10	-1.19E-07	1.38E+06
758.400	3.57E-13	-5.31E-06	1.37E-06	-1.26E-14	7.56E-08	1.63E+10	-1.03E-07	1.38E+06
763.200	2.93E-13	9.86E-08	9.25E-07	-1.33E-14	1.40E-09	1.63E+10	-8.42E-08	1.38E+06
768.000	2.29E-13	3.57E-06	5.65E-07	-1.28E-14	5.08E-08	1.63E+10	-6.58E-08	1.38E+06
772.800	1.70E-13	5.53E-06	2.90E-07	-1.14E-14	7.86E-08	1.63E+10	-4.89E-08	1.38E+06
777.600	1.19E-13	6.35E-06	9.05E-08	-9.70E-15	9.04E-08	1.63E+10	-3.42E-08	1.38E+06
782.400	7.71E-14	6.39E-06	-4.48E-08	-7.82E-15	9.10E-08	1.63E+10	-2.21E-08	1.38E+06
787.200	4.41E-14	5.92E-06	-1.28E-07	-6.01E-15	8.43E-08	1.63E+10	-1.27E-08	1.38E+06
792.000	1.94E-14	5.16E-06	-1.72E-07	-4.38E-15	7.35E-08	1.63E+10	-5.57E-09	1.38E+06
796.800	2.04E-15	4.27E-06	-1.87E-07	-2.99E-15	6.08E-08	1.63E+10	-5.87E-10	1.38E+06
801.600	-9.28E-15	3.37E-06	-1.82E-07	-1.86E-15	4.79E-08	1.63E+10	2.67E-09	1.38E+06
806.400	-1.58E-14	2.53E-06	-1.65E-07	-9.95E-16	3.59E-08	1.63E+10	4.55E-09	1.38E+06
811.200	-1.88E-14	1.79E-06	-1.41E-07	-3.59E-16	2.54E-08	1.63E+10	5.41E-09	1.38E+06
816.000	-1.93E-14	1.17E-06	-1.14E-07	7.68E-17	1.67E-08	1.63E+10	5.54E-09	1.38E+06
820.800	-1.81E-14	6.90E-07	-8.86E-08	3.51E-16	9.82E-09	1.63E+10	5.20E-09	1.38E+06
825.600	-1.59E-14	3.24E-07	-6.52E-08	5.01E-16	4.61E-09	1.63E+10	4.57E-09	1.38E+06
830.400	-1.33E-14	6.40E-08	-4.50E-08	5.58E-16	9.11E-10	1.63E+10	3.82E-09	1.38E+06
835.200	-1.06E-14	-1.08E-07	-2.86E-08	5.51E-16	1.54E-09	1.63E+10	3.03E-09	1.38E+06
840.000	-7.99E-15	-2.11E-07	-1.58E-08	5.04E-16	3.00E-09	1.63E+10	2.30E-09	1.38E+06
844.800	-5.72E-15	-2.60E-07	-6.37E-09	4.35E-16	3.70E-09	1.63E+10	1.64E-09	1.38E+06
849.600	-3.81E-15	-2.72E-07	2.04E-10	3.57E-16	3.87E-09	1.63E+10	1.10E-09	1.38E+06
854.400	-2.29E-15	-2.58E-07	4.41E-09	2.79E-16	3.67E-09	1.63E+10	6.59E-10	1.38E+06
859.200	-1.14E-15	-2.29E-07	6.78E-09	2.07E-16	3.26E-09	1.63E+10	3.27E-10	1.38E+06
864.000	-3.06E-16	-1.93E-07	7.77E-09	1.45E-16	2.75E-09	1.63E+10	8.79E-11	1.38E+06
868.800	2.53E-16	-1.55E-07	7.81E-09	9.35E-17	2.20E-09	1.63E+10	-7.26E-11	1.38E+06
873.600	5.92E-16	-1.18E-07	7.23E-09	5.34E-17	1.68E-09	1.63E+10	-1.70E-10	1.38E+06
878.400	7.65E-16	-8.54E-08	6.29E-09	2.34E-17	1.21E-09	1.63E+10	-2.20E-10	1.38E+06
883.200	8.17E-16	-5.77E-08	5.20E-09	2.35E-18	8.21E-10	1.63E+10	-2.35E-10	1.38E+06
888.000	7.87E-16	-3.54E-08	4.09E-09	-1.14E-17	5.04E-10	1.63E+10	-2.26E-10	1.38E+06
892.800	7.08E-16	-1.84E-08	3.06E-09	-1.93E-17	2.62E-10	1.63E+10	-2.03E-10	1.38E+06
897.600	6.02E-16	-6.02E-09	2.16E-09	-2.29E-17	8.57E-11	1.63E+10	-1.73E-10	1.38E+06
902.400	4.88E-16	2.36E-09	1.41E-09	-2.34E-17	3.35E-11	1.63E+10	-1.40E-10	1.38E+06
907.200	3.77E-16	7.50E-09	8.12E-10	-2.20E-17	1.07E-10	1.63E+10	-1.08E-10	1.38E+06
912.000	2.77E-16	1.02E-08	3.61E-10	-1.94E-17	1.44E-10	1.63E+10	-7.96E-11	1.38E+06
916.800	1.91E-16	1.10E-08	3.75E-11	-1.63E-17	1.56E-10	1.63E+10	-5.50E-11	1.38E+06
921.600	1.21E-16	1.05E-08	-1.78E-10	-1.31E-17	1.50E-10	1.63E+10	-3.48E-11	1.38E+06
926.400	6.56E-17	9.25E-09	-3.07E-10	-1.02E-17	1.32E-10	1.63E+10	-1.89E-11	1.38E+06
931.200	2.32E-17	7.57E-09	-3.68E-10	-7.71E-18	1.08E-10	1.63E+10	-6.68E-12	1.38E+06
936.000	-8.44E-18	5.72E-09	-3.78E-10	-5.76E-18	8.14E-11	1.63E+10	2.42E-12	1.38E+06
940.800	-3.20E-17	3.93E-09	-3.50E-10	-4.34E-18	5.60E-11	1.63E+10	9.20E-12	1.38E+06
945.600	-5.01E-17	2.36E-09	-2.94E-10	-3.41E-18	3.36E-11	1.63E+10	1.44E-11	1.38E+06
950.400	-6.48E-17	1.12E-09	-2.15E-10	-2.90E-18	1.59E-11	1.63E+10	1.86E-11	1.38E+06
955.200	-7.79E-17	3.00E-10	-1.16E-10	-2.69E-18	4.27E-12	1.63E+10	2.24E-11	1.38E+06
960.000	-9.06E-17	0.000	0.000	-2.65E-18	0.000	1.63E+10	2.60E-11	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	0.17055084 in
Computed slope at pile head	=	-0.00247297
Maximum bending moment	=	441890.29666 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	62.40000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	10
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 20000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.508947	1.02E-06	20000.	-0.006570	1.45E-08	1.63E+10	0.000	0.000
4.800	0.477409	96000.	20000.	-0.006556	1366.354	1.63E+10	0.000	0.000
9.600	0.446007	1.92E+05	20000.	-0.006514	2732.707	1.63E+10	0.000	0.000
14.400	0.414876	2.88E+05	19944.	-0.006443	4099.061	1.63E+10	-23.434	271.129
19.200	0.384153	3.83E+05	19705.	-0.006344	5457.729	1.63E+10	-76.117	951.082
24.000	0.353972	4.77E+05	19203.	-0.006218	6791.438	1.63E+10	-133.004	1803.584
28.800	0.324465	5.68E+05	18428.	-0.006064	8081.531	1.63E+10	-189.827	2808.224
33.600	0.295761	6.54E+05	17391.	-0.005884	9309.375	1.63E+10	-242.317	3932.654
38.400	0.267981	7.35E+05	16122.	-0.005679	10458.	1.63E+10	-286.230	5126.875
43.200	0.241240	8.09E+05	14674.	-0.005452	11512.	1.63E+10	-317.373	6314.829
48.000	0.215642	8.76E+05	13116.	-0.005204	12463.	1.63E+10	-331.604	7381.193
52.800	0.191282	9.35E+05	11541.	-0.004937	13304.	1.63E+10	-324.768	8149.670
57.600	0.168244	9.86E+05	9886.405	-0.004654	14040.	1.63E+10	-364.650	10403.
62.400	0.146600	1.03E+06	7985.750	-0.004358	14655.	1.63E+10	-427.290	13990.
67.200	0.126411	1.06E+06	5787.887	-0.004049	15131.	1.63E+10	-488.486	18548.
72.000	0.107725	1.09E+06	3316.643	-0.003733	15446.	1.63E+10	-541.199	24115.
76.800	0.090574	1.09E+06	634.925	-0.003412	15584.	1.63E+10	-576.184	30535.
81.600	0.074969	1.09E+06	-2151.551	-0.003090	15533.	1.63E+10	-584.848	37445.
86.400	0.060908	1.07E+06	-4906.291	-0.002771	15290.	1.63E+10	-562.961	44365.
91.200	0.048365	1.04E+06	-7487.540	-0.002459	14862.	1.63E+10	-512.560	50869.
96.000	0.037299	1.00E+06	-9775.331	-0.002158	14267.	1.63E+10	-440.686	56712.
100.800	0.027649	9.50E+05	-11688.	-0.001870	13527.	1.63E+10	-356.282	61852.
105.600	0.019343	8.90E+05	-13185.	-0.001599	12670.	1.63E+10	-267.499	66381.
110.400	0.012295	8.24E+05	-14260.	-0.001347	11725.	1.63E+10	-180.444	70447.
115.200	0.006411	7.53E+05	-14931.	-0.001115	10721.	1.63E+10	-99.106	74198.
120.000	0.001593	6.80E+05	-15231.	-0.000904	9685.143	1.63E+10	-25.801	77754.
124.800	-0.002264	6.07E+05	-15201.	-0.000714	8640.374	1.63E+10	38.299	81203.
129.600	-0.005262	5.35E+05	-14886.	-0.000546	7608.164	1.63E+10	92.757	84606.
134.400	-0.007505	4.64E+05	-14334.	-0.000399	6606.371	1.63E+10	137.593	87997.
139.200	-0.009092	3.97E+05	-13588.	-0.000272	5649.698	1.63E+10	173.124	91397.
144.000	-0.010118	3.34E+05	-12693.	-0.000165	4749.798	1.63E+10	199.857	94815.
148.800	-0.010672	2.75E+05	-11689.	-7.49E-05	3915.435	1.63E+10	218.440	98252.
153.600	-0.010837	2.22E+05	-10613.	-1.77E-06	3152.704	1.63E+10	229.617	1.02E+05
158.400	-0.010689	1.73E+05	-9500.225	5.64E-05	2465.270	1.63E+10	234.203	1.05E+05
163.200	-0.010296	1.30E+05	-8378.809	0.000101	1854.637	1.63E+10	233.054	1.09E+05
168.000	-0.009719	92773.	-7274.578	0.000134	1320.428	1.63E+10	227.043	1.12E+05
172.800	-0.009010	60471.	-6208.780	0.000156	860.673	1.63E+10	217.040	1.16E+05
177.600	-0.008217	33169.	-5198.557	0.000170	472.090	1.63E+10	203.886	1.19E+05
182.400	-0.007376	10565.	-4257.121	0.000177	150.366	1.63E+10	188.379	1.23E+05
187.200	-0.006521	-7699.347	-3393.997	0.000177	109.584	1.63E+10	171.256	1.26E+05
192.000	-0.005676	-22018.	-2615.349	0.000173	313.374	1.63E+10	153.181	1.30E+05

196.800	-0.004862	-32807.	-1924.334	0.000165	466.933	1.63E+10	134.742	1.33E+05
201.600	-0.004095	-40491.	-1321.493	0.000154	576.306	1.63E+10	116.442	1.36E+05
206.400	-0.003385	-45493.	-805.153	0.000141	647.495	1.63E+10	98.700	1.40E+05
211.200	-0.002740	-48221.	-371.830	0.000127	686.319	1.63E+10	81.852	1.43E+05
216.000	-0.002162	-49063.	-16.606	0.000113	698.300	1.63E+10	66.158	1.47E+05
220.800	-0.001654	-48380.	266.500	9.87E-05	688.588	1.63E+10	51.803	1.50E+05
225.600	-0.001214	-46504.	484.200	8.48E-05	661.887	1.63E+10	38.906	1.54E+05
230.400	-0.000840	-43732.	643.644	7.15E-05	622.429	1.63E+10	27.529	1.57E+05
235.200	-0.000528	-40325.	752.154	5.91E-05	573.943	1.63E+10	17.683	1.61E+05
240.000	-0.000273	-36511.	817.003	4.78E-05	519.658	1.63E+10	9.337	1.64E+05
244.800	-6.95E-05	-32482.	845.233	3.76E-05	462.311	1.63E+10	2.426	1.68E+05
249.600	8.82E-05	-28397.	843.514	2.87E-05	404.169	1.63E+10	-3.142	1.71E+05
254.400	0.000206	-24384.	818.026	2.09E-05	347.057	1.63E+10	-7.478	1.75E+05
259.200	0.000289	-20544.	774.390	1.43E-05	292.398	1.63E+10	-10.704	1.78E+05
264.000	0.000343	-16950.	717.613	8.75E-06	241.248	1.63E+10	-12.953	1.81E+05
268.800	0.000373	-13655.	652.074	4.24E-06	194.346	1.63E+10	-14.356	1.85E+05
273.600	0.000383	-10690.	581.513	6.59E-07	152.152	1.63E+10	-15.045	1.88E+05
278.400	0.000379	-8072.256	509.057	-2.10E-06	114.891	1.63E+10	-15.145	1.92E+05
283.200	0.000363	-5803.254	437.248	-4.15E-06	82.597	1.63E+10	-14.775	1.95E+05
288.000	0.000339	-3874.675	368.084	-5.57E-06	55.148	1.63E+10	-14.043	1.99E+05
292.800	0.000310	-2269.644	303.073	-6.48E-06	32.304	1.63E+10	-13.045	2.02E+05
297.600	0.000277	-965.178	243.281	-6.95E-06	13.737	1.63E+10	-11.868	2.06E+05
302.400	0.000243	65.852	189.397	-7.09E-06	0.937263	1.63E+10	-10.584	2.09E+05
307.200	0.000209	853.030	141.784	-6.95E-06	12.141	1.63E+10	-9.255	2.13E+05
312.000	0.000176	1426.975	100.536	-6.61E-06	20.310	1.63E+10	-7.931	2.16E+05
316.800	0.000146	1818.181	65.534	-6.14E-06	25.878	1.63E+10	-6.653	2.19E+05
321.600	0.000117	2056.104	36.489	-5.57E-06	29.264	1.63E+10	-5.449	2.23E+05
326.400	9.21E-05	2168.472	12.988	-4.94E-06	30.864	1.63E+10	-4.343	2.26E+05
331.200	6.99E-05	2180.788	-5.465	-4.30E-06	31.039	1.63E+10	-3.346	2.30E+05
336.000	5.08E-05	2116.011	-19.417	-3.67E-06	30.117	1.63E+10	-2.467	2.33E+05
340.800	3.46E-05	1994.387	-29.439	-3.07E-06	28.386	1.63E+10	-1.709	2.37E+05
345.600	2.13E-05	1833.394	-36.103	-2.50E-06	26.094	1.63E+10	-1.068	2.40E+05
350.400	1.06E-05	1647.799	-39.960	-1.99E-06	23.453	1.63E+10	-0.539432	2.44E+05
355.200	2.24E-06	1449.775	-41.532	-1.53E-06	20.634	1.63E+10	-0.115491	2.47E+05
360.000	-4.09E-06	1249.089	-41.297	-1.14E-06	17.778	1.63E+10	0.213546	2.51E+05
364.800	-8.66E-06	1053.325	-39.685	-7.97E-07	14.992	1.63E+10	0.458265	2.54E+05
369.600	-1.17E-05	868.118	-37.073	-5.14E-07	12.356	1.63E+10	0.629695	2.57E+05
374.400	-1.36E-05	697.420	-33.789	-2.83E-07	9.926	1.63E+10	0.738852	2.61E+05
379.200	-1.45E-05	543.744	-30.104	-1.00E-07	7.739	1.63E+10	0.796376	2.64E+05
384.000	-1.46E-05	408.418	-26.244	3.97E-08	5.813	1.63E+10	0.812260	2.68E+05
388.800	-1.41E-05	291.805	-22.385	1.43E-07	4.153	1.63E+10	0.795654	2.71E+05
393.600	-1.32E-05	193.525	-18.664	2.14E-07	2.754	1.63E+10	0.754747	2.75E+05
398.400	-1.20E-05	112.634	-15.180	2.59E-07	1.603	1.63E+10	0.696700	2.78E+05
403.200	-1.07E-05	47.795	-12.002	2.83E-07	0.680256	1.63E+10	0.627633	2.82E+05
408.000	-9.30E-06	-2.584	-9.169	2.90E-07	0.036773	1.63E+10	0.552645	2.85E+05
412.800	-7.92E-06	-40.229	-6.701	2.83E-07	0.572575	1.63E+10	0.475872	2.89E+05
417.600	-6.58E-06	-66.911	-4.597	2.68E-07	0.952327	1.63E+10	0.400559	2.92E+05
422.400	-5.35E-06	-84.363	-2.846	2.45E-07	1.201	1.63E+10	0.329152	2.95E+05
427.200	-4.23E-06	-94.232	-1.424	2.19E-07	1.341	1.63E+10	0.263391	2.99E+05
432.000	-3.24E-06	-98.032	-0.301144	1.91E-07	1.395	1.63E+10	0.204411	3.02E+05
436.800	-2.40E-06	-97.123	0.556270	1.62E-07	1.382	1.63E+10	0.152845	3.06E+05
441.600	-1.69E-06	-92.692	1.184	1.34E-07	1.319	1.63E+10	0.108907	3.09E+05
446.400	-1.11E-06	-85.752	1.620	1.08E-07	1.220	1.63E+10	0.072486	3.13E+05
451.200	-6.56E-07	-77.142	1.898	8.37E-08	1.098	1.63E+10	0.043219	3.16E+05
456.000	-3.09E-07	-67.536	2.051	6.24E-08	0.961227	1.63E+10	0.020557	3.20E+05
460.800	-5.68E-08	-57.456	2.109	4.40E-08	0.817767	1.63E+10	0.003822	3.23E+05
465.600	1.14E-07	-47.289	2.100	2.86E-08	0.673052	1.63E+10	-0.007749	3.27E+05
470.400	2.18E-07	-37.300	2.045	1.61E-08	0.530879	1.63E+10	-0.014970	3.30E+05
475.200	2.69E-07	-27.655	1.964	6.57E-09	0.393615	1.63E+10	-0.018677	3.34E+05
480.000	2.81E-07	-18.442	1.726	-2.14E-10	0.262476	1.63E+10	-0.080677	1.38E+06
484.800	2.67E-07	-11.087	1.348	-4.56E-09	0.157793	1.63E+10	-0.076638	1.38E+06
489.600	2.37E-07	-5.497	1.001	-7.00E-09	0.078241	1.63E+10	-0.068096	1.38E+06
494.400	2.00E-07	-1.477	0.700009	-8.03E-09	0.021020	1.63E+10	-0.057321	1.38E+06
499.200	1.60E-07	1.223	0.452166	-8.07E-09	0.017404	1.63E+10	-0.045947	1.38E+06
504.000	1.22E-07	2.864	0.257728	-7.47E-09	0.040762	1.63E+10	-0.035069	1.38E+06
508.800	8.83E-08	3.697	0.112711	-6.50E-09	0.052619	1.63E+10	-0.025355	1.38E+06
513.600	5.97E-08	3.946	0.010721	-5.37E-09	0.056162	1.63E+10	-0.017141	1.38E+06
518.400	3.67E-08	3.800	-0.055691	-4.23E-09	0.054084	1.63E+10	-0.010530	1.38E+06
523.200	1.90E-08	3.411	-0.094075	-3.17E-09	0.048553	1.63E+10	-0.005463	1.38E+06
528.000	6.20E-09	2.897	-0.111460	-2.24E-09	0.041230	1.63E+10	-0.001781	1.38E+06
532.800	-2.52E-09	2.341	-0.113993	-1.47E-09	0.033324	1.63E+10	0.000725	1.38E+06
537.600	-7.94E-09	1.803	-0.106779	-8.62E-10	0.025655	1.63E+10	0.002280	1.38E+06
542.400	-1.08E-08	1.316	-0.093859	-4.03E-10	0.018734	1.63E+10	0.003103	1.38E+06
547.200	-1.18E-08	0.901456	-0.078271	-7.65E-11	0.012830	1.63E+10	0.003392	1.38E+06
552.000	-1.15E-08	0.564830	-0.062176	1.39E-10	0.008039	1.63E+10	0.003314	1.38E+06
556.800	-1.05E-08	0.304565	-0.047004	2.67E-10	0.004335	1.63E+10	0.003007	1.38E+06
561.600	-8.97E-09	0.113588	-0.033603	3.29E-10	0.001617	1.63E+10	0.002577	1.38E+06
566.400	-7.31E-09	-0.018023	-0.022379	3.43E-10	0.000257	1.63E+10	0.002100	1.38E+06
571.200	-5.68E-09	-0.101252	-0.013426	3.26E-10	0.001441	1.63E+10	0.001630	1.38E+06
576.000	-4.18E-09	-0.146916	-0.006628	2.89E-10	0.002091	1.63E+10	0.001202	1.38E+06
580.800	-2.90E-09	-0.164883	-0.001743	2.43E-10	0.002347	1.63E+10	0.000833	1.38E+06

585.600	-1.85E-09	-0.163646	0.001534	1.95E-10	0.002329	1.63E+10	0.000532	1.38E+06
590.400	-1.03E-09	-0.150158	0.003522	1.48E-10	0.002137	1.63E+10	0.000297	1.38E+06
595.200	-4.26E-10	-0.129838	0.004527	1.07E-10	0.001848	1.63E+10	0.000122	1.38E+06
600.000	-2.51E-12	-0.106701	0.004822	7.24E-11	0.001519	1.63E+10	7.21E-07	1.38E+06
604.800	2.70E-10	-0.083547	0.004638	4.44E-11	0.001189	1.63E+10	-7.75E-05	1.38E+06
609.600	4.24E-10	-0.062179	0.004160	2.30E-11	0.000885	1.63E+10	-0.000122	1.38E+06
614.400	4.90E-10	-0.043616	0.003529	7.37E-12	0.000621	1.63E+10	-0.000141	1.38E+06
619.200	4.95E-10	-0.028296	0.002850	-3.21E-12	0.000403	1.63E+10	-0.000142	1.38E+06
624.000	4.59E-10	-0.016251	0.002193	-9.77E-12	0.000231	1.63E+10	-0.000132	1.38E+06
628.800	4.01E-10	-0.007245	0.001600	-1.32E-11	0.000103	1.63E+10	-0.000115	1.38E+06
633.600	3.32E-10	-0.000892	0.001094	-1.44E-11	1.27E-05	1.63E+10	-9.54E-05	1.38E+06
638.400	2.62E-10	0.003262	0.000685	-1.41E-11	4.64E-05	1.63E+10	-7.53E-05	1.38E+06
643.200	1.97E-10	0.005680	0.000368	-1.28E-11	8.08E-05	1.63E+10	-5.66E-05	1.38E+06
648.000	1.40E-10	0.006794	0.000136	-1.09E-11	9.67E-05	1.63E+10	-4.01E-05	1.38E+06
652.800	9.21E-11	0.006984	-2.40E-05	-8.90E-12	9.94E-05	1.63E+10	-2.64E-05	1.38E+06
657.600	5.43E-11	0.006564	-0.000125	-6.91E-12	9.34E-05	1.63E+10	-1.56E-05	1.38E+06
662.400	2.58E-11	0.005785	-0.000180	-5.09E-12	8.23E-05	1.63E+10	-7.40E-06	1.38E+06
667.200	5.44E-12	0.004835	-0.000202	-3.52E-12	6.88E-05	1.63E+10	-1.56E-06	1.38E+06
672.000	-8.05E-12	0.003849	-0.000200	-2.24E-12	5.48E-05	1.63E+10	2.31E-06	1.38E+06
676.800	-1.61E-11	0.002917	-0.000183	-1.25E-12	4.15E-05	1.63E+10	4.63E-06	1.38E+06
681.600	-2.00E-11	0.002091	-0.000158	-5.10E-13	2.98E-05	1.63E+10	5.75E-06	1.38E+06
686.400	-2.10E-11	0.001398	-0.000130	3.31E-15	1.99E-05	1.63E+10	6.03E-06	1.38E+06
691.200	-2.00E-11	0.000844	-0.000102	3.33E-13	1.20E-05	1.63E+10	5.75E-06	1.38E+06
696.000	-1.78E-11	0.000422	-7.56E-05	5.20E-13	6.01E-06	1.63E+10	5.11E-06	1.38E+06
700.800	-1.50E-11	0.000118	-5.30E-05	5.99E-13	1.68E-06	1.63E+10	4.31E-06	1.38E+06
705.600	-1.20E-11	-8.65E-05	-3.43E-05	6.04E-13	1.23E-06	1.63E+10	3.46E-06	1.38E+06
710.400	-9.21E-12	-0.000211	-1.97E-05	5.60E-13	3.01E-06	1.63E+10	2.65E-06	1.38E+06
715.200	-6.67E-12	-0.000275	-8.71E-06	4.89E-13	3.92E-06	1.63E+10	1.92E-06	1.38E+06
720.000	-4.52E-12	-0.000295	-9.94E-07	4.05E-13	4.20E-06	1.63E+10	1.30E-06	1.38E+06
724.800	-2.79E-12	-0.000285	4.05E-06	3.19E-13	4.05E-06	1.63E+10	8.01E-07	1.38E+06
729.600	-1.46E-12	-0.000256	6.97E-06	2.40E-13	3.65E-06	1.63E+10	4.19E-07	1.38E+06
734.400	-4.88E-13	-0.000218	8.31E-06	1.70E-13	3.10E-06	1.63E+10	1.40E-07	1.38E+06
739.200	1.73E-13	-0.000176	8.53E-06	1.12E-13	2.51E-06	1.63E+10	-4.96E-08	1.38E+06
744.000	5.84E-13	-0.000136	8.01E-06	6.57E-14	1.94E-06	1.63E+10	-1.68E-07	1.38E+06
748.800	8.03E-13	-9.95E-05	7.05E-06	3.10E-14	1.42E-06	1.63E+10	-2.31E-07	1.38E+06
753.600	8.82E-13	-6.83E-05	5.89E-06	6.34E-15	9.72E-07	1.63E+10	-2.53E-07	1.38E+06
758.400	8.64E-13	-4.29E-05	4.69E-06	-1.00E-14	6.11E-07	1.63E+10	-2.48E-07	1.38E+06
763.200	7.86E-13	-2.33E-05	3.55E-06	-1.98E-14	3.32E-07	1.63E+10	-2.26E-07	1.38E+06
768.000	6.74E-13	-8.86E-06	2.54E-06	-2.45E-14	1.26E-07	1.63E+10	-1.94E-07	1.38E+06
772.800	5.50E-13	1.10E-06	1.70E-06	-2.57E-14	1.57E-08	1.63E+10	-1.58E-07	1.38E+06
777.600	4.28E-13	7.43E-06	1.02E-06	-2.44E-14	1.06E-07	1.63E+10	-1.23E-07	1.38E+06
782.400	3.16E-13	1.09E-05	5.09E-07	-2.17E-14	1.55E-07	1.63E+10	-9.08E-08	1.38E+06
787.200	2.20E-13	1.23E-05	1.40E-07	-1.83E-14	1.75E-07	1.63E+10	-6.31E-08	1.38E+06
792.000	1.41E-13	1.23E-05	-1.09E-07	-1.47E-14	1.74E-07	1.63E+10	-4.04E-08	1.38E+06
796.800	7.88E-14	1.13E-05	-2.60E-07	-1.12E-14	1.60E-07	1.63E+10	-2.26E-08	1.38E+06
801.600	3.30E-14	9.76E-06	-3.37E-07	-8.11E-15	1.39E-07	1.63E+10	-9.48E-09	1.38E+06
806.400	9.81E-16	8.03E-06	-3.60E-07	-5.49E-15	1.14E-07	1.63E+10	-2.82E-10	1.38E+06
811.200	-1.97E-14	6.30E-06	-3.48E-07	-3.38E-15	8.97E-08	1.63E+10	5.66E-09	1.38E+06
816.000	-3.14E-14	4.70E-06	-3.12E-07	-1.76E-15	6.68E-08	1.63E+10	9.03E-09	1.38E+06
820.800	-3.66E-14	3.30E-06	-2.65E-07	-5.81E-16	4.70E-08	1.63E+10	1.05E-08	1.38E+06
825.600	-3.70E-14	2.15E-06	-2.15E-07	2.21E-16	3.06E-08	1.63E+10	1.06E-08	1.38E+06
830.400	-3.44E-14	1.24E-06	-1.65E-07	7.19E-16	1.76E-08	1.63E+10	9.90E-09	1.38E+06
835.200	-3.01E-14	5.59E-07	-1.21E-07	9.84E-16	7.96E-09	1.63E+10	8.65E-09	1.38E+06
840.000	-2.50E-14	7.87E-08	-8.29E-08	1.08E-15	1.12E-09	1.63E+10	7.18E-09	1.38E+06
844.800	-1.98E-14	-2.36E-07	-5.20E-08	1.06E-15	3.36E-09	1.63E+10	5.68E-09	1.38E+06
849.600	-1.49E-14	-4.21E-07	-2.81E-08	9.58E-16	5.99E-09	1.63E+10	4.27E-09	1.38E+06
854.400	-1.06E-14	-5.07E-07	-1.06E-08	8.22E-16	7.21E-09	1.63E+10	3.04E-09	1.38E+06
859.200	-6.98E-15	-5.22E-07	1.51E-09	6.70E-16	7.44E-09	1.63E+10	2.01E-09	1.38E+06
864.000	-4.13E-15	-4.92E-07	9.17E-09	5.21E-16	7.00E-09	1.63E+10	1.19E-09	1.38E+06
868.800	-1.98E-15	-4.34E-07	1.34E-08	3.84E-16	6.18E-09	1.63E+10	5.69E-10	1.38E+06
873.600	-4.44E-16	-3.64E-07	1.51E-08	2.67E-16	5.17E-09	1.63E+10	1.27E-10	1.38E+06
878.400	5.81E-16	-2.90E-07	1.50E-08	1.71E-16	4.12E-09	1.63E+10	-1.67E-10	1.38E+06
883.200	1.20E-15	-2.20E-07	1.37E-08	9.57E-17	3.13E-09	1.63E+10	-3.44E-10	1.38E+06
888.000	1.50E-15	-1.58E-07	1.19E-08	4.01E-17	2.25E-09	1.63E+10	-4.31E-10	1.38E+06
892.800	1.58E-15	-1.06E-07	9.76E-09	1.29E-18	1.51E-09	1.63E+10	-4.54E-10	1.38E+06
897.600	1.51E-15	-6.42E-08	7.63E-09	-2.37E-17	9.14E-10	1.63E+10	-4.34E-10	1.38E+06
902.400	1.35E-15	-3.26E-08	5.65E-09	-3.80E-17	4.64E-10	1.63E+10	-3.89E-10	1.38E+06
907.200	1.15E-15	-9.93E-09	3.93E-09	-4.42E-17	1.41E-10	1.63E+10	-3.30E-10	1.38E+06
912.000	9.28E-16	5.12E-09	2.50E-09	-4.50E-17	7.28E-11	1.63E+10	-2.67E-10	1.38E+06
916.800	7.16E-16	1.40E-08	1.36E-09	-4.21E-17	2.00E-10	1.63E+10	-2.06E-10	1.38E+06
921.600	5.24E-16	1.82E-08	5.08E-10	-3.74E-17	2.59E-10	1.63E+10	-1.50E-10	1.38E+06
926.400	3.57E-16	1.89E-08	-9.95E-11	-3.19E-17	2.69E-10	1.63E+10	-1.03E-10	1.38E+06
931.200	2.17E-16	1.72E-08	-4.95E-10	-2.66E-17	2.45E-10	1.63E+10	-6.23E-11	1.38E+06
936.000	1.01E-16	1.41E-08	-7.15E-10	-2.20E-17	2.01E-10	1.63E+10	-2.91E-11	1.38E+06
940.800	5.88E-18	1.04E-08	-7.89E-10	-1.84E-17	1.48E-10	1.63E+10	-1.69E-12	1.38E+06
945.600	-7.50E-17	6.57E-09	-7.41E-10	-1.59E-17	9.35E-11	1.63E+10	2.16E-11	1.38E+06
950.400	-1.47E-16	3.26E-09	-5.88E-10	-1.44E-17	4.64E-11	1.63E+10	4.21E-11	1.38E+06
955.200	-2.14E-16	9.24E-10	-3.40E-10	-1.38E-17	1.32E-11	1.63E+10	6.14E-11	1.38E+06
960.000	-2.79E-16	0.000	0.000	-1.37E-17	0.000	1.63E+10	8.02E-11	6.89E+05

Please note that because this analysis makes computations of ultimate moment

capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection = 0.50894654 in
Computed slope at pile head = -0.00657034
Maximum bending moment = 1094928. lbs-in
Maximum shear force = 20000.00000 lbs
Depth of maximum bending moment = 76.80000000 in
Depth of maximum shear force = 0.00000 in
Number of iterations = 18
Number of zero deflection points = 11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 30000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	1.065	-1.57E-06	30000.	-0.012425	2.24E-08	1.63E+10	0.000	0.000
4.800	1.005	1.44E+05	30000.	-0.012404	2049.530	1.63E+10	0.000	0.000
9.600	0.945862	2.88E+05	30000.	-0.012340	4099.061	1.63E+10	0.000	0.000
14.400	0.886833	4.32E+05	29944.	-0.012234	6148.591	1.63E+10	-23.434	126.839
19.200	0.828416	5.75E+05	29705.	-0.012086	8190.437	1.63E+10	-76.119	441.049
24.000	0.770812	7.17E+05	29203.	-0.011895	10207.	1.63E+10	-133.021	828.350
28.800	0.714221	8.56E+05	28428.	-0.011664	12181.	1.63E+10	-189.895	1276.208
33.600	0.658841	9.90E+05	27390.	-0.011392	14092.	1.63E+10	-242.495	1766.703
38.400	0.604859	1.12E+06	26120.	-0.011081	15923.	1.63E+10	-286.576	2274.189
43.200	0.552460	1.24E+06	24670.	-0.010734	17661.	1.63E+10	-317.893	2761.984
48.000	0.501814	1.36E+06	23109.	-0.010352	19294.	1.63E+10	-332.200	3177.589
52.800	0.453085	1.46E+06	21532.	-0.009937	20818.	1.63E+10	-325.252	3445.733
57.600	0.406423	1.56E+06	19873.	-0.009491	22236.	1.63E+10	-366.004	4322.638
62.400	0.361969	1.65E+06	17956.	-0.009018	23533.	1.63E+10	-432.388	5733.815
67.200	0.319853	1.73E+06	15709.	-0.008519	24689.	1.63E+10	-504.058	7564.341
72.000	0.280189	1.80E+06	13105.	-0.007998	25680.	1.63E+10	-580.889	9951.377
76.800	0.243075	1.86E+06	10121.	-0.007458	26480.	1.63E+10	-662.325	13079.
81.600	0.208591	1.90E+06	6740.236	-0.006904	27063.	1.63E+10	-746.472	17177.
86.400	0.176796	1.93E+06	2960.665	-0.006341	27401.	1.63E+10	-828.349	22490.
91.200	0.147721	1.93E+06	-1182.109	-0.005773	27467.	1.63E+10	-897.807	29173.
96.000	0.121374	1.91E+06	-5590.867	-0.005207	27239.	1.63E+10	-939.176	37142.
100.800	0.097733	1.88E+06	-10090.	-0.004649	26703.	1.63E+10	-935.385	45940.
105.600	0.076744	1.82E+06	-14438.	-0.004105	25861.	1.63E+10	-876.282	54808.
110.400	0.058323	1.74E+06	-18377.	-0.003582	24731.	1.63E+10	-765.187	62975.
115.200	0.042359	1.64E+06	-21696.	-0.003084	23350.	1.63E+10	-617.523	69976.
120.000	0.028713	1.53E+06	-24265.	-0.002618	21766.	1.63E+10	-453.113	75747.
124.800	0.017230	1.41E+06	-26046.	-0.002185	20034.	1.63E+10	-288.940	80496.
129.600	0.007736	1.28E+06	-27067.	-0.001790	18207.	1.63E+10	-136.225	84530.
134.400	4.99E-05	1.15E+06	-27396.	-0.001432	16336.	1.63E+10	-0.915390	88128.
139.200	-0.006013	1.02E+06	-27123.	-0.001114	14464.	1.63E+10	114.633	91502.
144.000	-0.010640	8.87E+05	-26344.	-0.000833	12630.	1.63E+10	210.121	94791.
148.800	-0.014012	7.63E+05	-25152.	-0.000590	10865.	1.63E+10	286.307	98076.
153.600	-0.016306	6.46E+05	-23638.	-0.000383	9193.294	1.63E+10	344.447	1.01E+05
158.400	-0.017686	5.36E+05	-21885.	-0.000209	7634.859	1.63E+10	386.035	1.05E+05
163.200	-0.018308	4.36E+05	-19968.	-6.54E-05	6203.015	1.63E+10	412.678	1.08E+05
168.000	-0.018314	3.45E+05	-17955.	4.95E-05	4906.498	1.63E+10	426.050	1.12E+05
172.800	-0.017832	2.63E+05	-15906.	0.000139	3749.693	1.63E+10	427.864	1.15E+05
177.600	-0.016978	1.92E+05	-13871.	0.000206	2733.195	1.63E+10	419.841	1.19E+05
182.400	-0.015853	1.30E+05	-11895.	0.000254	1854.374	1.63E+10	403.688	1.22E+05
187.200	-0.014544	77843.	-10012.	0.000284	1107.932	1.63E+10	381.057	1.26E+05
192.000	-0.013124	34178.	-8248.516	0.000301	486.448	1.63E+10	353.522	1.29E+05
196.800	-0.011656	-1342.458	-6625.962	0.000306	19.107	1.63E+10	322.542	1.33E+05
201.600	-0.010190	-29431.	-5157.208	0.000301	418.893	1.63E+10	289.439	1.36E+05

206.400	-0.008766	-50852.	-3849.637	0.000289	723.764	1.63E+10	255.382	1.40E+05
211.200	-0.007413	-66388.	-2705.414	0.000272	944.889	1.63E+10	221.377	1.43E+05
216.000	-0.006155	-76824.	-1722.285	0.000251	1093.419	1.63E+10	188.260	1.47E+05
220.800	-0.005005	-82922.	-894.358	0.000227	1180.214	1.63E+10	156.709	1.50E+05
225.600	-0.003972	-85409.	-212.871	0.000203	1215.620	1.63E+10	127.244	1.54E+05
230.400	-0.003060	-84965.	333.080	0.000178	1209.300	1.63E+10	100.236	1.57E+05
235.200	-0.002268	-82212.	755.883	0.000153	1170.110	1.63E+10	75.931	1.61E+05
240.000	-0.001592	-77709.	1068.813	0.000129	1106.020	1.63E+10	54.457	1.64E+05
244.800	-0.001026	-71951.	1285.534	0.000107	1024.072	1.63E+10	35.843	1.68E+05
249.600	-0.000562	-65368.	1419.652	8.71E-05	930.370	1.63E+10	20.039	1.71E+05
254.400	-0.000190	-58323.	1484.368	6.89E-05	830.097	1.63E+10	6.926	1.75E+05
259.200	9.89E-05	-51118.	1492.194	5.28E-05	727.553	1.63E+10	-3.665	1.78E+05
264.000	0.000316	-43998.	1454.735	3.87E-05	626.211	1.63E+10	-11.942	1.81E+05
268.800	0.000471	-37152.	1382.548	2.68E-05	528.785	1.63E+10	-18.136	1.85E+05
273.600	0.000573	-30725.	1285.041	1.68E-05	437.306	1.63E+10	-22.492	1.88E+05
278.400	0.000632	-24816.	1170.438	8.62E-06	353.203	1.63E+10	-25.260	1.92E+05
283.200	0.000656	-19489.	1045.770	2.10E-06	277.383	1.63E+10	-26.685	1.95E+05
288.000	0.000652	-14777.	916.914	-2.94E-06	210.313	1.63E+10	-27.005	1.99E+05
292.800	0.000628	-10687.	788.649	-6.69E-06	152.100	1.63E+10	-26.439	2.02E+05
297.600	0.000588	-7205.589	664.737	-9.33E-06	102.556	1.63E+10	-25.191	2.06E+05
302.400	0.000538	-4305.052	548.018	-1.10E-05	61.273	1.63E+10	-23.442	2.09E+05
307.200	0.000482	-1944.619	440.513	-1.19E-05	27.677	1.63E+10	-21.352	2.13E+05
312.000	0.000423	-76.130	343.531	-1.22E-05	1.084	1.63E+10	-19.057	2.16E+05
316.800	0.000365	1353.281	257.778	-1.21E-05	19.261	1.63E+10	-16.673	2.19E+05
321.600	0.000308	2398.542	183.459	-1.15E-05	34.138	1.63E+10	-14.293	2.23E+05
326.400	0.000254	3114.483	120.375	-1.07E-05	44.328	1.63E+10	-11.991	2.26E+05
331.200	0.000205	3554.141	68.019	-9.71E-06	50.586	1.63E+10	-9.823	2.30E+05
336.000	0.000161	3767.470	25.655	-8.63E-06	53.622	1.63E+10	-7.829	2.33E+05
340.800	0.000122	3800.428	-7.613	-7.51E-06	54.091	1.63E+10	-6.033	2.37E+05
345.600	8.89E-05	3694.384	-32.774	-6.41E-06	52.582	1.63E+10	-4.451	2.40E+05
350.400	6.08E-05	3485.799	-50.859	-5.35E-06	49.613	1.63E+10	-3.085	2.44E+05
355.200	3.75E-05	3206.134	-62.902	-4.37E-06	45.632	1.63E+10	-1.933	2.47E+05
360.000	1.88E-05	2881.941	-69.900	-3.47E-06	41.018	1.63E+10	-0.983378	2.51E+05
364.800	4.21E-06	2535.091	-72.795	-2.67E-06	36.082	1.63E+10	-0.222752	2.54E+05
369.600	-6.84E-06	2183.109	-72.450	-1.98E-06	31.072	1.63E+10	0.366720	2.57E+05
374.400	-1.48E-05	1839.576	-69.639	-1.39E-06	26.182	1.63E+10	0.804344	2.61E+05
379.200	-2.02E-05	1514.575	-65.044	-8.94E-07	21.557	1.63E+10	1.110	2.64E+05
384.000	-2.34E-05	1215.153	-59.249	-4.92E-07	17.295	1.63E+10	1.304	2.68E+05
388.800	-2.49E-05	945.782	-52.745	-1.73E-07	13.461	1.63E+10	1.406	2.71E+05
393.600	-2.50E-05	708.805	-45.930	7.02E-08	10.088	1.63E+10	1.433	2.75E+05
398.400	-2.42E-05	504.850	-39.124	2.49E-07	7.185	1.63E+10	1.403	2.78E+05
403.200	-2.26E-05	333.215	-32.568	3.72E-07	4.743	1.63E+10	1.329	2.82E+05
408.000	-2.06E-05	192.202	-26.437	4.50E-07	2.736	1.63E+10	1.225	2.85E+05
412.800	-1.83E-05	79.418	-20.851	4.90E-07	1.130	1.63E+10	1.102	2.89E+05
417.600	-1.59E-05	-7.970	-15.881	5.00E-07	0.113442	1.63E+10	0.968962	2.92E+05
422.400	-1.35E-05	-73.034	-11.556	4.88E-07	1.039	1.63E+10	0.832972	2.95E+05
427.200	-1.12E-05	-118.907	-7.877	4.60E-07	1.692	1.63E+10	0.699962	2.99E+05
432.000	-9.11E-06	-148.652	-4.819	4.21E-07	2.116	1.63E+10	0.574241	3.02E+05
436.800	-7.20E-06	-165.167	-2.339	3.74E-07	2.351	1.63E+10	0.458851	3.06E+05
441.600	-5.52E-06	-171.110	-0.384281	3.25E-07	2.435	1.63E+10	0.355750	3.09E+05
446.400	-4.08E-06	-168.856	1.108	2.75E-07	2.403	1.63E+10	0.265990	3.13E+05
451.200	-2.88E-06	-160.474	2.202	2.26E-07	2.284	1.63E+10	0.189883	3.16E+05
456.000	-1.91E-06	-147.717	2.963	1.81E-07	2.102	1.63E+10	0.127156	3.20E+05
460.800	-1.15E-06	-132.030	3.453	1.40E-07	1.879	1.63E+10	0.077085	3.23E+05
465.600	-5.67E-07	-114.567	3.731	1.03E-07	1.631	1.63E+10	0.038612	3.27E+05
470.400	-1.52E-07	-96.215	3.848	7.24E-08	1.369	1.63E+10	0.010443	3.30E+05
475.200	1.28E-07	-77.622	3.852	4.68E-08	1.105	1.63E+10	-0.008875	3.34E+05
480.000	2.98E-07	-59.234	3.626	2.67E-08	0.843065	1.63E+10	-0.085502	1.38E+06
484.800	3.84E-07	-42.815	3.156	1.16E-08	0.609383	1.63E+10	-0.110253	1.38E+06
489.600	4.09E-07	-28.937	2.609	1.08E-09	0.411856	1.63E+10	-0.117616	1.38E+06
494.400	3.94E-07	-17.769	2.055	-5.80E-09	0.252899	1.63E+10	-0.113227	1.38E+06
499.200	3.54E-07	-9.209	1.539	-9.77E-09	0.131071	1.63E+10	-0.101623	1.38E+06
504.000	3.00E-07	-2.991	1.088	-1.16E-08	0.042567	1.63E+10	-0.086279	1.38E+06
508.800	2.43E-07	1.240	0.714001	-1.18E-08	0.017643	1.63E+10	-0.069720	1.38E+06
513.600	1.87E-07	3.864	0.417878	-1.11E-08	0.054990	1.63E+10	-0.053665	1.38E+06
518.400	1.36E-07	5.251	0.195055	-9.73E-09	0.074740	1.63E+10	-0.039178	1.38E+06
523.200	9.34E-08	5.736	0.036647	-8.11E-09	0.081642	1.63E+10	-0.026825	1.38E+06
528.000	5.85E-08	5.603	-0.068053	-6.44E-09	0.079747	1.63E+10	-0.016800	1.38E+06
532.800	3.15E-08	5.083	-0.130098	-4.87E-09	0.072343	1.63E+10	-0.009052	1.38E+06
537.600	1.17E-08	4.354	-0.159903	-3.48E-09	0.061971	1.63E+10	-0.003367	1.38E+06
542.400	-1.91E-09	3.548	-0.166664	-2.32E-09	0.050495	1.63E+10	0.000550	1.38E+06
547.200	-1.05E-08	2.754	-0.158085	-1.39E-09	0.039199	1.63E+10	0.003025	1.38E+06
552.000	-1.53E-08	2.030	-0.140306	-6.85E-10	0.028895	1.63E+10	0.004383	1.38E+06
556.800	-1.71E-08	1.407	-0.117991	-1.79E-10	0.020028	1.63E+10	0.004915	1.38E+06
561.600	-1.70E-08	0.897451	-0.094491	1.60E-10	0.012773	1.63E+10	0.004877	1.38E+06
566.400	-1.56E-08	0.500075	-0.072050	3.66E-10	0.007117	1.63E+10	0.004474	1.38E+06
571.200	-1.35E-08	0.205769	-0.052032	4.70E-10	0.002929	1.63E+10	0.003867	1.38E+06
576.000	-1.11E-08	0.000567	-0.035124	5.00E-10	8.07E-06	1.63E+10	0.003178	1.38E+06
580.800	-8.66E-09	-0.131424	-0.021528	4.81E-10	0.001871	1.63E+10	0.002488	1.38E+06
585.600	-6.44E-09	-0.206102	-0.011116	4.31E-10	0.002933	1.63E+10	0.001851	1.38E+06
590.400	-4.52E-09	-0.238135	-0.003558	3.66E-10	0.003389	1.63E+10	0.001298	1.38E+06

595.200	-2.93E-09	-0.240261	0.001577	2.95E-10	0.003420	1.63E+10	0.000842	1.38E+06
600.000	-1.68E-09	-0.222992	0.004757	2.27E-10	0.003174	1.63E+10	0.000483	1.38E+06
604.800	-7.49E-10	-0.194592	0.006433	1.66E-10	0.002770	1.63E+10	0.000215	1.38E+06
609.600	-9.05E-11	-0.161236	0.007011	1.13E-10	0.002295	1.63E+10	2.60E-05	1.38E+06
614.400	3.40E-10	-0.127282	0.006840	7.09E-11	0.001812	1.63E+10	-9.76E-05	1.38E+06
619.200	5.90E-10	-0.095576	0.006199	3.81E-11	0.001360	1.63E+10	-0.000169	1.38E+06
624.000	7.05E-10	-0.067776	0.005306	1.40E-11	0.000965	1.63E+10	-0.000203	1.38E+06
628.800	7.24E-10	-0.044643	0.004320	-2.54E-12	0.000635	1.63E+10	-0.000208	1.38E+06
633.600	6.81E-10	-0.026305	0.003351	-1.30E-11	0.000374	1.63E+10	-0.000196	1.38E+06
638.400	6.00E-10	-0.012473	0.002468	-1.87E-11	0.000178	1.63E+10	-0.000172	1.38E+06
643.200	5.01E-10	-0.002612	0.001709	-2.09E-11	3.72E-05	1.63E+10	-0.000144	1.38E+06
648.000	3.99E-10	0.003932	0.001088	-2.07E-11	5.60E-05	1.63E+10	-0.000115	1.38E+06
652.800	3.02E-10	0.007834	0.000605	-1.90E-11	0.000112	1.63E+10	-8.68E-05	1.38E+06
657.600	2.17E-10	0.009736	0.000247	-1.64E-11	0.000139	1.63E+10	-6.22E-05	1.38E+06
662.400	1.45E-10	0.010204	-2.40E-06	-1.35E-11	0.000145	1.63E+10	-4.16E-05	1.38E+06
667.200	8.74E-11	0.009713	-0.000162	-1.05E-11	0.000138	1.63E+10	-2.51E-05	1.38E+06
672.000	4.36E-11	0.008644	-0.000253	-7.83E-12	0.000123	1.63E+10	-1.25E-05	1.38E+06
676.800	1.22E-11	0.007286	-0.000291	-5.49E-12	0.000104	1.63E+10	-3.49E-06	1.38E+06
681.600	-9.04E-12	0.005848	-0.000293	-3.55E-12	8.32E-05	1.63E+10	2.60E-06	1.38E+06
686.400	-2.20E-11	0.004470	-0.000272	-2.03E-12	6.36E-05	1.63E+10	6.31E-06	1.38E+06
691.200	-2.86E-11	0.003237	-0.000237	-9.00E-13	4.61E-05	1.63E+10	8.21E-06	1.38E+06
696.000	-3.06E-11	0.002193	-0.000196	-1.01E-13	3.12E-05	1.63E+10	8.79E-06	1.38E+06
700.800	-2.95E-11	0.001351	-0.000155	4.21E-13	1.92E-05	1.63E+10	8.49E-06	1.38E+06
705.600	-2.66E-11	0.000706	-0.000116	7.24E-13	1.00E-05	1.63E+10	7.63E-06	1.38E+06
710.400	-2.26E-11	0.000236	-8.23E-05	8.63E-13	3.35E-06	1.63E+10	6.49E-06	1.38E+06
715.200	-1.83E-11	-8.49E-05	-5.42E-05	8.85E-13	1.21E-06	1.63E+10	5.25E-06	1.38E+06
720.000	-1.41E-11	-0.000284	-3.18E-05	8.31E-13	4.05E-06	1.63E+10	4.05E-06	1.38E+06
724.800	-1.03E-11	-0.000391	-1.50E-05	7.31E-13	5.56E-06	1.63E+10	2.96E-06	1.38E+06
729.600	-7.07E-12	-0.000429	-3.04E-06	6.11E-13	6.10E-06	1.63E+10	2.03E-06	1.38E+06
734.400	-4.44E-12	-0.000420	4.90E-06	4.86E-13	5.97E-06	1.63E+10	1.28E-06	1.38E+06
739.200	-2.41E-12	-0.000382	9.62E-06	3.68E-13	5.43E-06	1.63E+10	6.92E-07	1.38E+06
744.000	-9.15E-13	-0.000327	1.19E-05	2.63E-13	4.66E-06	1.63E+10	2.63E-07	1.38E+06
748.800	1.18E-13	-0.000267	1.25E-05	1.76E-13	3.80E-06	1.63E+10	-3.38E-08	1.38E+06
753.600	7.72E-13	-0.000208	1.19E-05	1.06E-13	2.96E-06	1.63E+10	-2.22E-07	1.38E+06
758.400	1.13E-12	-0.000153	1.05E-05	5.26E-14	2.18E-06	1.63E+10	-3.26E-07	1.38E+06
763.200	1.28E-12	-0.000107	8.88E-06	1.44E-14	1.52E-06	1.63E+10	-3.67E-07	1.38E+06
768.000	1.27E-12	-6.82E-05	7.12E-06	-1.14E-14	9.70E-07	1.63E+10	-3.65E-07	1.38E+06
772.800	1.17E-12	-3.82E-05	5.44E-06	-2.70E-14	5.44E-07	1.63E+10	-3.36E-07	1.38E+06
777.600	1.01E-12	-1.60E-05	3.93E-06	-3.50E-14	2.27E-07	1.63E+10	-2.91E-07	1.38E+06
782.400	8.33E-13	-4.27E-07	2.66E-06	-3.74E-14	6.08E-09	1.63E+10	-2.39E-07	1.38E+06
787.200	6.53E-13	9.59E-06	1.64E-06	-3.61E-14	1.37E-07	1.63E+10	-1.88E-07	1.38E+06
792.000	4.87E-13	1.53E-05	8.52E-07	-3.24E-14	2.18E-07	1.63E+10	-1.40E-07	1.38E+06
796.800	3.42E-13	1.78E-05	2.81E-07	-2.75E-14	2.53E-07	1.63E+10	-9.82E-08	1.38E+06
801.600	2.22E-13	1.80E-05	-1.08E-07	-2.23E-14	2.56E-07	1.63E+10	-6.39E-08	1.38E+06
806.400	1.28E-13	1.67E-05	-3.50E-07	-1.71E-14	2.38E-07	1.63E+10	-3.68E-08	1.38E+06
811.200	5.78E-14	1.46E-05	-4.79E-07	-1.25E-14	2.08E-07	1.63E+10	-1.66E-08	1.38E+06
816.000	8.01E-15	1.21E-05	-5.24E-07	-8.59E-15	1.73E-07	1.63E+10	-2.30E-09	1.38E+06
820.800	-2.46E-14	9.59E-06	-5.12E-07	-5.39E-15	1.37E-07	1.63E+10	7.08E-09	1.38E+06
825.600	-4.37E-14	7.22E-06	-4.65E-07	-2.91E-15	1.03E-07	1.63E+10	1.26E-08	1.38E+06
830.400	-5.26E-14	5.13E-06	-3.99E-07	-1.09E-15	7.30E-08	1.63E+10	1.51E-08	1.38E+06
835.200	-5.42E-14	3.39E-06	-3.25E-07	1.59E-16	4.82E-08	1.63E+10	1.56E-08	1.38E+06
840.000	-5.11E-14	2.00E-06	-2.53E-07	9.53E-16	2.85E-08	1.63E+10	1.47E-08	1.38E+06
844.800	-4.51E-14	9.60E-07	-1.86E-07	1.39E-15	1.37E-08	1.63E+10	1.29E-08	1.38E+06
849.600	-3.77E-14	2.14E-07	-1.29E-07	1.56E-15	3.05E-09	1.63E+10	1.08E-08	1.38E+06
854.400	-3.01E-14	-2.82E-07	-8.26E-08	1.55E-15	4.01E-09	1.63E+10	8.64E-09	1.38E+06
859.200	-2.28E-14	-5.79E-07	-4.62E-08	1.43E-15	8.24E-09	1.63E+10	6.55E-09	1.38E+06
864.000	-1.64E-14	-7.25E-07	-1.91E-08	1.23E-15	1.03E-08	1.63E+10	4.71E-09	1.38E+06
868.800	-1.10E-14	-7.63E-07	-2.65E-10	1.01E-15	1.09E-08	1.63E+10	3.15E-09	1.38E+06
873.600	-6.64E-15	-7.28E-07	1.19E-08	7.95E-16	1.04E-08	1.63E+10	1.91E-09	1.38E+06
878.400	-3.34E-15	-6.48E-07	1.88E-08	5.92E-16	9.23E-09	1.63E+10	9.60E-10	1.38E+06
883.200	-9.57E-16	-5.47E-07	2.17E-08	4.16E-16	7.79E-09	1.63E+10	2.75E-10	1.38E+06
888.000	6.54E-16	-4.40E-07	2.19E-08	2.71E-16	6.26E-09	1.63E+10	-1.88E-10	1.38E+06
892.800	1.64E-15	-3.37E-07	2.04E-08	1.57E-16	4.79E-09	1.63E+10	-4.72E-10	1.38E+06
897.600	2.16E-15	-2.44E-07	1.77E-08	7.11E-17	3.48E-09	1.63E+10	-6.20E-10	1.38E+06
902.400	2.33E-15	-1.66E-07	1.46E-08	1.06E-17	2.37E-09	1.63E+10	-6.68E-10	1.38E+06
907.200	2.26E-15	-1.04E-07	1.15E-08	-2.91E-17	1.48E-09	1.63E+10	-6.49E-10	1.38E+06
912.000	2.05E-15	-5.61E-08	8.51E-09	-5.27E-17	7.99E-10	1.63E+10	-5.88E-10	1.38E+06
916.800	1.75E-15	-2.20E-08	5.89E-09	-6.42E-17	3.14E-10	1.63E+10	-5.04E-10	1.38E+06
921.600	1.43E-15	4.46E-10	3.70E-09	-6.74E-17	6.34E-12	1.63E+10	-4.11E-10	1.38E+06
926.400	1.11E-15	1.35E-08	1.95E-09	-6.53E-17	1.91E-10	1.63E+10	-3.18E-10	1.38E+06
931.200	8.04E-16	1.91E-08	6.28E-10	-6.05E-17	2.72E-10	1.63E+10	-2.31E-10	1.38E+06
936.000	5.27E-16	1.95E-08	-2.89E-10	-5.48E-17	2.77E-10	1.63E+10	-1.51E-10	1.38E+06
940.800	2.77E-16	1.64E-08	-8.43E-10	-4.96E-17	2.33E-10	1.63E+10	-7.96E-11	1.38E+06
945.600	5.08E-17	1.14E-08	-1.07E-09	-4.55E-17	1.62E-10	1.63E+10	-1.46E-11	1.38E+06
950.400	-1.59E-16	6.10E-09	-9.94E-10	-4.29E-17	8.68E-11	1.63E+10	4.58E-11	1.38E+06
955.200	-3.61E-16	1.85E-09	-6.35E-10	-4.17E-17	2.64E-11	1.63E+10	1.04E-10	1.38E+06
960.000	-5.60E-16	0.000	0.000	-4.15E-17	0.000	1.63E+10	1.61E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be

representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	1.06493613 in
Computed slope at pile head	=	-0.01242478
Maximum bending moment	=	1929850. lbs-in
Maximum shear force	=	30000.00000 lbs
Depth of maximum bending moment	=	91.20000000 in
Depth of maximum shear force	=	4.80000000 in
Number of iterations	=	22
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 40000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	1.829	0.000	40000.	-0.019711	0.000	1.63E+10	0.000	0.000
4.800	1.734	1.92E+05	40000.	-0.019683	2732.707	1.63E+10	0.000	0.000
9.600	1.640	3.84E+05	40000.	-0.019598	5465.414	1.63E+10	0.000	0.000
14.400	1.546	5.76E+05	39944.	-0.019457	8198.121	1.63E+10	-23.434	72.755
19.200	1.453	7.67E+05	39705.	-0.019259	10923.	1.63E+10	-76.119	251.446
24.000	1.361	9.57E+05	39203.	-0.019005	13623.	1.63E+10	-133.020	469.078
28.800	1.271	1.14E+06	38428.	-0.018696	16280.	1.63E+10	-189.894	717.354
33.600	1.182	1.33E+06	37390.	-0.018332	18874.	1.63E+10	-242.493	984.999
38.400	1.095	1.50E+06	36120.	-0.017916	21388.	1.63E+10	-286.574	1256.631
43.200	1.010	1.67E+06	34670.	-0.017448	23809.	1.63E+10	-317.891	1511.208
48.000	0.927137	1.84E+06	33109.	-0.016931	26126.	1.63E+10	-332.197	1719.862
52.800	0.847163	1.99E+06	31532.	-0.016368	28333.	1.63E+10	-325.249	1842.852
57.600	0.770004	2.14E+06	29873.	-0.015760	30434.	1.63E+10	-366.001	2281.554
62.400	0.695867	2.28E+06	27956.	-0.015110	32415.	1.63E+10	-432.388	2982.554
67.200	0.624949	2.41E+06	25709.	-0.014420	34254.	1.63E+10	-504.081	3871.655
72.000	0.557434	2.52E+06	23105.	-0.013694	35927.	1.63E+10	-581.081	5003.623
76.800	0.493486	2.63E+06	20118.	-0.012935	37411.	1.63E+10	-663.387	6452.574
81.600	0.433255	2.72E+06	16723.	-0.012148	38676.	1.63E+10	-750.992	8320.196
86.400	0.376864	2.79E+06	12896.	-0.011337	39696.	1.63E+10	-843.842	10748.
91.200	0.324416	2.84E+06	8610.614	-0.010508	40438.	1.63E+10	-941.622	13932.
96.000	0.275984	2.87E+06	3847.565	-0.009667	40872.	1.63E+10	-1042.983	18140.
100.800	0.231612	2.88E+06	-1400.113	-0.008820	40964.	1.63E+10	-1143.550	23699.
105.600	0.191307	2.86E+06	-7102.464	-0.007976	40681.	1.63E+10	-1232.430	30922.
110.400	0.155044	2.81E+06	-13154.	-0.007141	39994.	1.63E+10	-1289.102	39909.
115.200	0.122752	2.73E+06	-19334.	-0.006325	38884.	1.63E+10	-1285.894	50283.
120.000	0.094322	2.62E+06	-25301.	-0.005536	37352.	1.63E+10	-1200.366	61086.
124.800	0.069602	2.49E+06	-30657.	-0.004784	35427.	1.63E+10	-1031.157	71112.
129.600	0.048400	2.33E+06	-35055.	-0.004074	33163.	1.63E+10	-801.575	79495.
134.400	0.030492	2.15E+06	-38291.	-0.003414	30637.	1.63E+10	-546.509	86031.
139.200	0.015627	1.96E+06	-40314.	-0.002808	27931.	1.63E+10	-296.372	91035.
144.000	0.003535	1.77E+06	-41193.	-0.002259	25128.	1.63E+10	-69.981	95012.
148.800	-0.006060	1.57E+06	-41063.	-0.001768	22303.	1.63E+10	124.254	98417.
153.600	-0.013441	1.37E+06	-40082.	-0.001336	19518.	1.63E+10	284.422	1.02E+05
158.400	-0.018883	1.18E+06	-38411.	-0.000960	16826.	1.63E+10	411.811	1.05E+05
163.200	-0.022654	1.00E+06	-36201.	-0.000638	14270.	1.63E+10	508.986	1.08E+05
168.000	-0.025007	8.35E+05	-33590.	-0.000367	11880.	1.63E+10	578.873	1.11E+05
172.800	-0.026181	6.80E+05	-30702.	-0.000144	9679.927	1.63E+10	624.425	1.14E+05
177.600	-0.026394	5.40E+05	-27647.	3.52E-05	7684.806	1.63E+10	648.532	1.18E+05
182.400	-0.025843	4.15E+05	-24521.	0.000176	5902.354	1.63E+10	654.025	1.21E+05
187.200	-0.024706	3.05E+05	-21406.	0.000282	4334.373	1.63E+10	643.684	1.25E+05
192.000	-0.023138	2.09E+05	-18373.	0.000357	2977.472	1.63E+10	620.232	1.29E+05
196.800	-0.021275	1.28E+05	-15477.	0.000407	1823.961	1.63E+10	586.311	1.32E+05
201.600	-0.019231	60614.	-12764.	0.000435	862.715	1.63E+10	544.431	1.36E+05
206.400	-0.017101	5620.949	-10264.	0.000445	80.002	1.63E+10	496.937	1.39E+05
211.200	-0.014963	-37923.	-8001.373	0.000440	539.753	1.63E+10	445.955	1.43E+05

216.000	-0.012878	-71192.	-5987.037	0.000424	1013.268	1.63E+10	393.352	1.47E+05
220.800	-0.010895	-95399.	-4225.146	0.000399	1357.794	1.63E+10	340.770	1.50E+05
225.600	-0.009046	-1.12E+05	-2712.349	0.000369	1590.573	1.63E+10	289.562	1.54E+05
230.400	-0.007355	-1.21E+05	-1439.480	0.000334	1728.397	1.63E+10	240.800	1.57E+05
235.200	-0.005836	-1.26E+05	-392.836	0.000298	1787.256	1.63E+10	195.302	1.61E+05
240.000	-0.004494	-1.25E+05	444.661	0.000261	1782.072	1.63E+10	153.655	1.64E+05
244.800	-0.003329	-1.21E+05	1092.406	0.000225	1726.500	1.63E+10	116.238	1.68E+05
249.600	-0.002336	-1.15E+05	1571.162	0.000190	1632.811	1.63E+10	83.244	1.71E+05
254.400	-0.001505	-1.06E+05	1902.251	0.000158	1511.824	1.63E+10	54.710	1.75E+05
259.200	-0.000824	-96460.	2106.862	0.000128	1372.896	1.63E+10	30.544	1.78E+05
264.000	-0.000279	-85995.	2205.492	0.000101	1223.952	1.63E+10	10.551	1.81E+05
268.800	0.000144	-75287.	2217.511	7.70E-05	1071.548	1.63E+10	-5.543	1.85E+05
273.600	0.000461	-64707.	2160.835	5.64E-05	920.962	1.63E+10	-18.071	1.88E+05
278.400	0.000686	-54543.	2051.703	3.89E-05	776.301	1.63E+10	-27.400	1.92E+05
283.200	0.000834	-45010.	1904.541	2.42E-05	640.626	1.63E+10	-33.917	1.95E+05
288.000	0.000918	-36259.	1731.910	1.23E-05	516.074	1.63E+10	-38.013	1.99E+05
292.800	0.000951	-28384.	1544.508	2.73E-06	403.986	1.63E+10	-40.071	2.02E+05
297.600	0.000944	-21432.	1351.236	-4.60E-06	305.039	1.63E+10	-40.459	2.06E+05
302.400	0.000907	-15412.	1159.295	-1.00E-05	219.360	1.63E+10	-39.517	2.09E+05
307.200	0.000848	-10303.	974.320	-1.38E-05	146.639	1.63E+10	-37.556	2.13E+05
312.000	0.000775	-6058.747	800.532	-1.62E-05	86.233	1.63E+10	-34.855	2.16E+05
316.800	0.000692	-2617.726	640.903	-1.75E-05	37.258	1.63E+10	-31.657	2.19E+05
321.600	0.000607	93.917	497.321	-1.79E-05	1.337	1.63E+10	-28.168	2.23E+05
326.400	0.000521	2156.559	370.767	-1.75E-05	30.694	1.63E+10	-24.563	2.26E+05
331.200	0.000438	3653.278	261.466	-1.67E-05	51.997	1.63E+10	-20.979	2.30E+05
336.000	0.000361	4666.637	169.050	-1.55E-05	66.420	1.63E+10	-17.528	2.33E+05
340.800	0.000290	5276.157	92.687	-1.40E-05	75.095	1.63E+10	-14.290	2.37E+05
345.600	0.000226	5556.435	31.215	-1.24E-05	79.084	1.63E+10	-11.323	2.40E+05
350.400	0.000171	5575.824	-16.754	-1.08E-05	79.360	1.63E+10	-8.664	2.44E+05
355.200	0.000123	5395.595	-52.741	-9.15E-06	76.795	1.63E+10	-6.330	2.47E+05
360.000	8.29E-05	5069.514	-78.316	-7.61E-06	72.154	1.63E+10	-4.326	2.51E+05
364.800	5.00E-05	4643.761	-95.043	-6.18E-06	66.094	1.63E+10	-2.643	2.54E+05
369.600	2.36E-05	4157.104	-104.424	-4.88E-06	59.167	1.63E+10	-1.265	2.57E+05
374.400	3.10E-06	3641.295	-107.865	-3.73E-06	51.826	1.63E+10	-0.168753	2.61E+05
379.200	-1.22E-05	3121.597	-106.653	-2.74E-06	44.429	1.63E+10	0.673799	2.64E+05
384.000	-2.32E-05	2617.424	-101.935	-1.89E-06	37.253	1.63E+10	1.292	2.68E+05
388.800	-3.04E-05	2143.024	-94.712	-1.19E-06	30.501	1.63E+10	1.717	2.71E+05
393.600	-3.46E-05	1708.188	-85.840	-6.23E-07	24.312	1.63E+10	1.979	2.75E+05
398.400	-3.64E-05	1318.955	-76.032	-1.77E-07	18.772	1.63E+10	2.107	2.78E+05
403.200	-3.63E-05	978.277	-65.866	1.61E-07	13.924	1.63E+10	2.129	2.82E+05
408.000	-3.48E-05	686.643	-55.795	4.07E-07	9.773	1.63E+10	2.068	2.85E+05
412.800	-3.24E-05	442.649	-46.161	5.73E-07	6.300	1.63E+10	1.946	2.89E+05
417.600	-2.93E-05	243.496	-37.210	6.74E-07	3.466	1.63E+10	1.783	2.92E+05
422.400	-2.59E-05	85.429	-29.104	7.22E-07	1.216	1.63E+10	1.595	2.95E+05
427.200	-2.24E-05	-35.899	-21.932	7.30E-07	0.510940	1.63E+10	1.394	2.99E+05
432.000	-1.89E-05	-125.119	-15.730	7.06E-07	1.781	1.63E+10	1.191	3.02E+05
436.800	-1.56E-05	-186.907	-10.487	6.60E-07	2.660	1.63E+10	0.993947	3.06E+05
441.600	-1.26E-05	-225.795	-6.159	5.99E-07	3.214	1.63E+10	0.809551	3.09E+05
446.400	-9.85E-06	-246.031	-2.676	5.30E-07	3.502	1.63E+10	0.641580	3.13E+05
451.200	-7.48E-06	-251.485	0.046064	4.56E-07	3.579	1.63E+10	0.492610	3.16E+05
456.000	-5.46E-06	-245.589	2.102	3.83E-07	3.495	1.63E+10	0.363904	3.20E+05
460.800	-3.80E-06	-231.308	3.589	3.13E-07	3.292	1.63E+10	0.255669	3.23E+05
465.600	-2.46E-06	-211.137	4.604	2.48E-07	3.005	1.63E+10	0.167283	3.27E+05
470.400	-1.42E-06	-187.112	5.239	1.89E-07	2.663	1.63E+10	0.097489	3.30E+05
475.200	-6.42E-07	-160.841	5.580	1.38E-07	2.289	1.63E+10	0.044574	3.34E+05
480.000	-9.26E-08	-133.543	5.751	9.47E-08	1.901	1.63E+10	0.026611	1.38E+06
484.800	2.68E-07	-105.631	5.630	5.95E-08	1.503	1.63E+10	-0.076854	1.38E+06
489.600	4.78E-07	-79.491	5.116	3.22E-08	1.131	1.63E+10	-0.137422	1.38E+06
494.400	5.77E-07	-56.516	4.389	1.22E-08	0.804384	1.63E+10	-0.165709	1.38E+06
499.200	5.95E-07	-37.360	3.580	-1.63E-09	0.531732	1.63E+10	-0.171044	1.38E+06
504.000	5.61E-07	-22.144	2.783	-1.04E-08	0.315170	1.63E+10	-0.161208	1.38E+06
508.800	4.96E-07	-10.642	2.054	-1.52E-08	0.151471	1.63E+10	-0.142379	1.38E+06
513.600	4.15E-07	-2.421	1.427	-1.71E-08	0.034463	1.63E+10	-0.119228	1.38E+06
518.400	3.31E-07	3.053	0.912200	-1.71E-08	0.043449	1.63E+10	-0.095093	1.38E+06
523.200	2.51E-07	6.336	0.510698	-1.57E-08	0.090176	1.63E+10	-0.072199	1.38E+06
528.000	1.81E-07	7.955	0.212916	-1.36E-08	0.113228	1.63E+10	-0.051877	1.38E+06
532.800	1.21E-07	8.380	0.004923	-1.12E-08	0.119268	1.63E+10	-0.034786	1.38E+06
537.600	7.34E-08	8.003	-0.129200	-8.75E-09	0.113901	1.63E+10	-0.021098	1.38E+06
542.400	3.71E-08	7.139	-0.205421	-6.52E-09	0.101615	1.63E+10	-0.010660	1.38E+06
547.200	1.09E-08	6.031	-0.238499	-4.58E-09	0.085833	1.63E+10	-0.003122	1.38E+06
552.000	-6.85E-09	4.850	-0.241269	-2.98E-09	0.069027	1.63E+10	0.001968	1.38E+06
556.800	-1.77E-08	3.714	-0.224336	-1.72E-09	0.052867	1.63E+10	0.005088	1.38E+06
561.600	-2.33E-08	2.696	-0.196047	-7.72E-10	0.038375	1.63E+10	0.006699	1.38E+06
566.400	-2.51E-08	1.832	-0.162651	-1.05E-10	0.026080	1.63E+10	0.007216	1.38E+06
571.200	-2.43E-08	1.135	-0.128560	3.32E-10	0.016151	1.63E+10	0.006988	1.38E+06
576.000	-2.19E-08	0.598209	-0.096668	5.87E-10	0.008514	1.63E+10	0.006300	1.38E+06
580.800	-1.87E-08	0.206780	-0.068663	7.06E-10	0.002943	1.63E+10	0.005369	1.38E+06
585.600	-1.52E-08	-0.060952	-0.045329	7.27E-10	0.000868	1.63E+10	0.004354	1.38E+06
590.400	-1.17E-08	-0.228379	-0.026809	6.85E-10	0.003250	1.63E+10	0.003363	1.38E+06
595.200	-8.58E-09	-0.318322	-0.012822	6.04E-10	0.004531	1.63E+10	0.002465	1.38E+06
600.000	-5.91E-09	-0.351466	-0.002833	5.06E-10	0.005002	1.63E+10	0.001697	1.38E+06

604.800	-3.73E-09	-0.345516	0.003810	4.03E-10	0.004918	1.63E+10	0.001071	1.38E+06
609.600	-2.04E-09	-0.314890	0.007786	3.06E-10	0.004482	1.63E+10	0.000586	1.38E+06
614.400	-7.94E-10	-0.270773	0.009738	2.19E-10	0.003854	1.63E+10	0.000228	1.38E+06
619.200	6.82E-11	-0.221402	0.010239	1.47E-10	0.003151	1.63E+10	-1.96E-05	1.38E+06
624.000	6.17E-10	-0.172483	0.009766	8.90E-11	0.002455	1.63E+10	-0.000177	1.38E+06
628.800	9.22E-10	-0.127649	0.008705	4.48E-11	0.001817	1.63E+10	-0.000265	1.38E+06
633.600	1.05E-09	-0.088919	0.007347	1.29E-11	0.001266	1.63E+10	-0.000301	1.38E+06
638.400	1.05E-09	-0.057118	0.005904	-8.63E-12	0.000813	1.63E+10	-0.000300	1.38E+06
643.200	9.64E-10	-0.032239	0.004518	-2.18E-11	0.000459	1.63E+10	-0.000277	1.38E+06
648.000	8.37E-10	-0.013741	0.003277	-2.86E-11	0.000196	1.63E+10	-0.000240	1.38E+06
652.800	6.90E-10	-0.000781	0.002224	-3.07E-11	1.11E-05	1.63E+10	-0.000198	1.38E+06
657.600	5.42E-10	0.007613	0.001375	-2.97E-11	0.000108	1.63E+10	-0.000156	1.38E+06
662.400	4.05E-10	0.012420	0.000722	-2.67E-11	0.000177	1.63E+10	-0.000116	1.38E+06
667.200	2.85E-10	0.014548	0.000247	-2.28E-11	0.000207	1.63E+10	-8.19E-05	1.38E+06
672.000	1.86E-10	0.014787	-7.85E-05	-1.85E-11	0.000210	1.63E+10	-5.35E-05	1.38E+06
676.800	1.08E-10	0.013795	-0.000281	-1.42E-11	0.000196	1.63E+10	-3.11E-05	1.38E+06
681.600	4.95E-11	0.012086	-0.000390	-1.04E-11	0.000172	1.63E+10	-1.42E-05	1.38E+06
686.400	7.96E-12	0.010050	-0.000430	-7.17E-12	0.000143	1.63E+10	-2.29E-06	1.38E+06
691.200	-1.94E-11	0.007961	-0.000422	-4.52E-12	0.000113	1.63E+10	5.56E-06	1.38E+06
696.000	-3.54E-11	0.006001	-0.000384	-2.46E-12	8.54E-05	1.63E+10	1.02E-05	1.38E+06
700.800	-4.30E-11	0.004275	-0.000330	-9.50E-13	6.08E-05	1.63E+10	1.24E-05	1.38E+06
705.600	-4.45E-11	0.002833	-0.000270	9.63E-14	4.03E-05	1.63E+10	1.28E-05	1.38E+06
710.400	-4.21E-11	0.001687	-0.000210	7.62E-13	2.40E-05	1.63E+10	1.21E-05	1.38E+06
715.200	-3.72E-11	0.000818	-0.000155	1.13E-12	1.16E-05	1.63E+10	1.07E-05	1.38E+06
720.000	-3.12E-11	0.000197	-0.000108	1.28E-12	2.80E-06	1.63E+10	8.97E-06	1.38E+06
724.800	-2.49E-11	-0.000218	-6.93E-05	1.28E-12	3.11E-06	1.63E+10	7.17E-06	1.38E+06
729.600	-1.90E-11	-0.000468	-3.90E-05	1.18E-12	6.66E-06	1.63E+10	5.45E-06	1.38E+06
734.400	-1.37E-11	-0.000593	-1.65E-05	1.02E-12	8.43E-06	1.63E+10	3.92E-06	1.38E+06
739.200	-9.18E-12	-0.000627	-7.58E-07	8.40E-13	8.92E-06	1.63E+10	2.64E-06	1.38E+06
744.000	-5.59E-12	-0.000600	9.42E-06	6.59E-13	8.54E-06	1.63E+10	1.61E-06	1.38E+06
748.800	-2.85E-12	-0.000536	1.52E-05	4.92E-13	7.63E-06	1.63E+10	8.18E-07	1.38E+06
753.600	-8.63E-13	-0.000454	1.78E-05	3.46E-13	6.46E-06	1.63E+10	2.48E-07	1.38E+06
758.400	4.80E-13	-0.000365	1.81E-05	2.26E-13	5.20E-06	1.63E+10	-1.38E-07	1.38E+06
763.200	1.31E-12	-0.000280	1.68E-05	1.31E-13	3.99E-06	1.63E+10	-3.75E-07	1.38E+06
768.000	1.74E-12	-0.000204	1.47E-05	5.95E-14	2.90E-06	1.63E+10	-4.99E-07	1.38E+06
772.800	1.88E-12	-0.000139	1.22E-05	9.10E-15	1.98E-06	1.63E+10	-5.39E-07	1.38E+06
777.600	1.82E-12	-8.63E-05	9.69E-06	-2.40E-14	1.23E-06	1.63E+10	-5.24E-07	1.38E+06
782.400	1.65E-12	-4.58E-05	7.30E-06	-4.35E-14	6.52E-07	1.63E+10	-4.73E-07	1.38E+06
787.200	1.41E-12	-1.62E-05	5.19E-06	-5.26E-14	2.31E-07	1.63E+10	-4.04E-07	1.38E+06
792.000	1.14E-12	4.06E-06	3.44E-06	-5.44E-14	5.78E-08	1.63E+10	-3.28E-07	1.38E+06
796.800	8.83E-13	1.68E-05	2.04E-06	-5.13E-14	2.39E-07	1.63E+10	-2.54E-07	1.38E+06
801.600	6.48E-13	2.37E-05	9.86E-07	-4.54E-14	3.37E-07	1.63E+10	-1.86E-07	1.38E+06
806.400	4.47E-13	2.63E-05	2.31E-07	-3.80E-14	3.74E-07	1.63E+10	-1.28E-07	1.38E+06
811.200	2.83E-13	2.59E-05	-2.73E-07	-3.04E-14	3.68E-07	1.63E+10	-8.14E-08	1.38E+06
816.000	1.56E-13	2.36E-05	-5.76E-07	-2.31E-14	3.36E-07	1.63E+10	-4.48E-08	1.38E+06
820.800	6.18E-14	2.04E-05	-7.25E-07	-1.66E-14	2.90E-07	1.63E+10	-1.77E-08	1.38E+06
825.600	-3.50E-15	1.67E-05	-7.66E-07	-1.11E-14	2.37E-07	1.63E+10	1.00E-09	1.38E+06
830.400	-4.52E-14	1.30E-05	-7.32E-07	-6.77E-15	1.85E-07	1.63E+10	1.30E-08	1.38E+06
835.200	-6.85E-14	9.64E-06	-6.54E-07	-3.43E-15	1.37E-07	1.63E+10	1.97E-08	1.38E+06
840.000	-7.82E-14	6.73E-06	-5.53E-07	-1.02E-15	9.58E-08	1.63E+10	2.25E-08	1.38E+06
844.800	-7.83E-14	4.34E-06	-4.45E-07	6.06E-16	6.17E-08	1.63E+10	2.25E-08	1.38E+06
849.600	-7.23E-14	2.46E-06	-3.41E-07	1.61E-15	3.50E-08	1.63E+10	2.08E-08	1.38E+06
854.400	-6.29E-14	1.06E-06	-2.48E-07	2.13E-15	1.51E-08	1.63E+10	1.81E-08	1.38E+06
859.200	-5.19E-14	8.34E-08	-1.68E-07	2.29E-15	1.19E-09	1.63E+10	1.49E-08	1.38E+06
864.000	-4.09E-14	-5.53E-07	-1.05E-07	2.23E-15	7.88E-09	1.63E+10	1.17E-08	1.38E+06
868.800	-3.06E-14	-9.20E-07	-5.53E-08	2.01E-15	1.31E-08	1.63E+10	8.78E-09	1.38E+06
873.600	-2.16E-14	-1.08E-06	-1.93E-08	1.71E-15	1.54E-08	1.63E+10	6.20E-09	1.38E+06
878.400	-1.41E-14	-1.11E-06	5.30E-09	1.39E-15	1.57E-08	1.63E+10	4.06E-09	1.38E+06
883.200	-8.22E-15	-1.03E-06	2.07E-08	1.08E-15	1.47E-08	1.63E+10	2.36E-09	1.38E+06
888.000	-3.79E-15	-9.07E-07	2.90E-08	7.91E-16	1.29E-08	1.63E+10	1.09E-09	1.38E+06
892.800	-6.31E-16	-7.55E-07	3.20E-08	5.46E-16	1.07E-08	1.63E+10	1.81E-10	1.38E+06
897.600	1.46E-15	-5.99E-07	3.15E-08	3.47E-16	8.53E-09	1.63E+10	-4.18E-10	1.38E+06
902.400	2.70E-15	-4.53E-07	2.86E-08	1.92E-16	6.45E-09	1.63E+10	-7.74E-10	1.38E+06
907.200	3.29E-15	-3.25E-07	2.45E-08	7.70E-17	4.62E-09	1.63E+10	-9.46E-10	1.38E+06
912.000	3.43E-15	-2.18E-07	1.98E-08	-2.90E-18	3.11E-09	1.63E+10	-9.87E-10	1.38E+06
916.800	3.27E-15	-1.34E-07	1.52E-08	-5.48E-17	1.91E-09	1.63E+10	-9.38E-10	1.38E+06
921.600	2.91E-15	-7.23E-08	1.09E-08	-8.53E-17	1.03E-09	1.63E+10	-8.36E-10	1.38E+06
926.400	2.45E-15	-2.94E-08	7.25E-09	-1.00E-16	4.18E-10	1.63E+10	-7.03E-10	1.38E+06
931.200	1.95E-15	-2.66E-09	4.22E-09	-1.05E-16	3.79E-11	1.63E+10	-5.59E-10	1.38E+06
936.000	1.44E-15	1.12E-08	1.89E-09	-1.04E-16	1.59E-10	1.63E+10	-4.14E-10	1.38E+06
940.800	9.51E-16	1.54E-08	2.36E-10	-9.98E-17	2.20E-10	1.63E+10	-2.73E-10	1.38E+06
945.600	4.83E-16	1.34E-08	-7.53E-10	-9.55E-17	1.91E-10	1.63E+10	-1.39E-10	1.38E+06
950.400	3.41E-17	8.21E-09	-1.11E-09	-9.23E-17	1.17E-10	1.63E+10	-9.80E-12	1.38E+06
955.200	-4.03E-16	2.77E-09	-8.55E-10	-9.07E-17	3.94E-11	1.63E+10	1.16E-10	1.38E+06
960.000	-8.37E-16	0.000	0.000	-9.03E-17	0.000	1.63E+10	2.40E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection	=	1.82882223 in
Computed slope at pile head	=	-0.01971142
Maximum bending moment	=	2878131. lbs-in
Maximum shear force	=	-41192.93190 lbs
Depth of maximum bending moment	=	100.80000 in
Depth of maximum shear force	=	144.00000 in
Number of iterations	=	26
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 50000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	2.803	4.40E-06	50000.	-0.028310	6.26E-08	1.63E+10	0.000	0.000
4.800	2.667	2.40E+05	50000.	-0.028275	3415.884	1.63E+10	0.000	0.000
9.600	2.531	4.80E+05	50000.	-0.028169	6831.768	1.63E+10	0.000	0.000
14.400	2.396	7.20E+05	49944.	-0.027992	10248.	1.63E+10	-23.434	46.941
19.200	2.262	9.59E+05	49705.	-0.027745	13656.	1.63E+10	-76.119	161.493
24.000	2.130	1.20E+06	49203.	-0.027427	17039.	1.63E+10	-133.020	299.770
28.800	1.999	1.43E+06	48428.	-0.027040	20379.	1.63E+10	-189.893	455.938
33.600	1.870	1.66E+06	47390.	-0.026584	23656.	1.63E+10	-242.493	622.318
38.400	1.744	1.89E+06	46120.	-0.026062	26854.	1.63E+10	-286.574	788.761
43.200	1.620	2.10E+06	44670.	-0.025474	29958.	1.63E+10	-317.890	941.793
48.000	1.499	2.32E+06	43109.	-0.024823	32957.	1.63E+10	-332.197	1063.462
52.800	1.382	2.52E+06	41532.	-0.024111	35848.	1.63E+10	-325.249	1129.764
57.600	1.268	2.71E+06	39873.	-0.023341	38632.	1.63E+10	-366.000	1385.576
62.400	1.158	2.90E+06	37957.	-0.022514	41296.	1.63E+10	-432.387	1792.579
67.200	1.052	3.08E+06	35709.	-0.021633	43818.	1.63E+10	-504.080	2300.446
72.000	0.950125	3.24E+06	33105.	-0.020702	46175.	1.63E+10	-581.079	2935.595
76.800	0.853047	3.40E+06	30118.	-0.019724	48341.	1.63E+10	-663.386	3732.799
81.600	0.760770	3.53E+06	26723.	-0.018704	50290.	1.63E+10	-750.999	4738.350
86.400	0.673488	3.65E+06	22896.	-0.017646	51993.	1.63E+10	-843.919	6014.673
91.200	0.591370	3.75E+06	18609.	-0.016555	53419.	1.63E+10	-942.145	7647.152
96.000	0.514557	3.83E+06	13838.	-0.015438	54535.	1.63E+10	-1045.670	9754.442
100.800	0.443161	3.89E+06	8557.995	-0.014302	55309.	1.63E+10	-1154.435	12504.
105.600	0.377257	3.91E+06	2743.991	-0.013154	55705.	1.63E+10	-1268.066	16134.
110.400	0.316886	3.91E+06	-3622.976	-0.012001	55684.	1.63E+10	-1384.837	20977.
115.200	0.262046	3.88E+06	-10544.	-0.010854	55210.	1.63E+10	-1498.759	27453.
120.000	0.212689	3.81E+06	-17967.	-0.009722	54244.	1.63E+10	-1594.132	35977.
124.800	0.168719	3.71E+06	-25730.	-0.008615	52755.	1.63E+10	-1640.434	46670.
129.600	0.129989	3.56E+06	-33499.	-0.007544	50728.	1.63E+10	-1596.785	58963.
134.400	0.096297	3.38E+06	-40772.	-0.006521	48178.	1.63E+10	-1433.696	71464.
139.200	0.067390	3.17E+06	-46994.	-0.005555	45157.	1.63E+10	-1158.633	82526.
144.000	0.042968	2.93E+06	-51733.	-0.004656	41757.	1.63E+10	-816.087	91167.
148.800	0.022693	2.68E+06	-54797.	-0.003830	38089.	1.63E+10	-460.483	97403.
153.600	0.006200	2.41E+06	-56218.	-0.003081	34270.	1.63E+10	-131.592	1.02E+05
158.400	-0.006888	2.14E+06	-56171.	-0.002412	30407.	1.63E+10	151.126	1.05E+05
163.200	-0.016957	1.87E+06	-54890.	-0.001822	26595.	1.63E+10	382.559	1.08E+05
168.000	-0.024384	1.61E+06	-52616.	-0.001310	22908.	1.63E+10	564.746	1.11E+05
172.800	-0.029536	1.36E+06	-49575.	-0.000873	19405.	1.63E+10	702.309	1.14E+05
177.600	-0.032761	1.13E+06	-45969.	-0.000505	16134.	1.63E+10	800.332	1.17E+05
182.400	-0.034384	9.22E+05	-41976.	-0.000202	13124.	1.63E+10	863.636	1.21E+05
187.200	-0.034703	7.31E+05	-37751.	4.11E-05	10398.	1.63E+10	896.663	1.24E+05
192.000	-0.033989	5.60E+05	-33430.	0.000231	7966.369	1.63E+10	903.573	1.28E+05
196.800	-0.032484	4.10E+05	-29130.	0.000374	5830.640	1.63E+10	888.340	1.31E+05
201.600	-0.030400	2.80E+05	-24946.	0.000475	3986.219	1.63E+10	854.813	1.35E+05
206.400	-0.027920	1.70E+05	-20958.	0.000542	2422.112	1.63E+10	806.712	1.39E+05
211.200	-0.025200	78870.	-17228.	0.000578	1122.547	1.63E+10	747.585	1.42E+05
216.000	-0.022368	4787.010	-13800.	0.000591	68.133	1.63E+10	680.656	1.46E+05
220.800	-0.019529	-53614.	-10705.	0.000584	763.077	1.63E+10	609.056	1.50E+05

225.600	-0.016766	-97982.	-7958.163	0.000561	1394.562	1.63E+10	535.501	1.53E+05
230.400	-0.014141	-1.30E+05	-5563.579	0.000528	1850.444	1.63E+10	462.242	1.57E+05
235.200	-0.011701	-1.51E+05	-3515.452	0.000486	2154.744	1.63E+10	391.144	1.60E+05
240.000	-0.009474	-1.64E+05	-1799.853	0.000440	2330.779	1.63E+10	323.689	1.64E+05
244.800	-0.007479	-1.69E+05	-396.599	0.000391	2400.668	1.63E+10	261.000	1.68E+05
249.600	-0.005722	-1.68E+05	719.070	0.000341	2384.968	1.63E+10	203.862	1.71E+05
254.400	-0.004202	-1.62E+05	1574.974	0.000293	2302.417	1.63E+10	152.764	1.74E+05
259.200	-0.002911	-1.52E+05	2200.643	0.000247	2169.771	1.63E+10	107.931	1.78E+05
264.000	-0.001835	-1.41E+05	2626.173	0.000203	2001.731	1.63E+10	69.373	1.81E+05
268.800	-0.000958	-1.27E+05	2881.272	0.000164	1810.943	1.63E+10	36.918	1.85E+05
273.600	-0.000261	-1.13E+05	2994.491	0.000129	1608.048	1.63E+10	10.257	1.88E+05
278.400	0.000276	-98490.	2992.641	9.74E-05	1401.790	1.63E+10	-11.027	1.92E+05
283.200	0.000674	-84252.	2900.365	7.05E-05	1199.147	1.63E+10	-27.421	1.95E+05
288.000	0.000953	-70646.	2739.854	4.77E-05	1005.497	1.63E+10	-39.458	1.99E+05
292.800	0.001132	-57949.	2530.700	2.88E-05	824.786	1.63E+10	-47.690	2.02E+05
297.600	0.001229	-46352.	2289.834	1.34E-05	659.714	1.63E+10	-52.671	2.06E+05
302.400	0.001261	-35967.	2031.573	1.31E-06	511.914	1.63E+10	-54.938	2.09E+05
307.200	0.001242	-26848.	1767.725	-7.94E-06	382.129	1.63E+10	-54.999	2.13E+05
312.000	0.001185	-18997.	1507.746	-1.47E-05	270.380	1.63E+10	-53.325	2.16E+05
316.800	0.001101	-12374.	1258.946	-1.93E-05	176.118	1.63E+10	-50.342	2.19E+05
321.600	0.001000	-6911.045	1026.707	-2.21E-05	98.364	1.63E+10	-46.425	2.23E+05
326.400	0.000888	-2517.662	814.726	-2.35E-05	35.834	1.63E+10	-41.901	2.26E+05
331.200	0.000774	910.325	625.252	-2.38E-05	12.957	1.63E+10	-37.047	2.30E+05
336.000	0.000660	3484.756	459.325	-2.31E-05	49.598	1.63E+10	-32.090	2.33E+05
340.800	0.000552	5319.841	317.000	-2.18E-05	75.716	1.63E+10	-27.212	2.37E+05
345.600	0.000451	6527.955	197.559	-2.01E-05	92.911	1.63E+10	-22.555	2.40E+05
350.400	0.000359	7216.406	99.698	-1.81E-05	102.710	1.63E+10	-18.220	2.44E+05
355.200	0.000277	7485.061	21.701	-1.59E-05	106.534	1.63E+10	-14.279	2.47E+05
360.000	0.000206	7424.732	-38.421	-1.37E-05	105.675	1.63E+10	-10.772	2.51E+05
364.800	0.000146	7116.216	-82.799	-1.16E-05	101.284	1.63E+10	-7.718	2.54E+05
369.600	9.54E-05	6629.866	-113.605	-9.53E-06	94.362	1.63E+10	-5.117	2.57E+05
374.400	5.43E-05	6025.612	-132.974	-7.67E-06	85.762	1.63E+10	-2.953	2.61E+05
379.200	2.18E-05	5353.320	-142.938	-6.00E-06	76.193	1.63E+10	-1.199	2.64E+05
384.000	-3.23E-06	4653.409	-145.382	-4.52E-06	66.231	1.63E+10	0.180231	2.68E+05
388.800	-2.16E-05	3957.651	-142.013	-3.25E-06	56.329	1.63E+10	1.223	2.71E+05
393.600	-3.45E-05	3290.080	-134.343	-2.19E-06	46.827	1.63E+10	1.973	2.75E+05
398.400	-4.26E-05	2667.963	-123.677	-1.31E-06	37.973	1.63E+10	2.471	2.78E+05
403.200	-4.70E-05	2102.782	-111.122	-6.07E-07	29.929	1.63E+10	2.760	2.82E+05
408.000	-4.85E-05	1601.192	-97.589	-6.14E-08	22.790	1.63E+10	2.879	2.85E+05
412.800	-4.76E-05	1165.925	-83.809	3.46E-07	16.594	1.63E+10	2.863	2.89E+05
417.600	-4.51E-05	796.625	-70.346	6.35E-07	11.338	1.63E+10	2.746	2.92E+05
422.400	-4.15E-05	490.599	-57.620	8.25E-07	6.983	1.63E+10	2.556	2.95E+05
427.200	-3.72E-05	243.474	-45.921	9.33E-07	3.465	1.63E+10	2.318	2.99E+05
432.000	-3.26E-05	49.760	-35.432	9.76E-07	0.708227	1.63E+10	2.052	3.02E+05
436.800	-2.79E-05	-96.672	-26.247	9.69E-07	1.376	1.63E+10	1.775	3.06E+05
441.600	-2.33E-05	-202.210	-18.388	9.25E-07	2.878	1.63E+10	1.500	3.09E+05
446.400	-1.90E-05	-273.197	-11.821	8.55E-07	3.888	1.63E+10	1.236	3.13E+05
451.200	-1.51E-05	-315.696	-6.472	7.68E-07	4.493	1.63E+10	0.992450	3.16E+05
456.000	-1.16E-05	-335.329	-2.236	6.72E-07	4.773	1.63E+10	0.772569	3.20E+05
460.800	-8.61E-06	-337.163	1.009	5.73E-07	4.799	1.63E+10	0.579611	3.23E+05
465.600	-6.10E-06	-325.642	3.396	4.76E-07	4.635	1.63E+10	0.414774	3.27E+05
470.400	-4.04E-06	-304.564	5.058	3.83E-07	4.335	1.63E+10	0.277969	3.30E+05
475.200	-2.42E-06	-277.083	6.129	2.97E-07	3.944	1.63E+10	0.168120	3.34E+05
480.000	-1.19E-06	-245.728	7.352	2.20E-07	3.497	1.63E+10	0.341429	1.38E+06
484.800	-3.05E-07	-206.506	8.381	1.54E-07	2.939	1.63E+10	0.087501	1.38E+06
489.600	2.87E-07	-165.268	8.393	9.90E-08	2.352	1.63E+10	-0.082565	1.38E+06
494.400	6.46E-07	-125.933	7.750	5.61E-08	1.792	1.63E+10	-0.185515	1.38E+06
499.200	8.26E-07	-90.872	6.735	2.42E-08	1.293	1.63E+10	-0.237324	1.38E+06
504.000	8.78E-07	-61.278	5.560	1.79E-09	0.872166	1.63E+10	-0.252229	1.38E+06
508.800	8.43E-07	-37.497	4.373	-1.28E-08	0.533682	1.63E+10	-0.242249	1.38E+06
513.600	7.55E-07	-19.296	3.271	-2.11E-08	0.274638	1.63E+10	-0.217042	1.38E+06
518.400	6.40E-07	-6.096	2.308	-2.49E-08	0.086767	1.63E+10	-0.183998	1.38E+06
523.200	5.17E-07	2.864	1.510	-2.53E-08	0.040766	1.63E+10	-0.148479	1.38E+06
528.000	3.97E-07	8.404	0.880173	-2.37E-08	0.119609	1.63E+10	-0.114123	1.38E+06
532.800	2.90E-07	11.314	0.406648	-2.08E-08	0.161029	1.63E+10	-0.083179	1.38E+06
537.600	1.98E-07	12.308	0.070625	-1.73E-08	0.175172	1.63E+10	-0.056831	1.38E+06
542.400	1.23E-07	11.992	-0.150920	-1.37E-08	0.170678	1.63E+10	-0.035480	1.38E+06
547.200	6.61E-08	10.859	-0.281670	-1.04E-08	0.154550	1.63E+10	-0.018999	1.38E+06
552.000	2.41E-08	9.288	-0.343896	-7.39E-09	0.132192	1.63E+10	-0.006928	1.38E+06
556.800	-4.77E-09	7.557	-0.357233	-4.91E-09	0.107562	1.63E+10	0.001371	1.38E+06
561.600	-2.30E-08	5.858	-0.338100	-2.93E-09	0.083382	1.63E+10	0.006601	1.38E+06
566.400	-3.29E-08	4.312	-0.299573	-1.43E-09	0.061366	1.63E+10	0.009452	1.38E+06
571.200	-3.67E-08	2.982	-0.251563	-3.59E-10	0.042449	1.63E+10	0.010552	1.38E+06
576.000	-3.63E-08	1.897	-0.201179	3.60E-10	0.026993	1.63E+10	0.010441	1.38E+06
580.800	-3.33E-08	1.051	-0.153177	7.94E-10	0.014961	1.63E+10	0.009560	1.38E+06
585.600	-2.87E-08	0.426050	-0.110430	1.01E-09	0.006064	1.63E+10	0.008252	1.38E+06
590.400	-2.36E-08	-0.008958	-0.074378	1.07E-09	0.000127	1.63E+10	0.006770	1.38E+06
595.200	-1.84E-08	-0.287978	-0.045427	1.03E-09	0.004099	1.63E+10	0.005293	1.38E+06
600.000	-1.37E-08	-0.445054	-0.023287	9.21E-10	0.006334	1.63E+10	0.003932	1.38E+06
604.800	-9.58E-09	-0.511534	-0.007245	7.80E-10	0.007281	1.63E+10	0.002752	1.38E+06
609.600	-6.20E-09	-0.514605	0.003632	6.29E-10	0.007324	1.63E+10	0.001780	1.38E+06

614.400	-3.54E-09	-0.476664	0.010345	4.83E-10	0.006784	1.63E+10	0.001017	1.38E+06
619.200	-1.56E-09	-0.415294	0.013859	3.52E-10	0.005911	1.63E+10	0.000447	1.38E+06
624.000	-1.61E-10	-0.343621	0.015043	2.40E-10	0.004891	1.63E+10	4.63E-05	1.38E+06
628.800	7.49E-10	-0.270881	0.014638	1.50E-10	0.003855	1.63E+10	-0.000215	1.38E+06
633.600	1.28E-09	-0.203097	0.013242	7.99E-11	0.002891	1.63E+10	-0.000367	1.38E+06
638.400	1.52E-09	-0.143758	0.011317	2.88E-11	0.002046	1.63E+10	-0.000435	1.38E+06
643.200	1.55E-09	-0.094452	0.009202	-6.26E-12	0.001344	1.63E+10	-0.000446	1.38E+06
648.000	1.46E-09	-0.055421	0.007128	-2.83E-11	0.000789	1.63E+10	-0.000418	1.38E+06
652.800	1.28E-09	-0.026025	0.005241	-4.03E-11	0.000370	1.63E+10	-0.000368	1.38E+06
657.600	1.07E-09	-0.005105	0.003622	-4.49E-11	7.27E-05	1.63E+10	-0.000307	1.38E+06
662.400	8.49E-10	0.008744	0.002299	-4.44E-11	0.000124	1.63E+10	-0.000244	1.38E+06
667.200	6.43E-10	0.016970	0.001271	-4.06E-11	0.000242	1.63E+10	-0.000185	1.38E+06
672.000	4.60E-10	0.020943	0.000511	-3.50E-11	0.000298	1.63E+10	-0.000132	1.38E+06
676.800	3.07E-10	0.021874	-1.75E-05	-2.87E-11	0.000311	1.63E+10	-8.81E-05	1.38E+06
681.600	1.84E-10	0.020775	-0.000356	-2.24E-11	0.000296	1.63E+10	-5.29E-05	1.38E+06
686.400	9.13E-11	0.018458	-0.000546	-1.66E-11	0.000263	1.63E+10	-2.62E-05	1.38E+06
691.200	2.45E-11	0.015536	-0.000626	-1.16E-11	0.000221	1.63E+10	-7.03E-06	1.38E+06
696.000	-2.04E-11	0.012452	-0.000628	-7.51E-12	0.000177	1.63E+10	5.86E-06	1.38E+06
700.800	-4.77E-11	0.009503	-0.000581	-4.28E-12	0.000135	1.63E+10	1.37E-05	1.38E+06
705.600	-6.15E-11	0.006870	-0.000506	-1.87E-12	9.78E-05	1.63E+10	1.77E-05	1.38E+06
710.400	-6.56E-11	0.004644	-0.000418	-1.76E-13	6.61E-05	1.63E+10	1.89E-05	1.38E+06
715.200	-6.32E-11	0.002852	-0.000330	9.28E-13	4.06E-05	1.63E+10	1.82E-05	1.38E+06
720.000	-5.67E-11	0.001479	-0.000247	1.57E-12	2.10E-05	1.63E+10	1.63E-05	1.38E+06
724.800	-4.82E-11	0.000481	-0.000175	1.85E-12	6.85E-06	1.63E+10	1.38E-05	1.38E+06
729.600	-3.89E-11	-0.000198	-0.000115	1.90E-12	2.81E-06	1.63E+10	1.12E-05	1.38E+06
734.400	-3.00E-11	-0.000619	-6.71E-05	1.78E-12	8.81E-06	1.63E+10	8.61E-06	1.38E+06
739.200	-2.19E-11	-0.000842	-3.13E-05	1.56E-12	1.20E-05	1.63E+10	6.29E-06	1.38E+06
744.000	-1.50E-11	-0.000920	-5.92E-06	1.30E-12	1.31E-05	1.63E+10	4.30E-06	1.38E+06
748.800	-9.39E-12	-0.000898	1.09E-05	1.03E-12	1.28E-05	1.63E+10	2.70E-06	1.38E+06
753.600	-5.06E-12	-0.000815	2.08E-05	7.81E-13	1.16E-05	1.63E+10	1.45E-06	1.38E+06
758.400	-1.88E-12	-0.000698	2.56E-05	5.59E-13	9.94E-06	1.63E+10	5.41E-07	1.38E+06
763.200	3.03E-13	-0.000569	2.67E-05	3.72E-13	8.10E-06	1.63E+10	-8.71E-08	1.38E+06
768.000	1.69E-12	-0.000442	2.54E-05	2.23E-13	6.29E-06	1.63E+10	-4.84E-07	1.38E+06
772.800	2.44E-12	-0.000326	2.25E-05	1.10E-13	4.64E-06	1.63E+10	-7.02E-07	1.38E+06
777.600	2.74E-12	-0.000226	1.89E-05	2.89E-14	3.21E-06	1.63E+10	-7.88E-07	1.38E+06
782.400	2.72E-12	-0.000144	1.52E-05	-2.56E-14	2.05E-06	1.63E+10	-7.82E-07	1.38E+06
787.200	2.50E-12	-8.03E-05	1.16E-05	-5.86E-14	1.14E-06	1.63E+10	-7.17E-07	1.38E+06
792.000	2.16E-12	-3.31E-05	8.35E-06	-7.53E-14	4.71E-07	1.63E+10	-6.20E-07	1.38E+06
796.800	1.77E-12	-1.44E-07	5.64E-06	-8.02E-14	2.06E-09	1.63E+10	-5.10E-07	1.38E+06
801.600	1.39E-12	2.10E-05	3.46E-06	-7.71E-14	2.99E-07	1.63E+10	-3.99E-07	1.38E+06
806.400	1.03E-12	3.30E-05	1.79E-06	-6.92E-14	4.70E-07	1.63E+10	-2.97E-07	1.38E+06
811.200	7.25E-13	3.82E-05	5.73E-07	-5.87E-14	5.43E-07	1.63E+10	-2.08E-07	1.38E+06
816.000	4.70E-13	3.85E-05	-2.52E-07	-4.74E-14	5.48E-07	1.63E+10	-1.35E-07	1.38E+06
820.800	2.70E-13	3.58E-05	-7.62E-07	-3.65E-14	5.09E-07	1.63E+10	-7.76E-08	1.38E+06
825.600	1.20E-13	3.12E-05	-1.03E-06	-2.66E-14	4.44E-07	1.63E+10	-3.46E-08	1.38E+06
830.400	1.47E-14	2.59E-05	-1.12E-06	-1.82E-14	3.68E-07	1.63E+10	-4.22E-09	1.38E+06
835.200	-5.44E-14	2.04E-05	-1.10E-06	-1.14E-14	2.91E-07	1.63E+10	1.56E-08	1.38E+06
840.000	-9.45E-14	1.53E-05	-9.94E-07	-6.11E-15	2.18E-07	1.63E+10	2.72E-08	1.38E+06
844.800	-1.13E-13	1.09E-05	-8.51E-07	-2.25E-15	1.55E-07	1.63E+10	3.25E-08	1.38E+06
849.600	-1.16E-13	7.16E-06	-6.93E-07	4.03E-16	1.02E-07	1.63E+10	3.34E-08	1.38E+06
854.400	-1.09E-13	4.22E-06	-5.38E-07	2.08E-15	6.01E-08	1.63E+10	3.14E-08	1.38E+06
859.200	-9.62E-14	2.00E-06	-3.96E-07	3.00E-15	2.85E-08	1.63E+10	2.76E-08	1.38E+06
864.000	-8.04E-14	4.23E-07	-2.74E-07	3.35E-15	6.02E-09	1.63E+10	2.31E-08	1.38E+06
868.800	-6.40E-14	-6.27E-07	-1.75E-07	3.32E-15	8.92E-09	1.63E+10	1.84E-08	1.38E+06
873.600	-4.85E-14	-1.25E-06	-9.70E-08	3.05E-15	1.78E-08	1.63E+10	1.39E-08	1.38E+06
878.400	-3.47E-14	-1.56E-06	-3.96E-08	2.63E-15	2.22E-08	1.63E+10	9.98E-09	1.38E+06
883.200	-2.32E-14	-1.63E-06	3.51E-10	2.16E-15	2.32E-08	1.63E+10	6.67E-09	1.38E+06
888.000	-1.40E-14	-1.55E-06	2.60E-08	1.69E-15	2.21E-08	1.63E+10	4.02E-09	1.38E+06
892.800	-6.94E-15	-1.38E-06	4.04E-08	1.26E-15	1.97E-08	1.63E+10	2.00E-09	1.38E+06
897.600	-1.87E-15	-1.17E-06	4.65E-08	8.86E-16	1.66E-08	1.63E+10	5.37E-10	1.38E+06
902.400	1.56E-15	-9.38E-07	4.67E-08	5.76E-16	1.33E-08	1.63E+10	-4.48E-10	1.38E+06
907.200	3.66E-15	-7.19E-07	4.31E-08	3.32E-16	1.02E-08	1.63E+10	-1.05E-09	1.38E+06
912.000	4.75E-15	-5.24E-07	3.73E-08	1.49E-16	7.45E-09	1.63E+10	-1.36E-09	1.38E+06
916.800	5.09E-15	-3.60E-07	3.05E-08	1.90E-17	5.13E-09	1.63E+10	-1.46E-09	1.38E+06
921.600	4.93E-15	-2.31E-07	2.36E-08	-6.80E-17	3.28E-09	1.63E+10	-1.42E-09	1.38E+06
926.400	4.44E-15	-1.34E-07	1.72E-08	-1.22E-16	1.90E-09	1.63E+10	-1.28E-09	1.38E+06
931.200	3.76E-15	-6.59E-08	1.15E-08	-1.51E-16	9.38E-10	1.63E+10	-1.08E-09	1.38E+06
936.000	2.99E-15	-2.32E-08	6.85E-09	-1.64E-16	3.30E-10	1.63E+10	-8.59E-10	1.38E+06
940.800	2.18E-15	-1.85E-10	3.28E-09	-1.68E-16	2.63E-12	1.63E+10	-6.28E-10	1.38E+06
945.600	1.38E-15	8.34E-09	8.23E-10	-1.66E-16	1.19E-10	1.63E+10	-3.97E-10	1.38E+06
950.400	5.87E-16	7.72E-09	-5.33E-10	-1.64E-16	1.10E-10	1.63E+10	-1.69E-10	1.38E+06
955.200	-1.95E-16	3.22E-09	-8.04E-10	-1.62E-16	4.58E-11	1.63E+10	5.59E-11	1.38E+06
960.000	-9.72E-16	0.000	0.000	-1.62E-16	0.000	1.63E+10	2.79E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 5:

Pile-head deflection	=	2.80260720 in
Computed slope at pile head	=	-0.02830991
Maximum bending moment	=	3913821. lbs-in
Maximum shear force	=	-56217.64909 lbs
Depth of maximum bending moment	=	105.60000 in
Depth of maximum shear force	=	153.60000 in
Number of iterations	=	29
Number of zero deflection points	=	11

Summary of Pile Response(s)

Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment, y = pile-head displacment in
Type 2 = Shear and Slope, M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness, V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment, S = Pile-head Slope, radians
Type 5 = Deflection and Slope, R = Rot. Stiffness of Pile-head in-lbs/rad

Load Type	Pile-Head Condition 1	Pile-Head Condition 2	Axial Load lbs	Pile-Head Deflection in	Maximum Moment in-lbs	Maximum Shear lbs
1	V= 10000.	M= 0.000	0.0000	0.1705508	441890.	10000.0000
1	V= 20000.	M= 0.000	0.0000	0.5089465	1094928.	20000.0000
1	V= 30000.	M= 0.000	0.0000	1.0649	1929850.	30000.0000
1	V= 40000.	M= 0.000	0.0000	1.8288	2878131.	-41192.9319
1	V= 50000.	M= 0.000	0.0000	2.8026	3913821.	-56217.6491

The analysis ended normally.

APPENDIX G. LPILE ANALYSIS FOR TP3 (P-MULTIPLIER OF 0.80)

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                  LPILE Plus for Windows, Version 5.0 (5.0.47)

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method

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J Price
RB&G Engineering

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                             Files Used for Analysis
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Path  to  file  locations:              C:\Users\jprice\Documents\Thesis\LPILE  03.23.11\Pioneer
Crossing\Peak Plus 1 Min\
Name of input data file:     phi28.k150.gam138.2.pmult0.80.lpd
Name of output file:         phi28.k150.gam138.2.pmult0.80.lpo
Name of plot output file:    phi28.k150.gam138.2.pmult0.80.lpp
Name of runtime file:        phi28.k150.gam138.2.pmult0.80.lpr


--------------------------------------------------------------------------------
                           Time and Date of Analysis
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               Date:  May  5, 2012     Time:   2:15:58


--------------------------------------------------------------------------------
                                 Problem Title
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New LPILE Plus 5.0 Data File


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                                 Program Options
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Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 3:
- Computation of Nonlinear Bending Stiffness and Ultimate Bending Moment
  Capacity with Pile Response Computed Using Nonlinear EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis uses p-y multiplers for group action
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
```

- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 200
- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 960.00 in

Depth of ground surface below top of pile = 12.00 in

Slope angle of ground surface = 0.00 deg.

Structural properties of pile defined using 2 points

Point No.	Point Depth in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	16.00000000	562.0800	18.4100	29000000.
2	960.0000	16.00000000	562.0800	18.4100	29000000.

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of moment of inertia and modulus of are not used for any computations other than total stress due to combined axial loading and bending.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by API RP-2A, 1987
Distance from top of pile to top of layer = 12.000 in
Distance from top of pile to bottom of layer = 480.000 in
p-y subgrade modulus k for top of soil layer = 150.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 150.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 480.000 in
Distance from top of pile to bottom of layer = 1000.000 in

(Depth of lowest layer extends 40.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	12.00	0.08000
2	480.00	0.08000
3	480.00	0.06944
4	1000.00	0.06944

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	12.000	0.00000	28.00	------	------
2	480.000	0.00000	28.00	------	------
3	480.000	6.94444	0.00	0.00700	0.0
4	1000.000	6.94444	0.00	0.00700	0.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

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p-y Modification Factors

Distribution of p-y multipliers with depth defined using 2 points

Point No.	Depth X in	p-mult	y-mult
1	12.000	0.8000	1.0000
2	960.000	0.8000	1.0000

Loading Type

Static loading criteria was used for computation of p-y curves.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   10000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   20000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   30000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   40000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   50000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Computation of Nonlinear Bending Stiffness for Section 1

Dimensions and Material Properties of Steel Pipe Section:

Outer Diameter of Pipe   =   16.00000 in.
Pipe Wall Thickness   =   0.37500 in.
Yield Stress of Pipe   =   60. ksi
Elastic Modulus   =   29000. ksi
Cross-sectional Area   =   18.40777 sq. in.
Moment of Inertia   =   562.084 in^4
Elastic Bending Stiffness =   16300439. kip-in2

Definition of Run Messages:

   Y = part of pipe section has yielded

Axial Thrust Force =   0.000 kips

Bending Curvature rad/in.	Bending Moment in-kip	Bending Stiffness kip-in2	Max Comp Strain in/in	Minimum Strain in/in	Depth to N Axis in	Run Msg
0.00000550	89.57501530	16299140.	0.00004397	-0.00004397	8.00000000	
0.00001099	179.15003	16299140.	0.00008793	-0.00008793	8.00000000	
0.00001649	268.72505	16299140.	0.00013190	-0.00013190	8.00000000	
0.00002198	358.30006	16299140.	0.00017586	-0.00017586	8.00000000	
0.00002748	447.87508	16299140.	0.00021983	-0.00021983	8.00000000	
0.00003297	537.45009	16299140.	0.00026379	-0.00026379	8.00000000	
0.00003847	627.02511	16299140.	0.00030776	-0.00030776	8.00000000	
0.00004397	716.60012	16299140.	0.00035172	-0.00035172	8.00000000	
0.00004946	806.17514	16299140.	0.00039569	-0.00039569	8.00000000	
0.00005496	895.75015	16299140.	0.00043966	-0.00043966	8.00000000	
0.00006045	985.32517	16299140.	0.00048362	-0.00048362	8.00000000	
0.00006595	1074.90018	16299140.	0.00052759	-0.00052759	8.00000000	
0.00007144	1164.47520	16299140.	0.00057155	-0.00057155	8.00000000	
0.00007694	1254.05021	16299140.	0.00061552	-0.00061552	8.00000000	
0.00008244	1343.62523	16299140.	0.00065948	-0.00065948	8.00000000	
0.00008793	1433.20024	16299140.	0.00070345	-0.00070345	8.00000000	
0.00009343	1522.77526	16299140.	0.00074741	-0.00074741	8.00000000	
0.00009892	1612.35028	16299140.	0.00079138	-0.00079138	8.00000000	
0.00010442	1701.92529	16299140.	0.00083534	-0.00083534	8.00000000	
0.00010991	1791.50031	16299140.	0.00087931	-0.00087931	8.00000000	
0.00011541	1881.07532	16299140.	0.00092328	-0.00092328	8.00000000	
0.00012091	1970.65034	16299140.	0.00096724	-0.00096724	8.00000000	
0.00012640	2060.22535	16299140.	0.00101121	-0.00101121	8.00000000	
0.00013190	2149.80037	16299140.	0.00105517	-0.00105517	8.00000000	
0.00013739	2239.37538	16299140.	0.00109914	-0.00109914	8.00000000	
0.00014289	2328.95040	16299140.	0.00114310	-0.00114310	8.00000000	
0.00014838	2418.52541	16299140.	0.00118707	-0.00118707	8.00000000	
0.00015388	2508.10043	16299140.	0.00123103	-0.00123103	8.00000000	
0.00015938	2597.67544	16299140.	0.00127500	-0.00127500	8.00000000	
0.00016487	2687.25046	16299140.	0.00131897	-0.00131897	8.00000000	
0.00017037	2776.82547	16299140.	0.00136293	-0.00136293	8.00000000	
0.00017586	2866.40049	16299140.	0.00140690	-0.00140690	8.00000000	
0.00018136	2955.97550	16299140.	0.00145086	-0.00145086	8.00000000	
0.00018685	3045.55052	16299140.	0.00149483	-0.00149483	8.00000000	
0.00019235	3135.12554	16299140.	0.00153879	-0.00153879	8.00000000	
0.00019784	3224.70055	16299140.	0.00158276	-0.00158276	8.00000000	
0.00020334	3314.27557	16299140.	0.00162672	-0.00162672	8.00000000	
0.00020884	3403.85058	16299140.	0.00167069	-0.00167069	8.00000000	
0.00021433	3493.42560	16299140.	0.00171466	-0.00171466	8.00000000	
0.00021983	3583.00061	16299140.	0.00175862	-0.00175862	8.00000000	
0.00022532	3672.57563	16299140.	0.00180259	-0.00180259	8.00000000	
0.00023082	3762.15064	16299140.	0.00184655	-0.00184655	8.00000000	

0.00023631	3851.72566	16299140.	0.00189052	-0.00189052	8.00000000	
0.00024181	3941.30067	16299140.	0.00193448	-0.00193448	8.00000000	
0.00024731	4030.87569	16299140.	0.00197845	-0.00197845	8.00000000	
0.00025280	4120.45070	16299140.	0.00202241	-0.00202241	8.00000000	
0.00025830	4210.02572	16299140.	0.00206638	-0.00206638	8.00000000	
0.00026379	4296.43113	16287124.	0.00211034	-0.00211034	8.00000000	Y
0.00026929	4373.42773	16240660.	0.00215431	-0.00215431	8.00000000	Y
0.00027478	4439.00035	16154479.	0.00219828	-0.00219828	8.00000000	Y
0.00028028	4495.55846	16039516.	0.00224224	-0.00224224	8.00000000	Y
0.00028578	4546.13334	15908038.	0.00228621	-0.00228621	8.00000000	Y
0.00029127	4592.05610	15765549.	0.00233017	-0.00233017	8.00000000	Y
0.00029677	4633.81340	15614302.	0.00237414	-0.00237414	8.00000000	Y
0.00030226	4671.83655	15456200.	0.00241810	-0.00241810	8.00000000	Y
0.00030776	4707.19007	15295071.	0.00246207	-0.00246207	8.00000000	Y
0.00031325	4740.26069	15132308.	0.00250603	-0.00250603	8.00000000	Y
0.00031875	4771.09192	14968131.	0.00255000	-0.00255000	8.00000000	Y
0.00032425	4799.32117	14801495.	0.00259397	-0.00259397	8.00000000	Y
0.00032974	4826.14536	14636153.	0.00263793	-0.00263793	8.00000000	Y
0.00033524	4851.49019	14471819.	0.00268190	-0.00268190	8.00000000	Y
0.00034073	4874.74421	14306649.	0.00272586	-0.00272586	8.00000000	Y
0.00034623	4897.17687	14144351.	0.00276983	-0.00276983	8.00000000	Y
0.00035172	4918.00554	13982564.	0.00281379	-0.00281379	8.00000000	Y
0.00035722	4937.78073	13822807.	0.00285776	-0.00285776	8.00000000	Y
0.00036272	4956.64343	13665374.	0.00290172	-0.00290172	8.00000000	Y
0.00036821	4974.21101	13509124.	0.00294569	-0.00294569	8.00000000	Y
0.00037371	4991.27486	13356122.	0.00298966	-0.00298966	8.00000000	Y
0.00037920	5007.02214	13204082.	0.00303362	-0.00303362	8.00000000	Y
0.00038470	5022.43782	13055524.	0.00307759	-0.00307759	8.00000000	Y
0.00039019	5036.70038	12908196.	0.00312155	-0.00312155	8.00000000	Y
0.00039569	5050.60468	12764055.	0.00316552	-0.00316552	8.00000000	Y
0.00040119	5063.67451	12621783.	0.00320948	-0.00320948	8.00000000	Y
0.00040668	5076.19222	12481999.	0.00325345	-0.00325345	8.00000000	Y
0.00041218	5088.32389	12345005.	0.00329741	-0.00329741	8.00000000	Y
0.00041767	5099.56942	12209495.	0.00334138	-0.00334138	8.00000000	Y
0.00042317	5110.81496	12077505.	0.00338534	-0.00338534	8.00000000	Y
0.00042866	5121.06351	11946573.	0.00342931	-0.00342931	8.00000000	Y
0.00043416	5131.14214	11818565.	0.00347328	-0.00347328	8.00000000	Y
0.00043966	5140.96479	11693174.	0.00351724	-0.00351724	8.00000000	Y
0.00044515	5149.97368	11569052.	0.00356121	-0.00356121	8.00000000	Y
0.00045065	5158.98257	11447957.	0.00360517	-0.00360517	8.00000000	Y
0.00045614	5167.55970	11328834.	0.00364914	-0.00364914	8.00000000	Y
0.00046164	5175.58878	11211359.	0.00369310	-0.00369310	8.00000000	Y
0.00046713	5183.61786	11096649.	0.00373707	-0.00373707	8.00000000	Y
0.00047263	5191.25387	10983774.	0.00378103	-0.00378103	8.00000000	Y
0.00047813	5198.38655	10872442.	0.00382500	-0.00382500	8.00000000	Y
0.00048362	5205.51924	10763640.	0.00386897	-0.00386897	8.00000000	Y
0.00048912	5212.48015	10656932.	0.00391293	-0.00391293	8.00000000	Y
0.00049461	5218.79394	10551287.	0.00395690	-0.00395690	8.00000000	Y
0.00050011	5225.10773	10447963.	0.00400086	-0.00400086	8.00000000	Y
0.00050560	5231.42152	10346886.	0.00404483	-0.00404483	8.00000000	Y
0.00051110	5237.19181	10246919.	0.00408879	-0.00408879	8.00000000	Y
0.00051659	5242.75882	10148686.	0.00413276	-0.00413276	8.00000000	Y
0.00052209	5248.32584	10052521.	0.00417672	-0.00417672	8.00000000	Y
0.00052759	5253.89285	9958359.	0.00422069	-0.00422069	8.00000000	Y
0.00053308	5258.80636	9864912.	0.00426466	-0.00426466	8.00000000	Y
0.00053858	5263.69376	9773325.	0.00430862	-0.00430862	8.00000000	Y
0.00054407	5268.58116	9683587.	0.00435259	-0.00435259	8.00000000	Y
0.00054957	5273.46856	9595644.	0.00439655	-0.00439655	8.00000000	Y
0.00055506	5277.81618	9508471.	0.00444052	-0.00444052	8.00000000	Y
0.00056056	5282.08657	9422869.	0.00448448	-0.00448448	8.00000000	Y
0.00056606	5286.35697	9338928.	0.00452845	-0.00452845	8.00000000	Y
0.00057155	5290.62736	9256603.	0.00457241	-0.00457241	8.00000000	Y
0.00057705	5294.66043	9175434.	0.00461638	-0.00461638	8.00000000	Y
0.00058254	5298.37219	9095245.	0.00466034	-0.00466034	8.00000000	Y
0.00058804	5302.08395	9016554.	0.00470431	-0.00470431	8.00000000	Y
0.00059353	5305.79571	8939322.	0.00474828	-0.00474828	8.00000000	Y
0.00059903	5309.50748	8863506.	0.00479224	-0.00479224	8.00000000	Y
0.00060453	5312.93644	8788601.	0.00483621	-0.00483621	8.00000000	Y
0.00061002	5316.14401	8714682.	0.00488017	-0.00488017	8.00000000	Y
0.00061552	5319.35157	8642084.	0.00492414	-0.00492414	8.00000000	Y
0.00062101	5322.55913	8570770.	0.00496810	-0.00496810	8.00000000	Y
0.00062651	5325.76669	8500708.	0.00501207	-0.00501207	8.00000000	Y
0.00063200	5328.87341	8431704.	0.00505603	-0.00505603	8.00000000	Y
0.00063750	5331.62752	8363337.	0.00510000	-0.00510000	8.00000000	Y
0.00064300	5334.38163	8296139.	0.00514397	-0.00514397	8.00000000	Y
0.00064849	5337.13574	8230079.	0.00518793	-0.00518793	8.00000000	Y
0.00065399	5339.88985	8165130.	0.00523190	-0.00523190	8.00000000	Y
0.00065948	5342.64396	8101264.	0.00527586	-0.00527586	8.00000000	Y
0.00066498	5345.26145	8038247.	0.00531983	-0.00531983	8.00000000	Y
0.00067047	5347.60938	7975862.	0.00536379	-0.00536379	8.00000000	Y
0.00067597	5349.95732	7914491.	0.00540776	-0.00540776	8.00000000	Y

0.00068147	5352.30525	7854110.	0.00545172	-0.00545172	8.00000000	Y
0.00068696	5354.65319	7794695.	0.00549569	-0.00549569	8.00000000	Y
0.00069246	5357.00112	7736223.	0.00553966	-0.00553966	8.00000000	Y
0.00069795	5359.34906	7678672.	0.00558362	-0.00558362	8.00000000	Y
0.00070345	5361.40220	7621601.	0.00562759	-0.00562759	8.00000000	Y
0.00070894	5363.38797	7565320.	0.00567155	-0.00567155	8.00000000	Y
0.00071444	5365.37374	7509905.	0.00571552	-0.00571552	8.00000000	Y
0.00071994	5367.35952	7455335.	0.00575948	-0.00575948	8.00000000	Y
0.00072543	5369.34529	7401593.	0.00580345	-0.00580345	8.00000000	Y
0.00073093	5371.33107	7348659.	0.00584741	-0.00584741	8.00000000	Y
0.00073642	5373.31684	7296514.	0.00589138	-0.00589138	8.00000000	Y
0.00074192	5375.12714	7244906.	0.00593534	-0.00593534	8.00000000	Y
0.00074741	5376.79167	7193862.	0.00597931	-0.00597931	8.00000000	Y
0.00075291	5378.45620	7143563.	0.00602328	-0.00602328	8.00000000	Y
0.00075841	5380.12073	7093992.	0.00606724	-0.00606724	8.00000000	Y
0.00076390	5381.78526	7045136.	0.00611121	-0.00611121	8.00000000	Y
0.00076940	5383.44979	6996977.	0.00615517	-0.00615517	8.00000000	Y
0.00077489	5385.11432	6949501.	0.00619914	-0.00619914	8.00000000	Y
0.00078039	5386.77885	6902694.	0.00624310	-0.00624310	8.00000000	Y

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Load	Axial Thrust	Interp. Mom. Cap.
1	0.000 kips	5386.8 in-kip

Please note that the values in the above table are not factored by a strength reduction factor for LRFD.

The value of the strength reduction factor depends on the provisions of the LRFD code being used.

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to the LRFD structural design standard being followed.

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 10000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.201985	7.85E-08	10000.	-0.002772	1.12E-09	1.63E+10	0.000	0.000
4.800	0.188679	48000.	10000.	-0.002765	683.177	1.63E+10	0.000	0.000
9.600	0.175440	96000.	10000.	-0.002744	1366.354	1.63E+10	0.000	0.000
14.400	0.162337	1.44E+05	9955.615	-0.002709	2049.530	1.63E+10	-18.494	546.827
19.200	0.149438	1.92E+05	9769.228	-0.002659	2726.643	1.63E+10	-59.168	1900.488
24.000	0.136809	2.38E+05	9384.114	-0.002596	3384.352	1.63E+10	-101.296	3554.022
28.800	0.124516	2.82E+05	8802.218	-0.002519	4008.844	1.63E+10	-141.161	5441.612
33.600	0.112622	3.22E+05	8041.599	-0.002431	4587.046	1.63E+10	-175.764	7491.132
38.400	0.101183	3.59E+05	7132.830	-0.002330	5107.611	1.63E+10	-202.890	9624.803
43.200	0.090252	3.91E+05	6115.534	-0.002220	5561.643	1.63E+10	-220.984	11753.
48.000	0.079873	4.18E+05	5035.806	-0.002101	5943.209	1.63E+10	-228.902	13756.
52.800	0.070084	4.39E+05	3945.339	-0.001975	6249.712	1.63E+10	-225.459	15442.
57.600	0.060916	4.55E+05	2832.294	-0.001843	6482.282	1.63E+10	-238.310	18778.
62.400	0.052391	4.66E+05	1659.276	-0.001707	6636.704	1.63E+10	-250.447	22945.
67.200	0.044526	4.71E+05	454.352	-0.001569	6708.998	1.63E+10	-251.604	27123.
72.000	0.037327	4.71E+05	-731.118	-0.001430	6698.784	1.63E+10	-242.342	31163.
76.800	0.030794	4.64E+05	-1851.363	-0.001293	6609.101	1.63E+10	-224.427	34983.
81.600	0.024917	4.53E+05	-2870.378	-0.001158	6445.823	1.63E+10	-200.162	38560.
86.400	0.019680	4.37E+05	-3763.178	-0.001027	6216.906	1.63E+10	-171.838	41913.
91.200	0.015060	4.17E+05	-4515.031	-0.000901	5931.640	1.63E+10	-141.435	45079.
96.000	0.011030	3.93E+05	-5119.742	-0.000782	5599.993	1.63E+10	-110.528	48101.
100.800	0.007555	3.68E+05	-5577.746	-0.000670	5232.102	1.63E+10	-80.306	51020.
105.600	0.004601	3.40E+05	-5894.395	-0.000565	4837.876	1.63E+10	-51.631	53867.
110.400	0.002127	3.11E+05	-6078.564	-0.000470	4426.719	1.63E+10	-25.107	56669.
115.200	9.21E-05	2.82E+05	-6141.557	-0.000382	4007.329	1.63E+10	-1.141	59443.

120.000	-0.001544	2.52E+05	-6096.263	-0.000304	3587.565	1.63E+10	20.013	62203.
124.800	-0.002825	2.23E+05	-5956.493	-0.000234	3174.364	1.63E+10	38.224	64957.
129.600	-0.003789	1.95E+05	-5736.465	-0.000172	2773.698	1.63E+10	53.455	67710.
134.400	-0.004479	1.68E+05	-5450.371	-0.000119	2390.560	1.63E+10	65.751	70465.
139.200	-0.004931	1.43E+05	-5112.042	-7.32E-05	2028.984	1.63E+10	75.220	73223.
144.000	-0.005181	1.19E+05	-4734.663	-3.47E-05	1692.075	1.63E+10	82.022	75985.
148.800	-0.005264	97104.	-4330.552	-2.88E-06	1382.062	1.63E+10	86.358	78749.
153.600	-0.005209	77312.	-3910.986	2.28E-05	1100.368	1.63E+10	88.461	81516.
158.400	-0.005045	59558.	-3486.078	4.30E-05	847.683	1.63E+10	88.584	84285.
163.200	-0.004797	43846.	-3064.697	5.82E-05	624.047	1.63E+10	86.992	87054.
168.000	-0.004486	30137.	-2654.429	6.91E-05	428.937	1.63E+10	83.953	89824.
172.800	-0.004133	18363.	-2261.578	7.62E-05	261.358	1.63E+10	79.735	92595.
177.600	-0.003755	8425.978	-1891.189	8.02E-05	119.926	1.63E+10	74.593	95364.
182.400	-0.003364	207.585	-1547.115	8.14E-05	2.955	1.63E+10	68.771	98134.
187.200	-0.002973	-6426.328	-1232.087	8.05E-05	91.465	1.63E+10	62.491	1.01E+05
192.000	-0.002591	-11620.	-947.816	7.79E-05	165.392	1.63E+10	55.955	1.04E+05
196.800	-0.002225	-15525.	-695.099	7.39E-05	220.970	1.63E+10	49.344	1.06E+05
201.600	-0.001882	-18293.	-473.932	6.89E-05	260.367	1.63E+10	42.809	1.09E+05
206.400	-0.001564	-20075.	-283.634	6.32E-05	285.726	1.63E+10	36.482	1.12E+05
211.200	-0.001275	-21016.	-122.958	5.72E-05	299.122	1.63E+10	30.466	1.15E+05
216.000	-0.001015	-21256.	9.789	5.10E-05	302.526	1.63E+10	24.845	1.18E+05
220.800	-0.000785	-20922.	116.641	4.48E-05	297.784	1.63E+10	19.677	1.20E+05
225.600	-0.000585	-20136.	199.870	3.87E-05	286.589	1.63E+10	15.002	1.23E+05
230.400	-0.000414	-19004.	261.899	3.29E-05	270.475	1.63E+10	10.843	1.26E+05
235.200	-0.000269	-17622.	305.216	2.76E-05	250.805	1.63E+10	7.206	1.29E+05
240.000	-0.000149	-16073.	332.310	2.26E-05	228.771	1.63E+10	4.083	1.31E+05
244.800	-5.22E-05	-14431.	345.608	1.81E-05	205.399	1.63E+10	1.458	1.34E+05
249.600	2.45E-05	-12756.	347.431	1.41E-05	181.549	1.63E+10	-0.698219	1.37E+05
254.400	8.31E-05	-11096.	339.952	1.06E-05	157.928	1.63E+10	-2.418	1.40E+05
259.200	0.000126	-9492.099	325.173	7.55E-06	135.100	1.63E+10	-3.740	1.42E+05
264.000	0.000156	-7974.351	304.904	4.98E-06	113.498	1.63E+10	-4.706	1.45E+05
268.800	0.000174	-6565.021	280.751	2.84E-06	93.439	1.63E+10	-5.358	1.48E+05
273.600	0.000183	-5279.139	254.116	1.09E-06	75.137	1.63E+10	-5.740	1.51E+05
278.400	0.000184	-4125.508	226.194	-2.91E-07	58.718	1.63E+10	-5.894	1.53E+05
283.200	0.000180	-3107.674	197.985	-1.36E-06	44.231	1.63E+10	-5.860	1.56E+05
288.000	0.000171	-2224.849	170.302	-2.14E-06	31.666	1.63E+10	-5.675	1.59E+05
292.800	0.000159	-1472.779	143.782	-2.69E-06	20.962	1.63E+10	-5.375	1.62E+05
297.600	0.000146	-844.538	118.910	-3.03E-06	12.020	1.63E+10	-4.989	1.65E+05
302.400	0.000130	-331.240	96.028	-3.20E-06	4.714	1.63E+10	-4.546	1.67E+05
307.200	0.000115	77.327	75.354	-3.24E-06	1.101	1.63E+10	-4.068	1.70E+05
312.000	9.94E-05	392.161	57.006	-3.17E-06	5.582	1.63E+10	-3.577	1.73E+05
316.800	8.44E-05	624.583	41.010	-3.02E-06	8.890	1.63E+10	-3.088	1.76E+05
321.600	7.04E-05	785.855	27.323	-2.81E-06	11.185	1.63E+10	-2.615	1.78E+05
326.400	5.74E-05	886.884	15.846	-2.56E-06	12.623	1.63E+10	-2.167	1.81E+05
331.200	4.58E-05	937.981	6.439	-2.30E-06	13.350	1.63E+10	-1.753	1.84E+05
336.000	3.54E-05	948.695	-1.071	-2.02E-06	13.503	1.63E+10	-1.376	1.87E+05
340.800	2.64E-05	927.697	-6.873	-1.74E-06	13.204	1.63E+10	-1.041	1.89E+05
345.600	1.87E-05	882.715	-11.166	-1.48E-06	12.564	1.63E+10	-0.747717	1.92E+05
350.400	1.22E-05	820.505	-14.151	-1.22E-06	11.678	1.63E+10	-0.496238	1.95E+05
355.200	6.92E-06	746.863	-16.026	-9.94E-07	10.630	1.63E+10	-0.285086	1.98E+05
360.000	2.68E-06	666.651	-16.979	-7.86E-07	9.488	1.63E+10	-0.111919	2.00E+05
364.800	-6.20E-07	583.862	-17.185	-6.01E-07	8.310	1.63E+10	0.026239	2.03E+05
369.600	-3.09E-06	501.676	-16.803	-4.42E-07	7.140	1.63E+10	0.132782	2.06E+05
374.400	-4.86E-06	422.550	-15.977	-3.06E-07	6.014	1.63E+10	0.211336	2.09E+05
379.200	-6.03E-06	348.293	-14.833	-1.92E-07	4.957	1.63E+10	0.265604	2.12E+05
384.000	-6.70E-06	280.156	-13.477	-9.95E-08	3.987	1.63E+10	0.299240	2.14E+05
388.800	-6.98E-06	218.913	-12.001	-2.60E-08	3.116	1.63E+10	0.315747	2.17E+05
393.600	-6.95E-06	164.945	-10.479	3.05E-08	2.348	1.63E+10	0.318407	2.20E+05
398.400	-6.69E-06	118.313	-8.970	7.22E-08	1.684	1.63E+10	0.310221	2.23E+05
403.200	-6.26E-06	78.829	-7.521	1.01E-07	1.122	1.63E+10	0.293881	2.25E+05
408.000	-5.72E-06	46.115	-6.163	1.20E-07	0.656353	1.63E+10	0.271750	2.28E+05
412.800	-5.11E-06	19.663	-4.921	1.29E-07	0.279861	1.63E+10	0.245860	2.31E+05
417.600	-4.48E-06	-1.125	-3.808	1.32E-07	0.016007	1.63E+10	0.217918	2.34E+05
422.400	-3.84E-06	-16.892	-2.830	1.29E-07	0.240414	1.63E+10	0.189324	2.36E+05
427.200	-3.24E-06	-28.296	-1.989	1.23E-07	0.402738	1.63E+10	0.161190	2.39E+05
432.000	-2.67E-06	-35.987	-1.280	1.13E-07	0.512203	1.63E+10	0.134370	2.42E+05
436.800	-2.15E-06	-40.583	-0.694550	1.02E-07	0.577605	1.63E+10	0.109488	2.45E+05
441.600	-1.69E-06	-42.655	-0.223061	8.97E-08	0.607103	1.63E+10	0.086966	2.47E+05
446.400	-1.29E-06	-42.724	0.146593	7.72E-08	0.608083	1.63E+10	0.067056	2.50E+05
451.200	-9.46E-07	-41.248	0.427212	6.48E-08	0.587073	1.63E+10	0.049868	2.53E+05
456.000	-6.64E-07	-38.623	0.631842	5.30E-08	0.549711	1.63E+10	0.035395	2.56E+05
460.800	-4.37E-07	-35.182	0.773277	4.22E-08	0.500741	1.63E+10	0.023537	2.59E+05
465.600	-2.59E-07	-31.199	0.863663	3.24E-08	0.444054	1.63E+10	0.014124	2.61E+05
470.400	-1.26E-07	-26.891	0.914199	2.38E-08	0.382734	1.63E+10	0.006933	2.64E+05
475.200	-3.06E-08	-22.423	0.934920	1.66E-08	0.319142	1.63E+10	0.001701	2.67E+05
480.000	3.31E-08	-17.916	0.916149	1.06E-08	0.254991	1.63E+10	-0.009522	1.38E+06
484.800	7.16E-08	-13.628	0.843958	6.00E-09	0.193963	1.63E+10	-0.020558	1.38E+06
489.600	9.07E-08	-9.814	0.732076	2.54E-09	0.139677	1.63E+10	-0.026060	1.38E+06
494.400	9.60E-08	-6.600	0.603351	1.28E-10	0.093936	1.63E+10	-0.027576	1.38E+06
499.200	9.19E-08	-4.022	0.473780	-1.44E-09	0.057238	1.63E+10	-0.026412	1.38E+06
504.000	8.22E-08	-2.052	0.353716	-2.33E-09	0.029201	1.63E+10	-0.023615	1.38E+06

508.800	6.96E-08	-0.625859	0.249077	-2.72E-09	0.008908	1.63E+10	-0.019985	1.38E+06
513.600	5.60E-08	0.339486	0.162473	-2.77E-09	0.004832	1.63E+10	-0.016100	1.38E+06
518.400	4.30E-08	0.933882	0.094184	-2.58E-09	0.013292	1.63E+10	-0.012354	1.38E+06
523.200	3.13E-08	1.244	0.042967	-2.26E-09	0.017701	1.63E+10	-0.008986	1.38E+06
528.000	2.13E-08	1.346	0.006702	-1.88E-09	0.019163	1.63E+10	-0.006124	1.38E+06
532.800	1.33E-08	1.308	-0.017137	-1.49E-09	0.018616	1.63E+10	-0.003809	1.38E+06
537.600	7.05E-09	1.182	-0.031137	-1.12E-09	0.016821	1.63E+10	-0.002024	1.38E+06
542.400	2.51E-09	1.009	-0.037723	-7.97E-10	0.014362	1.63E+10	-0.000720	1.38E+06
547.200	-6.07E-10	0.819707	-0.039033	-5.28E-10	0.011667	1.63E+10	0.000175	1.38E+06
552.000	-2.56E-09	0.634361	-0.036847	-3.14E-10	0.009029	1.63E+10	0.000736	1.38E+06
556.800	-3.62E-09	0.465977	-0.032583	-1.52E-10	0.006632	1.63E+10	0.001040	1.38E+06
561.600	-4.02E-09	0.321560	-0.027315	-3.59E-11	0.004577	1.63E+10	0.001155	1.38E+06
566.400	-3.97E-09	0.203757	-0.021808	4.14E-11	0.002900	1.63E+10	0.001139	1.38E+06
571.200	-3.62E-09	0.112204	-0.016576	8.80E-11	0.001597	1.63E+10	0.001041	1.38E+06
576.000	-3.12E-09	0.044631	-0.011926	1.11E-10	0.000635	1.63E+10	0.000897	1.38E+06
580.800	-2.56E-09	-0.002281	-0.008010	1.17E-10	3.25E-05	1.63E+10	0.000735	1.38E+06
585.600	-2.00E-09	-0.032269	-0.004872	1.12E-10	0.000459	1.63E+10	0.000573	1.38E+06
590.400	-1.48E-09	-0.049049	-0.002475	1.00E-10	0.000698	1.63E+10	0.000425	1.38E+06
595.200	-1.03E-09	-0.056034	-0.000743	8.47E-11	0.000798	1.63E+10	0.000297	1.38E+06
600.000	-6.66E-10	-0.056179	0.000429	6.82E-11	0.000800	1.63E+10	0.000191	1.38E+06
604.800	-3.78E-10	-0.051915	0.001149	5.23E-11	0.000739	1.63E+10	0.000109	1.38E+06
609.600	-1.64E-10	-0.045146	0.001523	3.80E-11	0.000643	1.63E+10	4.71E-05	1.38E+06
614.400	-1.34E-11	-0.037292	0.001646	2.59E-11	0.000531	1.63E+10	3.85E-06	1.38E+06
619.200	8.45E-11	-0.029349	0.001597	1.61E-11	0.000418	1.63E+10	-2.43E-05	1.38E+06
624.000	1.41E-10	-0.021965	0.001441	8.51E-12	0.000313	1.63E+10	-4.05E-05	1.38E+06
628.800	1.66E-10	-0.015514	0.001230	2.99E-12	0.000221	1.63E+10	-4.77E-05	1.38E+06
633.600	1.70E-10	-0.010162	0.000998	-7.89E-13	0.000145	1.63E+10	-4.87E-05	1.38E+06
638.400	1.59E-10	-0.005932	0.000772	-3.16E-12	8.44E-05	1.63E+10	-4.56E-05	1.38E+06
643.200	1.39E-10	-0.002753	0.000566	-4.44E-12	3.92E-05	1.63E+10	-4.00E-05	1.38E+06
648.000	1.16E-10	-0.000494	0.000390	-4.92E-12	7.04E-06	1.63E+10	-3.33E-05	1.38E+06
652.800	9.20E-11	0.000996	0.000247	-4.84E-12	1.42E-05	1.63E+10	-2.64E-05	1.38E+06
657.600	6.95E-11	0.001877	0.000136	-4.42E-12	2.67E-05	1.63E+10	-2.00E-05	1.38E+06
662.400	4.96E-11	0.002298	5.35E-05	-3.80E-12	3.27E-05	1.63E+10	-1.43E-05	1.38E+06
667.200	3.30E-11	0.002390	-3.49E-06	-3.11E-12	3.40E-05	1.63E+10	-9.48E-06	1.38E+06
672.000	1.97E-11	0.002264	-3.99E-05	-2.43E-12	3.22E-05	1.63E+10	-5.67E-06	1.38E+06
676.800	9.69E-12	0.002008	-6.01E-05	-1.80E-12	2.86E-05	1.63E+10	-2.78E-06	1.38E+06
681.600	2.47E-12	0.001687	-6.85E-05	-1.26E-12	2.40E-05	1.63E+10	-7.10E-07	1.38E+06
686.400	-2.36E-12	0.001350	-6.86E-05	-8.08E-13	1.92E-05	1.63E+10	6.79E-07	1.38E+06
691.200	-5.29E-12	0.001028	-6.33E-05	-4.58E-13	1.46E-05	1.63E+10	1.52E-06	1.38E+06
696.000	-6.76E-12	0.000742	-5.50E-05	-1.97E-13	1.06E-05	1.63E+10	1.94E-06	1.38E+06
700.800	-7.18E-12	0.000500	-4.54E-05	-1.41E-14	7.12E-06	1.63E+10	2.06E-06	1.38E+06
705.600	-6.89E-12	0.000306	-3.57E-05	1.05E-13	4.35E-06	1.63E+10	1.98E-06	1.38E+06
710.400	-6.17E-12	0.000157	-2.67E-05	1.73E-13	2.24E-06	1.63E+10	1.77E-06	1.38E+06
715.200	-5.23E-12	4.95E-05	-1.88E-05	2.03E-13	7.05E-07	1.63E+10	1.50E-06	1.38E+06
720.000	-4.22E-12	-2.36E-05	-1.23E-05	2.07E-13	3.36E-07	1.63E+10	1.21E-06	1.38E+06
724.800	-3.24E-12	-6.88E-05	-7.18E-06	1.93E-13	9.79E-07	1.63E+10	9.32E-07	1.38E+06
729.600	-2.36E-12	-9.25E-05	-3.31E-06	1.70E-13	1.32E-06	1.63E+10	6.79E-07	1.38E+06
734.400	-1.61E-12	-0.000101	-5.70E-07	1.41E-13	1.43E-06	1.63E+10	4.64E-07	1.38E+06
739.200	-1.01E-12	-9.80E-05	1.24E-06	1.12E-13	1.39E-06	1.63E+10	2.90E-07	1.38E+06
744.000	-5.39E-13	-8.87E-05	2.31E-06	8.45E-14	1.26E-06	1.63E+10	1.55E-07	1.38E+06
748.800	-1.96E-13	-7.59E-05	2.81E-06	6.03E-14	1.08E-06	1.63E+10	5.64E-08	1.38E+06
753.600	3.96E-14	-6.17E-05	2.92E-06	4.00E-14	8.79E-07	1.63E+10	-1.14E-08	1.38E+06
758.400	1.88E-13	-4.78E-05	2.76E-06	2.39E-14	6.81E-07	1.63E+10	-5.41E-08	1.38E+06
763.200	2.69E-13	-3.52E-05	2.45E-06	1.17E-14	5.01E-07	1.63E+10	-7.73E-08	1.38E+06
768.000	3.00E-13	-2.43E-05	2.06E-06	2.91E-15	3.47E-07	1.63E+10	-8.63E-08	1.38E+06
772.800	2.97E-13	-1.55E-05	1.64E-06	-2.96E-15	2.20E-07	1.63E+10	-8.53E-08	1.38E+06
777.600	2.72E-13	-8.57E-06	1.25E-06	-6.50E-15	1.22E-07	1.63E+10	-7.81E-08	1.38E+06
782.400	2.35E-13	-3.47E-06	9.02E-07	-8.27E-15	4.94E-08	1.63E+10	-6.74E-08	1.38E+06
787.200	1.93E-13	8.29E-08	6.07E-07	-8.77E-15	1.18E-09	1.63E+10	-5.53E-08	1.38E+06
792.000	1.50E-13	2.36E-06	3.71E-07	-8.41E-15	3.36E-08	1.63E+10	-4.32E-08	1.38E+06
796.800	1.12E-13	3.64E-06	1.90E-07	-7.53E-15	5.18E-08	1.63E+10	-3.21E-08	1.38E+06
801.600	7.82E-14	4.18E-06	5.89E-08	-6.37E-15	5.95E-08	1.63E+10	-2.25E-08	1.38E+06
806.400	5.06E-14	4.21E-06	-2.99E-08	-5.14E-15	5.99E-08	1.63E+10	-1.45E-08	1.38E+06
811.200	2.89E-14	3.90E-06	-8.47E-08	-3.95E-15	5.54E-08	1.63E+10	-8.29E-09	1.38E+06
816.000	1.27E-14	3.39E-06	-1.13E-07	-2.87E-15	4.83E-08	1.63E+10	-3.64E-09	1.38E+06
820.800	1.29E-15	2.81E-06	-1.23E-07	-1.96E-15	4.00E-08	1.63E+10	-3.69E-10	1.38E+06
825.600	-6.14E-15	2.21E-06	-1.20E-07	-1.22E-15	3.15E-08	1.63E+10	1.76E-09	1.38E+06
830.400	-1.04E-14	1.66E-06	-1.08E-07	-6.51E-16	2.36E-08	1.63E+10	3.00E-09	1.38E+06
835.200	-1.24E-14	1.17E-06	-9.25E-08	-2.34E-16	1.67E-08	1.63E+10	3.56E-09	1.38E+06
840.000	-1.27E-14	7.71E-07	-7.52E-08	5.20E-17	1.10E-08	1.63E+10	3.65E-09	1.38E+06
844.800	-1.19E-14	4.52E-07	-5.82E-08	2.32E-16	6.44E-09	1.63E+10	3.42E-09	1.38E+06
849.600	-1.05E-14	2.12E-07	-4.28E-08	3.30E-16	3.02E-09	1.63E+10	3.01E-09	1.38E+06
854.400	-8.73E-15	4.13E-08	-2.96E-08	3.67E-16	5.88E-10	1.63E+10	2.51E-09	1.38E+06
859.200	-6.94E-15	-7.17E-08	-1.88E-08	3.63E-16	1.02E-09	1.63E+10	1.99E-09	1.38E+06
864.000	-5.25E-15	-1.39E-07	-1.04E-08	3.32E-16	1.97E-09	1.63E+10	1.51E-09	1.38E+06
868.800	-3.75E-15	-1.71E-07	-4.15E-09	2.86E-16	2.44E-09	1.63E+10	1.08E-09	1.38E+06
873.600	-2.50E-15	-1.79E-07	1.60E-10	2.35E-16	2.54E-09	1.63E+10	7.18E-10	1.38E+06
878.400	-1.50E-15	-1.70E-07	2.92E-09	1.83E-16	2.41E-09	1.63E+10	4.31E-10	1.38E+06
883.200	-7.41E-16	-1.51E-07	4.47E-09	1.36E-16	2.14E-09	1.63E+10	2.13E-10	1.38E+06
888.000	-1.94E-16	-1.27E-07	5.11E-09	9.53E-17	1.80E-09	1.63E+10	5.57E-11	1.38E+06
892.800	1.74E-16	-1.02E-07	5.12E-09	6.17E-17	1.44E-09	1.63E+10	-5.00E-11	1.38E+06

897.600	3.99E-16	-7.75E-08	4.73E-09	3.54E-17	1.10E-09	1.63E+10	-1.15E-10	1.38E+06
902.400	5.14E-16	-5.61E-08	4.10E-09	1.57E-17	7.99E-10	1.63E+10	-1.48E-10	1.38E+06
907.200	5.49E-16	-3.81E-08	3.37E-09	1.82E-18	5.43E-10	1.63E+10	-1.58E-10	1.38E+06
912.000	5.31E-16	-2.38E-08	2.62E-09	-7.30E-18	3.39E-10	1.63E+10	-1.53E-10	1.38E+06
916.800	4.79E-16	-1.30E-08	1.92E-09	-1.27E-17	1.85E-10	1.63E+10	-1.38E-10	1.38E+06
921.600	4.09E-16	-5.32E-09	1.31E-09	-1.54E-17	7.58E-11	1.63E+10	-1.18E-10	1.38E+06
926.400	3.31E-16	-3.77E-10	8.02E-10	-1.63E-17	5.36E-12	1.63E+10	-9.52E-11	1.38E+06
931.200	2.53E-16	2.38E-09	3.99E-10	-1.60E-17	3.38E-11	1.63E+10	-7.27E-11	1.38E+06
936.000	1.78E-16	3.45E-09	1.02E-10	-1.51E-17	4.91E-11	1.63E+10	-5.12E-11	1.38E+06
940.800	1.08E-16	3.35E-09	-9.58E-11	-1.41E-17	4.77E-11	1.63E+10	-3.11E-11	1.38E+06
945.600	4.28E-17	2.53E-09	-2.00E-10	-1.32E-17	3.60E-11	1.63E+10	-1.23E-11	1.38E+06
950.400	-1.89E-17	1.43E-09	-2.16E-10	-1.26E-17	2.04E-11	1.63E+10	5.43E-12	1.38E+06
955.200	-7.86E-17	4.56E-10	-1.49E-10	-1.24E-17	6.48E-12	1.63E+10	2.26E-11	1.38E+06
960.000	-1.38E-16	0.000	0.000	-1.23E-17	0.000	1.63E+10	3.96E-11	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	0.20198519 in
Computed slope at pile head	=	-0.00277219
Maximum bending moment	=	471374.18651 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	67.20000000 in
Depth of maximum shear force	=	9.60000000 in
Number of iterations	=	11
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 20000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.632877	7.85E-08	20000.	-0.007623	1.12E-09	1.63E+10	0.000	0.000
4.800	0.596288	96000.	20000.	-0.007609	1366.354	1.63E+10	0.000	0.000
9.600	0.559835	1.92E+05	20000.	-0.007566	2732.707	1.63E+10	0.000	0.000
14.400	0.523654	2.88E+05	19955.	-0.007495	4099.061	1.63E+10	-18.748	171.847
19.200	0.487879	3.84E+05	19764.	-0.007397	5459.266	1.63E+10	-60.895	599.120
24.000	0.452647	4.78E+05	19362.	-0.007270	6799.503	1.63E+10	-106.416	1128.469
28.800	0.418090	5.69E+05	18742.	-0.007116	8104.843	1.63E+10	-151.912	1744.067
33.600	0.384338	6.58E+05	17912.	-0.006935	9360.367	1.63E+10	-193.983	2422.658
38.400	0.351516	7.41E+05	16896.	-0.006729	10552.	1.63E+10	-229.234	3130.226
43.200	0.319741	8.20E+05	15736.	-0.006499	11669.	1.63E+10	-254.274	3817.192
48.000	0.289126	8.92E+05	14488.	-0.006247	12702.	1.63E+10	-265.717	4411.369
52.800	0.259772	9.59E+05	13226.	-0.005974	13649.	1.63E+10	-260.173	4807.405
57.600	0.231774	1.02E+06	11899.	-0.005683	14510.	1.63E+10	-292.703	6061.835
62.400	0.205217	1.07E+06	10368.	-0.005375	15274.	1.63E+10	-345.386	8078.543
67.200	0.180177	1.12E+06	8576.019	-0.005052	15926.	1.63E+10	-401.108	10686.
72.000	0.156718	1.16E+06	6514.922	-0.004717	16446.	1.63E+10	-457.682	14018.
76.800	0.134893	1.18E+06	4190.749	-0.004373	16816.	1.63E+10	-510.723	18173.
81.600	0.114738	1.20E+06	1637.107	-0.004023	17019.	1.63E+10	-553.294	23147.
86.400	0.096274	1.20E+06	-1075.614	-0.003671	17040.	1.63E+10	-577.006	28768.
91.200	0.079501	1.19E+06	-3839.982	-0.003320	16872.	1.63E+10	-574.814	34705.
96.000	0.064405	1.16E+06	-6525.424	-0.002974	16515.	1.63E+10	-544.121	40553.
100.800	0.050948	1.12E+06	-9002.425	-0.002638	15980.	1.63E+10	-487.963	45972.
105.600	0.039079	1.07E+06	-11166.	-0.002315	15285.	1.63E+10	-413.477	50786.
110.400	0.028728	1.02E+06	-12948.	-0.002007	14455.	1.63E+10	-329.051	54979.
115.200	0.019813	9.50E+05	-14319.	-0.001718	13516.	1.63E+10	-242.053	58642.
120.000	0.012239	8.78E+05	-15278.	-0.001448	12498.	1.63E+10	-157.858	61908.
124.800	0.005908	8.03E+05	-15849.	-0.001201	11429.	1.63E+10	-79.881	64904.

129.600	0.000711	7.26E+05	-16065.	-0.000976	10333.	1.63E+10	-10.030	67737.
134.400	-0.003460	6.49E+05	-15967.	-0.000773	9233.491	1.63E+10	50.802	70480.
139.200	-0.006713	5.73E+05	-15599.	-0.000593	8151.000	1.63E+10	102.359	73186.
144.000	-0.009157	4.99E+05	-15006.	-0.000436	7102.074	1.63E+10	144.771	75884.
148.800	-0.010896	4.29E+05	-14231.	-0.000299	6100.623	1.63E+10	178.407	78593.
153.600	-0.012029	3.62E+05	-13313.	-0.000183	5157.676	1.63E+10	203.786	81319.
158.400	-0.012649	3.01E+05	-12293.	-8.50E-05	4281.555	1.63E+10	221.533	84065.
163.200	-0.012845	2.44E+05	-11203.	-4.70E-06	3478.080	1.63E+10	232.347	86828.
168.000	-0.012694	1.93E+05	-10077.	5.97E-05	2750.797	1.63E+10	236.974	89604.
172.800	-0.012271	1.48E+05	-8941.259	0.000110	2101.225	1.63E+10	236.194	92391.
177.600	-0.011639	1.07E+05	-7820.478	0.000147	1529.105	1.63E+10	230.798	95183.
182.400	-0.010855	72555.	-6734.784	0.000174	1032.671	1.63E+10	221.574	97978.
187.200	-0.009969	42781.	-5700.727	0.000191	608.896	1.63E+10	209.283	1.01E+05
192.000	-0.009022	17828.	-4731.284	0.000200	253.750	1.63E+10	194.652	1.04E+05
196.800	-0.008049	-2639.312	-3836.068	0.000202	37.565	1.63E+10	178.355	1.06E+05
201.600	-0.007081	-18998.	-3021.598	0.000199	270.393	1.63E+10	161.007	1.09E+05
206.400	-0.006139	-31647.	-2291.603	0.000192	450.422	1.63E+10	143.157	1.12E+05
211.200	-0.005243	-40997.	-1647.353	0.000181	583.507	1.63E+10	125.280	1.15E+05
216.000	-0.004404	-47461.	-1088.008	0.000168	675.509	1.63E+10	107.780	1.17E+05
220.800	-0.003632	-51442.	-610.965	0.000153	732.167	1.63E+10	90.988	1.20E+05
225.600	-0.002933	-53327.	-212.191	0.000138	758.988	1.63E+10	75.168	1.23E+05
230.400	-0.002309	-53479.	113.447	0.000122	761.160	1.63E+10	60.515	1.26E+05
235.200	-0.001761	-52237.	371.881	0.000106	743.487	1.63E+10	47.166	1.29E+05
240.000	-0.001287	-49909.	569.575	9.15E-05	710.348	1.63E+10	35.206	1.31E+05
244.800	-0.000883	-46769.	713.276	7.72E-05	665.663	1.63E+10	24.669	1.34E+05
249.600	-0.000545	-43062.	809.809	6.40E-05	612.889	1.63E+10	15.553	1.37E+05
254.400	-0.000269	-38995.	865.897	5.19E-05	555.015	1.63E+10	7.817	1.40E+05
259.200	-4.71E-05	-34749.	888.016	4.11E-05	494.577	1.63E+10	1.399	1.42E+05
264.000	0.000125	-30470.	882.276	3.14E-05	433.680	1.63E+10	-3.790	1.45E+05
268.800	0.000255	-26279.	854.339	2.31E-05	374.027	1.63E+10	-7.850	1.48E+05
273.600	0.000347	-22269.	809.354	1.59E-05	316.947	1.63E+10	-10.893	1.51E+05
278.400	0.000408	-18509.	751.922	9.94E-06	263.440	1.63E+10	-13.037	1.53E+05
283.200	0.000442	-15050.	686.078	5.00E-06	214.208	1.63E+10	-14.398	1.56E+05
288.000	0.000456	-11923.	615.294	1.03E-06	169.698	1.63E+10	-15.095	1.59E+05
292.800	0.000452	-9143.456	542.490	-2.08E-06	130.137	1.63E+10	-15.240	1.62E+05
297.600	0.000436	-6715.062	470.067	-4.41E-06	95.574	1.63E+10	-14.937	1.65E+05
302.400	0.000410	-4630.815	399.935	-6.08E-06	65.910	1.63E+10	-14.285	1.67E+05
307.200	0.000377	-2875.686	333.563	-7.19E-06	40.929	1.63E+10	-13.371	1.70E+05
312.000	0.000341	-1428.615	272.019	-7.82E-06	20.333	1.63E+10	-12.273	1.73E+05
316.800	0.000302	-264.308	216.022	-8.07E-06	3.762	1.63E+10	-11.059	1.76E+05
321.600	0.000263	645.199	165.992	-8.01E-06	9.183	1.63E+10	-9.787	1.78E+05
326.400	0.000225	1329.215	122.093	-7.72E-06	18.919	1.63E+10	-8.504	1.81E+05
331.200	0.000189	1817.289	84.282	-7.26E-06	25.865	1.63E+10	-7.250	1.84E+05
336.000	0.000156	2138.319	52.352	-6.68E-06	30.434	1.63E+10	-6.054	1.87E+05
340.800	0.000125	2319.863	25.969	-6.02E-06	33.018	1.63E+10	-4.939	1.89E+05
345.600	9.79E-05	2387.622	4.710	-5.33E-06	33.983	1.63E+10	-3.919	1.92E+05
350.400	7.40E-05	2365.082	-11.909	-4.63E-06	33.662	1.63E+10	-3.005	1.95E+05
355.200	5.35E-05	2273.296	-24.407	-3.95E-06	32.355	1.63E+10	-2.202	1.98E+05
360.000	3.61E-05	2130.778	-33.312	-3.30E-06	30.327	1.63E+10	-1.509	2.00E+05
364.800	2.18E-05	1953.496	-39.150	-2.70E-06	27.804	1.63E+10	-0.923351	2.03E+05
369.600	1.03E-05	1754.941	-42.421	-2.15E-06	24.978	1.63E+10	-0.439849	2.06E+05
374.400	1.17E-06	1546.251	-43.599	-1.66E-06	22.008	1.63E+10	-0.050911	2.09E+05
379.200	-5.72E-06	1336.388	-43.116	-1.24E-06	19.021	1.63E+10	0.252173	2.12E+05
384.000	-1.07E-05	1132.335	-41.362	-8.76E-07	16.116	1.63E+10	0.478871	2.14E+05
388.800	-1.41E-05	939.315	-38.679	-5.71E-07	13.369	1.63E+10	0.638959	2.17E+05
393.600	-1.62E-05	761.017	-35.364	-3.20E-07	10.831	1.63E+10	0.742166	2.20E+05
398.400	-1.72E-05	599.818	-31.668	-1.20E-07	8.537	1.63E+10	0.797885	2.23E+05
403.200	-1.74E-05	457.003	-27.797	3.55E-08	6.504	1.63E+10	0.814953	2.25E+05
408.000	-1.69E-05	332.964	-23.918	1.52E-07	4.739	1.63E+10	0.801498	2.28E+05
412.800	-1.59E-05	227.392	-20.159	2.34E-07	3.236	1.63E+10	0.764837	2.31E+05
417.600	-1.46E-05	139.442	-16.616	2.88E-07	1.985	1.63E+10	0.711421	2.34E+05
422.400	-1.31E-05	67.882	-13.356	3.19E-07	0.966161	1.63E+10	0.646816	2.36E+05
427.200	-1.16E-05	11.226	-10.422	3.31E-07	0.159776	1.63E+10	0.575722	2.39E+05
432.000	-9.96E-06	-32.166	-7.835	3.27E-07	0.457815	1.63E+10	0.502010	2.42E+05
436.800	-8.41E-06	-63.992	-5.601	3.13E-07	0.910785	1.63E+10	0.428778	2.45E+05
441.600	-6.95E-06	-85.938	-3.712	2.91E-07	1.223	1.63E+10	0.358426	2.47E+05
446.400	-5.62E-06	-99.627	-2.149	2.64E-07	1.418	1.63E+10	0.292725	2.50E+05
451.200	-4.42E-06	-106.571	-0.887716	2.34E-07	1.517	1.63E+10	0.232906	2.53E+05
456.000	-3.37E-06	-108.149	0.102622	2.02E-07	1.539	1.63E+10	0.179735	2.56E+05
460.800	-2.48E-06	-105.586	0.854609	1.70E-07	1.503	1.63E+10	0.133593	2.59E+05
465.600	-1.74E-06	-99.945	1.402	1.40E-07	1.422	1.63E+10	0.094546	2.61E+05
470.400	-1.13E-06	-92.125	1.779	1.12E-07	1.311	1.63E+10	0.062415	2.64E+05
475.200	-6.63E-07	-82.868	2.017	8.62E-08	1.179	1.63E+10	0.036827	2.67E+05
480.000	-3.08E-07	-72.762	2.318	6.32E-08	1.036	1.63E+10	0.088371	1.38E+06
484.800	-5.55E-08	-60.620	2.568	4.36E-08	0.862791	1.63E+10	0.015947	1.38E+06
489.600	1.11E-07	-48.110	2.530	2.76E-08	0.684745	1.63E+10	-0.031860	1.38E+06
494.400	2.09E-07	-36.335	2.309	1.51E-08	0.517147	1.63E+10	-0.060129	1.38E+06
499.200	2.56E-07	-25.945	1.988	5.98E-09	0.369267	1.63E+10	-0.073642	1.38E+06
504.000	2.67E-07	-17.251	1.627	-3.81E-10	0.245536	1.63E+10	-0.076619	1.38E+06
508.800	2.53E-07	-10.323	1.269	-4.44E-09	0.146931	1.63E+10	-0.072591	1.38E+06
513.600	2.24E-07	-5.068	0.940416	-6.71E-09	0.072129	1.63E+10	-0.064370	1.38E+06

518.400	1.88E-07	-1.295	0.656111	-7.64E-09	0.018437	1.63E+10	-0.054091	1.38E+06
523.200	1.51E-07	1.231	0.422408	-7.65E-09	0.017518	1.63E+10	-0.043286	1.38E+06
528.000	1.15E-07	2.760	0.239370	-7.07E-09	0.039279	1.63E+10	-0.032980	1.38E+06
532.800	8.28E-08	3.529	0.103108	-6.14E-09	0.050225	1.63E+10	-0.023796	1.38E+06
537.600	5.58E-08	3.750	0.007492	-5.07E-09	0.053367	1.63E+10	-0.016044	1.38E+06
542.400	3.42E-08	3.601	-0.054571	-3.99E-09	0.051249	1.63E+10	-0.009815	1.38E+06
547.200	1.76E-08	3.226	-0.090246	-2.98E-09	0.045911	1.63E+10	-0.005049	1.38E+06
552.000	5.54E-09	2.734	-0.106185	-2.10E-09	0.038918	1.63E+10	-0.001592	1.38E+06
556.800	-2.62E-09	2.206	-0.108197	-1.38E-09	0.031402	1.63E+10	0.000754	1.38E+06
561.600	-7.67E-09	1.696	-0.101099	-8.02E-10	0.024134	1.63E+10	0.002204	1.38E+06
566.400	-1.03E-08	1.236	-0.088693	-3.70E-10	0.017589	1.63E+10	0.002965	1.38E+06
571.200	-1.12E-08	0.844212	-0.073837	-6.40E-11	0.012016	1.63E+10	0.003225	1.38E+06
576.000	-1.09E-08	0.526948	-0.058556	1.38E-10	0.007500	1.63E+10	0.003142	1.38E+06
580.800	-9.90E-09	0.282071	-0.044189	2.57E-10	0.004015	1.63E+10	0.002845	1.38E+06
585.600	-8.47E-09	0.102733	-0.031523	3.14E-10	0.001462	1.63E+10	0.002433	1.38E+06
590.400	-6.89E-09	-0.020552	-0.020934	3.26E-10	0.000293	1.63E+10	0.001979	1.38E+06
595.200	-5.34E-09	-0.098231	-0.012501	3.08E-10	0.001398	1.63E+10	0.001534	1.38E+06
600.000	-3.93E-09	-0.140561	-0.006109	2.73E-10	0.002001	1.63E+10	0.001129	1.38E+06
604.800	-2.72E-09	-0.156876	-0.001525	2.29E-10	0.002233	1.63E+10	0.000781	1.38E+06
609.600	-1.73E-09	-0.155199	0.001541	1.83E-10	0.002209	1.63E+10	0.000497	1.38E+06
614.400	-9.58E-10	-0.142083	0.003393	1.40E-10	0.002022	1.63E+10	0.000275	1.38E+06
619.200	-3.88E-10	-0.122628	0.004320	1.01E-10	0.001745	1.63E+10	0.000111	1.38E+06
624.000	8.73E-12	-0.100607	0.004582	6.78E-11	0.001432	1.63E+10	-2.51E-06	1.38E+06
628.800	2.63E-10	-0.078643	0.004394	4.14E-11	0.001119	1.63E+10	-7.56E-05	1.38E+06
633.600	4.06E-10	-0.058420	0.003933	2.12E-11	0.000831	1.63E+10	-0.000117	1.38E+06
638.400	4.67E-10	-0.040885	0.003331	6.59E-12	0.000582	1.63E+10	-0.000134	1.38E+06
643.200	4.69E-10	-0.026439	0.002686	-3.33E-12	0.000376	1.63E+10	-0.000135	1.38E+06
648.000	4.35E-10	-0.015099	0.002063	-9.44E-12	0.000215	1.63E+10	-0.000125	1.38E+06
652.800	3.79E-10	-0.006636	0.001502	-1.26E-11	9.45E-05	1.63E+10	-0.000109	1.38E+06
657.600	3.13E-10	-0.000680	0.001025	-1.37E-11	9.67E-06	1.63E+10	-9.00E-05	1.38E+06
662.400	2.47E-10	0.003203	0.000639	-1.33E-11	4.56E-05	1.63E+10	-7.09E-05	1.38E+06
667.200	1.85E-10	0.005451	0.000341	-1.21E-11	7.76E-05	1.63E+10	-5.32E-05	1.38E+06
672.000	1.31E-10	0.006474	0.000123	-1.03E-11	9.21E-05	1.63E+10	-3.76E-05	1.38E+06
676.800	8.61E-11	0.006630	-2.70E-05	-8.39E-12	9.44E-05	1.63E+10	-2.47E-05	1.38E+06
681.600	5.05E-11	0.006215	-0.000121	-6.50E-12	8.85E-05	1.63E+10	-1.45E-05	1.38E+06
686.400	2.37E-11	0.005467	-0.000172	-4.78E-12	7.78E-05	1.63E+10	-6.81E-06	1.38E+06
691.200	4.63E-12	0.004562	-0.000192	-3.30E-12	6.49E-05	1.63E+10	-1.33E-06	1.38E+06
696.000	-7.99E-12	0.003626	-0.000189	-2.10E-12	5.16E-05	1.63E+10	2.30E-06	1.38E+06
700.800	-1.55E-11	0.002743	-0.000173	-1.16E-12	3.90E-05	1.63E+10	4.45E-06	1.38E+06
705.600	-1.91E-11	0.001962	-0.000149	-4.65E-13	2.79E-05	1.63E+10	5.49E-06	1.38E+06
710.400	-1.99E-11	0.001308	-0.000123	1.66E-14	1.86E-05	1.63E+10	5.73E-06	1.38E+06
715.200	-1.89E-11	0.000786	-9.57E-05	3.25E-13	1.12E-05	1.63E+10	5.44E-06	1.38E+06
720.000	-1.68E-11	0.000389	-7.10E-05	4.98E-13	5.54E-06	1.63E+10	4.84E-06	1.38E+06
724.800	-1.42E-11	0.000104	-4.97E-05	5.71E-13	1.48E-06	1.63E+10	4.07E-06	1.38E+06
729.600	-1.14E-11	-8.74E-05	-3.21E-05	5.73E-13	1.24E-06	1.63E+10	3.26E-06	1.38E+06
734.400	-8.66E-12	-0.000204	-1.83E-05	5.30E-13	2.90E-06	1.63E+10	2.49E-06	1.38E+06
739.200	-6.26E-12	-0.000263	-7.98E-06	4.62E-13	3.74E-06	1.63E+10	1.80E-06	1.38E+06
744.000	-4.23E-12	-0.000280	-7.40E-07	3.82E-13	3.99E-06	1.63E+10	1.22E-06	1.38E+06
748.800	-2.60E-12	-0.000270	3.97E-06	3.01E-13	3.84E-06	1.63E+10	7.47E-07	1.38E+06
753.600	-1.35E-12	-0.000242	6.69E-06	2.25E-13	3.45E-06	1.63E+10	3.87E-07	1.38E+06
758.400	-4.38E-13	-0.000206	7.92E-06	1.59E-13	2.93E-06	1.63E+10	1.26E-07	1.38E+06
763.200	1.81E-13	-0.000166	8.10E-06	1.04E-13	2.37E-06	1.63E+10	-5.20E-08	1.38E+06
768.000	5.65E-13	-0.000128	7.58E-06	6.11E-14	1.82E-06	1.63E+10	-1.62E-07	1.38E+06
772.800	7.68E-13	-9.34E-05	6.66E-06	2.85E-14	1.33E-06	1.63E+10	-2.21E-07	1.38E+06
777.600	8.39E-13	-6.39E-05	5.56E-06	5.36E-15	9.10E-07	1.63E+10	-2.41E-07	1.38E+06
782.400	8.19E-13	-4.00E-05	4.41E-06	-9.95E-15	5.70E-07	1.63E+10	-2.35E-07	1.38E+06
787.200	7.43E-13	-2.16E-05	3.34E-06	-1.90E-14	3.07E-07	1.63E+10	-2.14E-07	1.38E+06
792.000	6.37E-13	-8.03E-06	2.38E-06	-2.34E-14	1.14E-07	1.63E+10	-1.83E-07	1.38E+06
796.800	5.19E-13	1.31E-06	1.59E-06	-2.44E-14	1.86E-08	1.63E+10	-1.49E-07	1.38E+06
801.600	4.03E-13	7.21E-06	9.52E-07	-2.31E-14	1.03E-07	1.63E+10	-1.16E-07	1.38E+06
806.400	2.97E-13	1.04E-05	4.69E-07	-2.05E-14	1.49E-07	1.63E+10	-8.53E-08	1.38E+06
811.200	2.06E-13	1.17E-05	1.23E-07	-1.73E-14	1.67E-07	1.63E+10	-5.91E-08	1.38E+06
816.000	1.31E-13	1.16E-05	-1.10E-07	-1.38E-14	1.65E-07	1.63E+10	-3.77E-08	1.38E+06
820.800	7.31E-14	1.07E-05	-2.51E-07	-1.05E-14	1.52E-07	1.63E+10	-2.10E-08	1.38E+06
825.600	3.01E-14	9.22E-06	-3.22E-07	-7.61E-15	1.31E-07	1.63E+10	-8.65E-09	1.38E+06
830.400	8.82E-17	7.57E-06	-3.43E-07	-5.14E-15	1.08E-07	1.63E+10	-2.53E-11	1.38E+06
835.200	-1.92E-14	5.93E-06	-3.29E-07	-3.15E-15	8.44E-08	1.63E+10	5.52E-09	1.38E+06
840.000	-3.01E-14	4.41E-06	-2.95E-07	-1.63E-15	6.28E-08	1.63E+10	8.66E-09	1.38E+06
844.800	-3.48E-14	3.09E-06	-2.51E-07	-5.21E-16	4.40E-08	1.63E+10	1.00E-08	1.38E+06
849.600	-3.51E-14	2.01E-06	-2.02E-07	2.30E-16	2.86E-08	1.63E+10	1.01E-08	1.38E+06
854.400	-3.26E-14	1.15E-06	-1.56E-07	6.96E-16	1.64E-08	1.63E+10	9.37E-09	1.38E+06
859.200	-2.85E-14	5.13E-07	-1.13E-07	9.41E-16	7.30E-09	1.63E+10	8.18E-09	1.38E+06
864.000	-2.36E-14	6.24E-08	-7.76E-08	1.03E-15	8.89E-10	1.63E+10	6.77E-09	1.38E+06
868.800	-1.86E-14	-2.32E-07	-4.85E-08	1.00E-15	3.30E-09	1.63E+10	5.35E-09	1.38E+06
873.600	-1.40E-14	-4.03E-07	-2.60E-08	9.07E-16	5.74E-09	1.63E+10	4.02E-09	1.38E+06
878.400	-9.91E-15	-4.82E-07	-9.58E-09	7.77E-16	6.86E-09	1.63E+10	2.85E-09	1.38E+06
883.200	-6.52E-15	-4.95E-07	1.75E-09	6.33E-16	7.05E-09	1.63E+10	1.87E-09	1.38E+06
888.000	-3.83E-15	-4.65E-07	8.89E-09	4.91E-16	6.62E-09	1.63E+10	1.10E-09	1.38E+06
892.800	-1.80E-15	-4.10E-07	1.28E-08	3.62E-16	5.84E-09	1.63E+10	5.18E-10	1.38E+06
897.600	-3.55E-16	-3.43E-07	1.43E-08	2.51E-16	4.88E-09	1.63E+10	1.02E-10	1.38E+06
902.400	6.10E-16	-2.73E-07	1.41E-08	1.61E-16	3.89E-09	1.63E+10	-1.75E-10	1.38E+06

907.200	1.19E-15	-2.07E-07	1.28E-08	9.00E-17	2.95E-09	1.63E+10	-3.41E-10	1.38E+06
912.000	1.47E-15	-1.50E-07	1.10E-08	3.74E-17	2.13E-09	1.63E+10	-4.23E-10	1.38E+06
916.800	1.55E-15	-1.02E-07	8.93E-09	4.06E-19	1.45E-09	1.63E+10	-4.45E-10	1.38E+06
921.600	1.48E-15	-6.40E-08	6.84E-09	-2.40E-17	9.12E-10	1.63E+10	-4.25E-10	1.38E+06
926.400	1.32E-15	-3.61E-08	4.91E-09	-3.88E-17	5.14E-10	1.63E+10	-3.78E-10	1.38E+06
931.200	1.11E-15	-1.69E-08	3.24E-09	-4.66E-17	2.40E-10	1.63E+10	-3.18E-10	1.38E+06
936.000	8.70E-16	-4.96E-09	1.88E-09	-4.98E-17	7.06E-11	1.63E+10	-2.50E-10	1.38E+06
940.800	6.28E-16	1.19E-09	8.48E-10	-5.03E-17	1.69E-11	1.63E+10	-1.80E-10	1.38E+06
945.600	3.87E-16	3.18E-09	1.48E-10	-4.97E-17	4.53E-11	1.63E+10	-1.11E-10	1.38E+06
950.400	1.51E-16	2.61E-09	-2.24E-10	-4.88E-17	3.71E-11	1.63E+10	-4.34E-11	1.38E+06
955.200	-8.14E-17	1.03E-09	-2.72E-10	-4.83E-17	1.47E-11	1.63E+10	2.34E-11	1.38E+06
960.000	-3.13E-16	0.000	0.000	-4.81E-17	0.000	1.63E+10	8.98E-11	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	0.63287682 in
Computed slope at pile head	=	-0.00762264
Maximum bending moment	=	1197227. lbs-in
Maximum shear force	=	20000.00000 lbs
Depth of maximum bending moment	=	86.40000000 in
Depth of maximum shear force	=	9.60000000 in
Number of iterations	=	19
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 30000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	1.329	-9.42E-07	30000.	-0.014438	1.34E-08	1.63E+10	0.000	0.000
4.800	1.260	1.44E+05	30000.	-0.014417	2049.530	1.63E+10	0.000	0.000
9.600	1.190	2.88E+05	30000.	-0.014353	4099.061	1.63E+10	0.000	0.000
14.400	1.122	4.32E+05	29955.	-0.014247	6148.591	1.63E+10	-18.747	80.219
19.200	1.054	5.76E+05	29764.	-0.014099	8191.974	1.63E+10	-60.895	277.400
24.000	0.986431	7.18E+05	29362.	-0.013908	10215.	1.63E+10	-106.416	517.825
28.800	0.920180	8.57E+05	28742.	-0.013676	12204.	1.63E+10	-151.915	792.445
33.600	0.855140	9.94E+05	27912.	-0.013404	14143.	1.63E+10	-193.995	1088.915
38.400	0.791505	1.13E+06	26896.	-0.013092	16018.	1.63E+10	-229.259	1390.320
43.200	0.729461	1.25E+06	25736.	-0.012742	17818.	1.63E+10	-254.313	1673.428
48.000	0.669187	1.37E+06	24488.	-0.012355	19534.	1.63E+10	-265.758	1906.253
52.800	0.610852	1.49E+06	23225.	-0.011934	21163.	1.63E+10	-260.200	2044.616
57.600	0.554620	1.60E+06	21898.	-0.011480	22707.	1.63E+10	-292.801	2534.069
62.400	0.500643	1.70E+06	20365.	-0.010995	24156.	1.63E+10	-345.910	3316.477
67.200	0.449065	1.79E+06	18567.	-0.010482	25490.	1.63E+10	-403.265	4310.452
72.000	0.400018	1.88E+06	16484.	-0.009942	26692.	1.63E+10	-464.861	5578.085
76.800	0.353623	1.95E+06	14094.	-0.009379	27742.	1.63E+10	-530.677	7203.304
81.600	0.309982	2.01E+06	11379.	-0.008796	28618.	1.63E+10	-600.585	9299.905
86.400	0.269184	2.06E+06	8320.217	-0.008196	29297.	1.63E+10	-674.046	12019.
91.200	0.231296	2.09E+06	4904.145	-0.007586	29755.	1.63E+10	-749.317	15550.
96.000	0.196363	2.11E+06	1133.126	-0.006968	29967.	1.63E+10	-821.940	20092.
100.800	0.164406	2.10E+06	-2958.600	-0.006348	29910.	1.63E+10	-882.946	25778.
105.600	0.135420	2.08E+06	-7281.884	-0.005733	29563.	1.63E+10	-918.423	32554.
110.400	0.109370	2.03E+06	-11677.	-0.005128	28915.	1.63E+10	-912.827	40062.
115.200	0.086192	1.96E+06	-15922.	-0.004539	27968.	1.63E+10	-856.152	47679.
120.000	0.065791	1.88E+06	-19778.	-0.003973	26739.	1.63E+10	-750.251	54737.
124.800	0.048046	1.78E+06	-23039.	-0.003435	25265.	1.63E+10	-608.545	60796.
129.600	0.032811	1.66E+06	-25578.	-0.002930	23591.	1.63E+10	-449.479	65756.
134.400	0.019918	1.53E+06	-27352.	-0.002461	21770.	1.63E+10	-289.538	69775.

139.200	0.009188	1.39E+06	-28383.	-0.002030	19854.	1.63E+10	-139.950	73115.
144.000	0.000429	1.26E+06	-28735.	-0.001640	17892.	1.63E+10	-6.798	76032.
148.800	-0.006552	1.12E+06	-28493.	-0.001290	15928.	1.63E+10	107.463	78723.
153.600	-0.011952	9.84E+05	-27749.	-0.000980	13999.	1.63E+10	202.493	81322.
158.400	-0.015961	8.53E+05	-26594.	-0.000710	12136.	1.63E+10	279.026	83911.
163.200	-0.018765	7.28E+05	-25112.	-0.000477	10365.	1.63E+10	338.285	86531.
168.000	-0.020540	6.12E+05	-23384.	-0.000280	8705.293	1.63E+10	381.697	89201.
172.800	-0.021449	5.04E+05	-21482.	-0.000115	7170.327	1.63E+10	410.766	91922.
177.600	-0.021647	4.05E+05	-19472.	1.85E-05	5770.062	1.63E+10	427.031	94689.
182.400	-0.021272	3.17E+05	-17410.	0.000125	4509.831	1.63E+10	432.046	97492.
187.200	-0.020448	2.38E+05	-15347.	0.000207	3391.279	1.63E+10	427.367	1.00E+05
192.000	-0.019288	1.70E+05	-13327.	0.000267	2412.871	1.63E+10	414.538	1.03E+05
196.800	-0.017889	1.10E+05	-11384.	0.000308	1570.401	1.63E+10	395.062	1.06E+05
201.600	-0.016333	60247.	-9546.443	0.000333	857.481	1.63E+10	370.385	1.09E+05
206.400	-0.014692	18691.	-7837.046	0.000345	266.019	1.63E+10	341.864	1.12E+05
211.200	-0.013025	-14989.	-6270.779	0.000345	213.337	1.63E+10	310.748	1.15E+05
216.000	-0.011379	-41509.	-4857.423	0.000337	590.791	1.63E+10	278.150	1.17E+05
220.800	-0.009791	-61620.	-3601.696	0.000322	877.033	1.63E+10	245.070	1.20E+05
225.600	-0.008291	-76085.	-2503.882	0.000301	1082.910	1.63E+10	212.353	1.23E+05
230.400	-0.006898	-85658.	-1560.572	0.000278	1219.151	1.63E+10	180.694	1.26E+05
235.200	-0.005627	-91067.	-765.349	0.000252	1296.139	1.63E+10	150.649	1.29E+05
240.000	-0.004484	-93005.	-109.444	0.000224	1323.725	1.63E+10	122.645	1.31E+05
244.800	-0.003472	-92117.	417.667	0.000197	1311.093	1.63E+10	96.985	1.34E+05
249.600	-0.002591	-88995.	827.710	0.000170	1266.657	1.63E+10	73.866	1.37E+05
254.400	-0.001835	-84171.	1133.117	0.000145	1197.999	1.63E+10	53.387	1.40E+05
259.200	-0.001199	-78117.	1346.602	0.000121	1111.833	1.63E+10	35.565	1.42E+05
264.000	-0.000673	-71244.	1480.795	9.91E-05	1014.005	1.63E+10	20.348	1.45E+05
268.800	-0.000248	-63902.	1547.939	7.92E-05	909.504	1.63E+10	7.629	1.48E+05
273.600	8.75E-05	-56384.	1559.659	6.15E-05	802.502	1.63E+10	-2.746	1.51E+05
278.400	0.000343	-48929.	1526.770	4.60E-05	696.400	1.63E+10	-10.958	1.53E+05
283.200	0.000529	-41727.	1459.159	3.26E-05	593.891	1.63E+10	-17.213	1.56E+05
288.000	0.000656	-34921.	1365.696	2.14E-05	497.027	1.63E+10	-21.730	1.59E+05
292.800	0.000734	-28616.	1254.196	1.20E-05	407.289	1.63E+10	-24.729	1.62E+05
297.600	0.000771	-22881.	1131.409	4.41E-06	325.660	1.63E+10	-26.432	1.65E+05
302.400	0.000776	-17755.	1003.052	-1.57E-06	252.698	1.63E+10	-27.051	1.67E+05
307.200	0.000756	-13252.	873.844	-6.14E-06	188.607	1.63E+10	-26.786	1.70E+05
312.000	0.000717	-9365.667	747.580	-9.47E-06	133.300	1.63E+10	-25.824	1.73E+05
316.800	0.000665	-6074.775	627.204	-1.17E-05	86.461	1.63E+10	-24.333	1.76E+05
321.600	0.000605	-3344.513	514.893	-1.31E-05	47.602	1.63E+10	-22.463	1.78E+05
326.400	0.000539	-1131.799	412.155	-1.38E-05	16.109	1.63E+10	-20.345	1.81E+05
331.200	0.000472	612.173	319.912	-1.39E-05	8.713	1.63E+10	-18.090	1.84E+05
336.000	0.000406	1939.354	238.596	-1.35E-05	27.603	1.63E+10	-15.792	1.87E+05
340.800	0.000343	2902.697	168.236	-1.28E-05	41.314	1.63E+10	-13.525	1.89E+05
345.600	0.000284	3554.420	108.535	-1.18E-05	50.590	1.63E+10	-11.350	1.92E+05
350.400	0.000229	3944.635	58.949	-1.07E-05	56.143	1.63E+10	-9.311	1.95E+05
355.200	0.000181	4120.331	18.751	-9.53E-06	58.644	1.63E+10	-7.439	1.98E+05
360.000	0.000138	4124.642	-12.911	-8.32E-06	58.705	1.63E+10	-5.754	2.00E+05
364.800	0.000101	3996.390	-36.958	-7.12E-06	56.880	1.63E+10	-4.266	2.03E+05
369.600	6.94E-05	3769.849	-54.344	-5.98E-06	53.656	1.63E+10	-2.978	2.06E+05
374.400	4.34E-05	3474.690	-66.018	-4.91E-06	49.455	1.63E+10	-1.886	2.09E+05
379.200	2.22E-05	3136.073	-72.898	-3.94E-06	44.635	1.63E+10	-0.980421	2.12E+05
384.000	5.56E-06	2774.868	-75.847	-3.07E-06	39.494	1.63E+10	-0.248280	2.14E+05
388.800	-7.20E-06	2407.943	-75.661	-2.30E-06	34.272	1.63E+10	0.325728	2.17E+05
393.600	-1.66E-05	2048.522	-73.059	-1.65E-06	29.156	1.63E+10	0.758575	2.20E+05
398.400	-2.30E-05	1706.579	-68.675	-1.10E-06	24.289	1.63E+10	1.068	2.23E+05
403.200	-2.71E-05	1389.241	-63.060	-6.40E-07	19.773	1.63E+10	1.272	2.25E+05
408.000	-2.92E-05	1101.198	-56.681	-2.73E-07	15.673	1.63E+10	1.386	2.28E+05
412.800	-2.97E-05	845.099	-49.925	1.33E-08	12.028	1.63E+10	1.429	2.31E+05
417.600	-2.90E-05	621.921	-43.102	2.29E-07	8.852	1.63E+10	1.414	2.34E+05
422.400	-2.75E-05	431.317	-36.458	3.84E-07	6.139	1.63E+10	1.355	2.36E+05
427.200	-2.54E-05	271.924	-30.175	4.88E-07	3.870	1.63E+10	1.263	2.39E+05
432.000	-2.28E-05	141.640	-24.382	5.49E-07	2.016	1.63E+10	1.150	2.42E+05
436.800	-2.01E-05	37.858	-19.164	5.75E-07	0.538821	1.63E+10	1.024	2.45E+05
441.600	-1.73E-05	-42.332	-14.566	5.75E-07	0.602504	1.63E+10	0.891827	2.47E+05
446.400	-1.46E-05	-101.974	-10.602	5.53E-07	1.451	1.63E+10	0.759566	2.50E+05
451.200	-1.20E-05	-144.115	-7.263	5.17E-07	2.051	1.63E+10	0.631759	2.53E+05
456.000	-9.61E-06	-171.701	-4.519	4.71E-07	2.444	1.63E+10	0.511829	2.56E+05
460.800	-7.47E-06	-187.494	-2.325	4.18E-07	2.669	1.63E+10	0.402229	2.59E+05
465.600	-5.60E-06	-194.020	-0.628521	3.62E-07	2.761	1.63E+10	0.304592	2.61E+05
470.400	-4.00E-06	-193.528	0.630221	3.05E-07	2.754	1.63E+10	0.219884	2.64E+05
475.200	-2.67E-06	-187.970	1.514	2.48E-07	2.675	1.63E+10	0.148540	2.67E+05
480.000	-1.61E-06	-178.989	2.983	1.94E-07	2.548	1.63E+10	0.463431	1.38E+06
484.800	-8.07E-07	-159.331	4.652	1.45E-07	2.268	1.63E+10	0.231812	1.38E+06
489.600	-2.26E-07	-134.332	5.364	1.01E-07	1.912	1.63E+10	0.064897	1.38E+06
494.400	1.65E-07	-107.838	5.406	6.56E-08	1.535	1.63E+10	-0.047464	1.38E+06
499.200	4.04E-07	-82.438	5.013	3.76E-08	1.173	1.63E+10	-0.116032	1.38E+06
504.000	5.26E-07	-59.711	4.372	1.67E-08	0.849851	1.63E+10	-0.151122	1.38E+06
508.800	5.64E-07	-40.465	3.621	1.90E-09	0.575936	1.63E+10	-0.161964	1.38E+06
513.600	5.44E-07	-24.952	2.857	-7.73E-09	0.355133	1.63E+10	-0.156372	1.38E+06
518.400	4.90E-07	-13.041	2.144	-1.33E-08	0.185607	1.63E+10	-0.140648	1.38E+06
523.200	4.16E-07	-4.370	1.519	-1.59E-08	0.062204	1.63E+10	-0.119627	1.38E+06

528.000	3.37E-07	1.544	0.999710	-1.63E-08	0.021970	1.63E+10	-0.096832	1.38E+06
532.800	2.60E-07	5.227	0.588122	-1.53E-08	0.074392	1.63E+10	-0.074663	1.38E+06
537.600	1.90E-07	7.190	0.277848	-1.35E-08	0.102329	1.63E+10	-0.054617	1.38E+06
542.400	1.31E-07	7.894	0.056787	-1.13E-08	0.112355	1.63E+10	-0.037491	1.38E+06
547.200	8.20E-08	7.735	-0.089762	-8.96E-09	0.110088	1.63E+10	-0.023571	1.38E+06
552.000	4.45E-08	7.032	-0.177033	-6.78E-09	0.100091	1.63E+10	-0.012792	1.38E+06
556.800	1.69E-08	6.035	-0.219417	-4.86E-09	0.085899	1.63E+10	-0.004868	1.38E+06
561.600	-2.10E-09	4.926	-0.229651	-3.24E-09	0.070111	1.63E+10	0.000604	1.38E+06
566.400	-1.42E-08	3.831	-0.218419	-1.95E-09	0.054520	1.63E+10	0.004076	1.38E+06
571.200	-2.09E-08	2.829	-0.194255	-9.73E-10	0.040267	1.63E+10	0.005992	1.38E+06
576.000	-2.35E-08	1.966	-0.163650	-2.67E-10	0.027978	1.63E+10	0.006760	1.38E+06
580.800	-2.34E-08	1.258	-0.131276	2.08E-10	0.017906	1.63E+10	0.006729	1.38E+06
585.600	-2.15E-08	0.705497	-0.100278	4.97E-10	0.010041	1.63E+10	0.006187	1.38E+06
590.400	-1.87E-08	0.295441	-0.072567	6.44E-10	0.004205	1.63E+10	0.005359	1.38E+06
595.200	-1.54E-08	0.008854	-0.049120	6.89E-10	0.000126	1.63E+10	0.004411	1.38E+06
600.000	-1.20E-08	-0.176111	-0.030233	6.64E-10	0.002507	1.63E+10	0.003459	1.38E+06
604.800	-8.98E-09	-0.281386	-0.015744	5.97E-10	0.004005	1.63E+10	0.002578	1.38E+06
609.600	-6.31E-09	-0.327253	-0.005206	5.07E-10	0.004658	1.63E+10	0.001812	1.38E+06
614.400	-4.10E-09	-0.331362	0.001974	4.10E-10	0.004716	1.63E+10	0.001179	1.38E+06
619.200	-2.37E-09	-0.308302	0.006438	3.16E-10	0.004388	1.63E+10	0.000681	1.38E+06
624.000	-1.07E-09	-0.269561	0.008808	2.31E-10	0.003837	1.63E+10	0.000307	1.38E+06
628.800	-1.51E-10	-0.223741	0.009650	1.58E-10	0.003184	1.63E+10	4.33E-05	1.38E+06
633.600	4.52E-10	-0.176924	0.009442	9.95E-11	0.002518	1.63E+10	-0.000130	1.38E+06
638.400	8.04E-10	-0.133097	0.008576	5.38E-11	0.001894	1.63E+10	-0.000231	1.38E+06
643.200	9.68E-10	-0.094592	0.007354	2.03E-11	0.001346	1.63E+10	-0.000278	1.38E+06
648.000	9.99E-10	-0.062495	0.005998	-2.85E-12	0.000889	1.63E+10	-0.000287	1.38E+06
652.800	9.41E-10	-0.037010	0.004661	-1.75E-11	0.000527	1.63E+10	-0.000270	1.38E+06
657.600	8.31E-10	-0.017751	0.003439	-2.56E-11	0.000253	1.63E+10	-0.000239	1.38E+06
662.400	6.95E-10	-0.003991	0.002387	-2.88E-11	5.68E-05	1.63E+10	-0.000200	1.38E+06
667.200	5.54E-10	0.005166	0.001526	-2.86E-11	7.35E-05	1.63E+10	-0.000159	1.38E+06
672.000	4.21E-10	0.010654	0.000853	-2.63E-11	0.000152	1.63E+10	-0.000121	1.38E+06
676.800	3.02E-10	0.013356	0.000355	-2.27E-11	0.000190	1.63E+10	-8.68E-05	1.38E+06
681.600	2.03E-10	0.014058	6.49E-06	-1.87E-11	0.000200	1.63E+10	-5.82E-05	1.38E+06
686.400	1.23E-10	0.013419	-0.000218	-1.47E-11	0.000191	1.63E+10	-3.53E-05	1.38E+06
691.200	6.19E-11	0.011967	-0.000345	-1.09E-11	0.000170	1.63E+10	-1.78E-05	1.38E+06
696.000	1.80E-11	0.010105	-0.000400	-7.66E-12	0.000144	1.63E+10	-5.17E-06	1.38E+06
700.800	-1.16E-11	0.008124	-0.000405	-4.98E-12	0.000116	1.63E+10	3.34E-06	1.38E+06
705.600	-2.98E-11	0.006220	-0.000376	-2.87E-12	8.85E-05	1.63E+10	8.56E-06	1.38E+06
710.400	-3.92E-11	0.004513	-0.000329	-1.29E-12	6.42E-05	1.63E+10	1.12E-05	1.38E+06
715.200	-4.21E-11	0.003066	-0.000273	-1.70E-13	4.36E-05	1.63E+10	1.21E-05	1.38E+06
720.000	-4.08E-11	0.001897	-0.000215	5.61E-13	2.70E-05	1.63E+10	1.17E-05	1.38E+06
724.800	-3.68E-11	0.000999	-0.000162	9.87E-13	1.42E-05	1.63E+10	1.06E-05	1.38E+06
729.600	-3.13E-11	0.000343	-0.000115	1.18E-12	4.89E-06	1.63E+10	9.00E-06	1.38E+06
734.400	-2.54E-11	-0.000104	-7.58E-05	1.22E-12	1.49E-06	1.63E+10	7.29E-06	1.38E+06
739.200	-1.96E-11	-0.000384	-4.48E-05	1.15E-12	5.47E-06	1.63E+10	5.63E-06	1.38E+06
744.000	-1.44E-11	-0.000535	-2.14E-05	1.01E-12	7.61E-06	1.63E+10	4.13E-06	1.38E+06
748.800	-9.88E-12	-0.000590	-4.67E-06	8.47E-13	8.39E-06	1.63E+10	2.84E-06	1.38E+06
753.600	-6.23E-12	-0.000579	6.45E-06	6.75E-13	8.25E-06	1.63E+10	1.79E-06	1.38E+06
758.400	-3.40E-12	-0.000528	1.31E-05	5.12E-13	7.51E-06	1.63E+10	9.78E-07	1.38E+06
763.200	-1.32E-12	-0.000454	1.63E-05	3.67E-13	6.46E-06	1.63E+10	3.79E-07	1.38E+06
768.000	1.22E-13	-0.000371	1.72E-05	2.46E-13	5.28E-06	1.63E+10	-3.50E-08	1.38E+06
772.800	1.04E-12	-0.000289	1.64E-05	1.49E-13	4.11E-06	1.63E+10	-2.99E-07	1.38E+06
777.600	1.55E-12	-0.000214	1.46E-05	7.47E-14	3.04E-06	1.63E+10	-4.45E-07	1.38E+06
782.400	1.76E-12	-0.000149	1.23E-05	2.13E-14	2.12E-06	1.63E+10	-5.05E-07	1.38E+06
787.200	1.75E-12	-9.55E-05	9.89E-06	-1.47E-14	1.36E-06	1.63E+10	-5.04E-07	1.38E+06
792.000	1.62E-12	-5.39E-05	7.57E-06	-3.67E-14	7.67E-07	1.63E+10	-4.64E-07	1.38E+06
796.800	1.40E-12	-2.29E-05	5.49E-06	-4.80E-14	3.26E-07	1.63E+10	-4.03E-07	1.38E+06
801.600	1.16E-12	-1.20E-06	3.72E-06	-5.15E-14	1.71E-08	1.63E+10	-3.32E-07	1.38E+06
806.400	9.08E-13	1.28E-05	2.30E-06	-4.98E-14	1.83E-07	1.63E+10	-2.61E-07	1.38E+06
811.200	6.78E-13	2.09E-05	1.21E-06	-4.48E-14	2.97E-07	1.63E+10	-1.95E-07	1.38E+06
816.000	4.77E-13	2.44E-05	4.10E-07	-3.82E-14	3.48E-07	1.63E+10	-1.37E-07	1.38E+06
820.800	3.11E-13	2.48E-05	-1.34E-07	-3.09E-14	3.53E-07	1.63E+10	-8.95E-08	1.38E+06
825.600	1.81E-13	2.31E-05	-4.74E-07	-2.39E-14	3.29E-07	1.63E+10	-5.19E-08	1.38E+06
830.400	8.25E-14	2.03E-05	-6.55E-07	-1.75E-14	2.88E-07	1.63E+10	-2.37E-08	1.38E+06
835.200	1.30E-14	1.68E-05	-7.21E-07	-1.20E-14	2.40E-07	1.63E+10	-3.74E-09	1.38E+06
840.000	-3.27E-14	1.33E-05	-7.07E-07	-7.56E-15	1.90E-07	1.63E+10	9.39E-09	1.38E+06
844.800	-5.95E-14	1.00E-05	-6.44E-07	-4.11E-15	1.43E-07	1.63E+10	1.71E-08	1.38E+06
849.600	-7.22E-14	7.15E-06	-5.53E-07	-1.58E-15	1.02E-07	1.63E+10	2.07E-08	1.38E+06
854.400	-7.47E-14	4.74E-06	-4.52E-07	1.70E-16	6.75E-08	1.63E+10	2.15E-08	1.38E+06
859.200	-7.06E-14	2.82E-06	-3.51E-07	1.28E-15	4.01E-08	1.63E+10	2.03E-08	1.38E+06
864.000	-6.24E-14	1.37E-06	-2.60E-07	1.90E-15	1.94E-08	1.63E+10	1.79E-08	1.38E+06
868.800	-5.23E-14	3.26E-07	-1.81E-07	2.15E-15	4.63E-09	1.63E+10	1.50E-08	1.38E+06
873.600	-4.18E-14	-3.68E-07	-1.16E-07	2.14E-15	5.24E-09	1.63E+10	1.20E-08	1.38E+06
878.400	-3.18E-14	-7.86E-07	-6.51E-08	1.97E-15	1.12E-08	1.63E+10	9.12E-09	1.38E+06
883.200	-2.28E-14	-9.93E-07	-2.74E-08	1.71E-15	1.41E-08	1.63E+10	6.56E-09	1.38E+06
888.000	-1.53E-14	-1.05E-06	-1.13E-09	1.41E-15	1.49E-08	1.63E+10	4.40E-09	1.38E+06
892.800	-9.30E-15	-1.00E-06	1.59E-08	1.11E-15	1.43E-08	1.63E+10	2.67E-09	1.38E+06
897.600	-4.70E-15	-8.97E-07	2.55E-08	8.27E-16	1.28E-08	1.63E+10	1.35E-09	1.38E+06
902.400	-1.36E-15	-7.59E-07	2.97E-08	5.84E-16	1.08E-08	1.63E+10	3.91E-10	1.38E+06
907.200	9.03E-16	-6.12E-07	3.00E-08	3.82E-16	8.71E-09	1.63E+10	-2.60E-10	1.38E+06
912.000	2.30E-15	-4.71E-07	2.78E-08	2.22E-16	6.71E-09	1.63E+10	-6.61E-10	1.38E+06

916.800	3.04E-15	-3.45E-07	2.41E-08	1.02E-16	4.92E-09	1.63E+10	-8.72E-10	1.38E+06
921.600	3.28E-15	-2.40E-07	1.98E-08	1.57E-17	3.41E-09	1.63E+10	-9.42E-10	1.38E+06
926.400	3.19E-15	-1.56E-07	1.53E-08	-4.26E-17	2.22E-09	1.63E+10	-9.15E-10	1.38E+06
931.200	2.87E-15	-9.28E-08	1.11E-08	-7.92E-17	1.32E-09	1.63E+10	-8.25E-10	1.38E+06
936.000	2.43E-15	-4.90E-08	7.47E-09	-1.00E-16	6.97E-10	1.63E+10	-6.97E-10	1.38E+06
940.800	1.91E-15	-2.11E-08	4.48E-09	-1.10E-16	3.01E-10	1.63E+10	-5.49E-10	1.38E+06
945.600	1.37E-15	-5.94E-09	2.22E-09	-1.14E-16	8.45E-11	1.63E+10	-3.93E-10	1.38E+06
950.400	8.13E-16	2.03E-10	7.19E-10	-1.15E-16	2.89E-12	1.63E+10	-2.34E-10	1.38E+06
955.200	2.60E-16	9.63E-10	-2.12E-11	-1.15E-16	1.37E-11	1.63E+10	-7.48E-11	1.38E+06
960.000	-2.91E-16	0.000	0.000	-1.15E-16	0.000	1.63E+10	8.36E-11	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	1.32886633 in
Computed slope at pile head	=	-0.01443772
Maximum bending moment	=	2105499. lbs-in
Maximum shear force	=	30000.00000 lbs
Depth of maximum bending moment	=	96.00000000 in
Depth of maximum shear force	=	4.80000000 in
Number of iterations	=	24
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 40000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	2.286	1.57E-06	40000.	-0.022917	2.24E-08	1.63E+10	0.000	0.000
4.800	2.176	1.92E+05	40000.	-0.022888	2732.707	1.63E+10	0.000	0.000
9.600	2.066	3.84E+05	40000.	-0.022804	5465.414	1.63E+10	0.000	0.000
14.400	1.957	5.76E+05	39955.	-0.022662	8198.121	1.63E+10	-18.747	45.989
19.200	1.848	7.68E+05	39764.	-0.022464	10925.	1.63E+10	-60.895	158.140
24.000	1.741	9.58E+05	39362.	-0.022210	13631.	1.63E+10	-106.416	293.385
28.800	1.635	1.15E+06	38742.	-0.021901	16303.	1.63E+10	-151.915	445.957
33.600	1.531	1.33E+06	37912.	-0.021536	18925.	1.63E+10	-193.995	608.292
38.400	1.428	1.51E+06	36896.	-0.021118	21483.	1.63E+10	-229.259	770.421
43.200	1.328	1.68E+06	35736.	-0.020648	23966.	1.63E+10	-254.312	919.154
48.000	1.230	1.85E+06	34488.	-0.020127	26366.	1.63E+10	-265.758	1036.979
52.800	1.135	2.01E+06	33225.	-0.019558	28678.	1.63E+10	-260.199	1100.551
57.600	1.042	2.17E+06	31898.	-0.018941	30906.	1.63E+10	-292.801	1348.285
62.400	0.953010	2.32E+06	30365.	-0.018280	33037.	1.63E+10	-345.910	1742.236
67.200	0.866907	2.46E+06	28567.	-0.017575	35055.	1.63E+10	-403.264	2232.845
72.000	0.784286	2.60E+06	26484.	-0.016831	36940.	1.63E+10	-464.864	2845.070
76.800	0.705334	2.72E+06	24094.	-0.016048	38673.	1.63E+10	-530.710	3611.631
81.600	0.630223	2.83E+06	21379.	-0.015232	40232.	1.63E+10	-600.800	4575.908
86.400	0.559107	2.92E+06	18316.	-0.014385	41594.	1.63E+10	-675.136	5796.119
91.200	0.492123	3.00E+06	14887.	-0.013513	42735.	1.63E+10	-753.712	7351.449
96.000	0.429383	3.07E+06	11071.	-0.012619	43628.	1.63E+10	-836.491	9350.998
100.800	0.370976	3.11E+06	6847.280	-0.011710	44248.	1.63E+10	-923.263	11946.
105.600	0.316963	3.13E+06	2199.974	-0.010792	44564.	1.63E+10	-1013.114	15342.
110.400	0.267377	3.13E+06	-2878.672	-0.009870	44548.	1.63E+10	-1102.988	19801.
115.200	0.222215	3.10E+06	-8369.682	-0.008952	44171.	1.63E+10	-1184.932	25595.
120.000	0.181440	3.05E+06	-14197.	-0.008046	43405.	1.63E+10	-1242.940	32882.
124.800	0.144975	2.97E+06	-20187.	-0.007160	42231.	1.63E+10	-1253.097	41489.
129.600	0.112705	2.86E+06	-26055.	-0.006302	40646.	1.63E+10	-1191.796	50757.
134.400	0.084472	2.72E+06	-31436.	-0.005482	38671.	1.63E+10	-1050.295	59681.
139.200	0.060080	2.55E+06	-35980.	-0.004706	36351.	1.63E+10	-843.175	67365.
144.000	0.039297	2.37E+06	-39446.	-0.003980	33755.	1.63E+10	-601.081	73419.

148.800	0.021868	2.18E+06	-41742.	-0.003311	30961.	1.63E+10	-355.277	77984.
153.600	0.007513	1.97E+06	-42900.	-0.002700	28051.	1.63E+10	-127.512	81467.
158.400	-0.004056	1.76E+06	-43035.	-0.002150	25100.	1.63E+10	71.230	84299.
163.200	-0.013132	1.56E+06	-42294.	-0.001661	22171.	1.63E+10	237.509	86816.
168.000	-0.020006	1.36E+06	-40832.	-0.001232	19321.	1.63E+10	371.914	89234.
172.800	-0.024961	1.17E+06	-38795.	-0.000861	16592.	1.63E+10	476.739	91678.
177.600	-0.028268	9.85E+05	-36319.	-0.000544	14020.	1.63E+10	554.790	94206.
182.400	-0.030183	8.17E+05	-33527.	-0.000279	11630.	1.63E+10	608.905	96835.
187.200	-0.030942	6.63E+05	-30525.	-6.06E-05	9438.975	1.63E+10	641.808	99562.
192.000	-0.030765	5.24E+05	-27410.	0.000114	7458.825	1.63E+10	656.108	1.02E+05
196.800	-0.029846	4.00E+05	-24265.	0.000250	5693.828	1.63E+10	654.332	1.05E+05
201.600	-0.028362	2.91E+05	-21161.	0.000352	4143.403	1.63E+10	638.943	1.08E+05
206.400	-0.026467	1.97E+05	-18158.	0.000424	2802.504	1.63E+10	612.341	1.11E+05
211.200	-0.024293	1.17E+05	-15304.	0.000470	1662.406	1.63E+10	576.838	1.14E+05
216.000	-0.021954	49988.	-12636.	0.000495	711.467	1.63E+10	534.561	1.17E+05
220.800	-0.019544	-4508.948	-10183.	0.000501	64.175	1.63E+10	487.625	1.20E+05
225.600	-0.017141	-47771.	-7961.856	0.000494	679.914	1.63E+10	437.923	1.23E+05
230.400	-0.014805	-80943.	-5981.876	0.000475	1152.046	1.63E+10	387.069	1.25E+05
235.200	-0.012584	-1.05E+05	-4245.425	0.000447	1497.249	1.63E+10	336.452	1.28E+05
240.000	-0.010511	-1.22E+05	-2748.578	0.000414	1732.121	1.63E+10	287.234	1.31E+05
244.800	-0.008611	-1.32E+05	-1482.378	0.000377	1872.802	1.63E+10	240.349	1.34E+05
249.600	-0.006896	-1.36E+05	-433.899	0.000337	1934.667	1.63E+10	196.517	1.37E+05
254.400	-0.005374	-1.36E+05	412.763	0.000297	1932.088	1.63E+10	156.259	1.40E+05
259.200	-0.004043	-1.32E+05	1075.575	0.000258	1878.269	1.63E+10	119.913	1.42E+05
264.000	-0.002899	-1.25E+05	1573.754	0.000220	1785.127	1.63E+10	87.661	1.45E+05
268.800	-0.001932	-1.17E+05	1927.055	0.000184	1663.238	1.63E+10	59.547	1.48E+05
273.600	-0.001131	-1.07E+05	2155.171	0.000151	1521.823	1.63E+10	35.501	1.51E+05
278.400	-0.000481	-96169.	2277.242	0.000121	1368.766	1.63E+10	15.362	1.53E+05
283.200	3.39E-05	-85062.	2311.465	9.46E-05	1210.671	1.63E+10	-1.103	1.56E+05
288.000	0.000428	-73979.	2274.793	7.12E-05	1052.938	1.63E+10	-14.177	1.59E+05
292.800	0.000718	-63224.	2182.728	5.10E-05	899.854	1.63E+10	-24.183	1.62E+05
297.600	0.000918	-53025.	2049.190	3.39E-05	754.700	1.63E+10	-31.458	1.65E+05
302.400	0.001043	-43552.	1886.443	1.97E-05	619.862	1.63E+10	-36.353	1.67E+05
307.200	0.001107	-34915.	1705.090	8.13E-06	496.945	1.63E+10	-39.211	1.70E+05
312.000	0.001121	-27183.	1514.107	-1.01E-06	386.886	1.63E+10	-40.365	1.73E+05
316.800	0.001097	-20380.	1320.915	-8.01E-06	290.065	1.63E+10	-40.131	1.76E+05
321.600	0.001044	-14502.	1131.481	-1.31E-05	206.403	1.63E+10	-38.799	1.78E+05
326.400	0.000971	-9517.713	950.444	-1.67E-05	135.464	1.63E+10	-36.633	1.81E+05
331.200	0.000884	-5377.591	781.245	-1.89E-05	76.538	1.63E+10	-33.867	1.84E+05
336.000	0.000790	-2017.756	626.274	-2.00E-05	28.718	1.63E+10	-30.705	1.87E+05
340.800	0.000692	634.640	487.011	-2.02E-05	9.033	1.63E+10	-27.322	1.89E+05
345.600	0.000596	2657.547	364.169	-1.97E-05	37.824	1.63E+10	-23.862	1.92E+05
350.400	0.000503	4130.665	257.833	-1.87E-05	58.791	1.63E+10	-20.444	1.95E+05
355.200	0.000417	5132.742	167.581	-1.73E-05	73.054	1.63E+10	-17.160	1.98E+05
360.000	0.000337	5739.443	92.605	-1.57E-05	81.689	1.63E+10	-14.079	2.00E+05
364.800	0.000266	6021.754	31.814	-1.40E-05	85.707	1.63E+10	-11.250	2.03E+05
369.600	0.000203	6044.860	-16.076	-1.22E-05	86.036	1.63E+10	-8.704	2.06E+05
374.400	0.000148	5867.426	-52.462	-1.05E-05	83.510	1.63E+10	-6.457	2.09E+05
379.200	0.000102	5541.224	-78.789	-8.78E-06	78.867	1.63E+10	-4.513	2.12E+05
384.000	6.42E-05	5111.047	-96.496	-7.21E-06	72.745	1.63E+10	-2.865	2.14E+05
388.800	3.32E-05	4614.859	-106.973	-5.78E-06	65.683	1.63E+10	-1.500	2.17E+05
393.600	8.70E-06	4084.107	-111.529	-4.50E-06	58.128	1.63E+10	-0.398172	2.20E+05
398.400	-1.00E-05	3544.181	-111.370	-3.38E-06	50.444	1.63E+10	0.464319	2.23E+05
403.200	-2.37E-05	3014.953	-107.584	-2.41E-06	42.911	1.63E+10	1.113	2.25E+05
408.000	-3.32E-05	2511.372	-101.132	-1.60E-06	35.744	1.63E+10	1.575	2.28E+05
412.800	-3.90E-05	2044.086	-92.845	-9.26E-07	29.093	1.63E+10	1.878	2.31E+05
417.600	-4.20E-05	1620.059	-83.429	-3.86E-07	23.058	1.63E+10	2.046	2.34E+05
422.400	-4.27E-05	1243.169	-73.467	3.56E-08	17.694	1.63E+10	2.105	2.36E+05
427.200	-4.17E-05	914.779	-63.429	3.53E-07	13.020	1.63E+10	2.077	2.39E+05
432.000	-3.94E-05	634.249	-53.684	5.81E-07	9.027	1.63E+10	1.983	2.42E+05
436.800	-3.61E-05	399.414	-44.506	7.34E-07	5.685	1.63E+10	1.841	2.45E+05
441.600	-3.23E-05	206.990	-36.091	8.23E-07	2.946	1.63E+10	1.665	2.47E+05
446.400	-2.82E-05	52.940	-28.565	8.61E-07	0.753482	1.63E+10	1.471	2.50E+05
451.200	-2.40E-05	-67.229	-21.995	8.59E-07	0.956867	1.63E+10	1.267	2.53E+05
456.000	-2.00E-05	-158.208	-16.401	8.26E-07	2.252	1.63E+10	1.064	2.56E+05
460.800	-1.61E-05	-224.681	-11.766	7.70E-07	3.198	1.63E+10	0.867627	2.59E+05
465.600	-1.26E-05	-271.163	-8.041	6.97E-07	3.859	1.63E+10	0.684486	2.61E+05
470.400	-9.42E-06	-301.875	-5.154	6.12E-07	4.297	1.63E+10	0.518357	2.64E+05
475.200	-6.70E-06	-320.644	-3.017	5.21E-07	4.564	1.63E+10	0.372316	2.67E+05
480.000	-4.43E-06	-330.835	0.928919	4.25E-07	4.709	1.63E+10	1.272	1.38E+06
484.800	-2.62E-06	-311.727	5.789	3.30E-07	4.437	1.63E+10	0.753372	1.38E+06
489.600	-1.26E-06	-275.260	8.465	2.44E-07	3.918	1.63E+10	0.361661	1.38E+06
494.400	-2.85E-07	-230.462	9.529	1.69E-07	3.280	1.63E+10	0.081734	1.38E+06
499.200	3.64E-07	-183.779	9.474	1.08E-07	2.616	1.63E+10	-0.104602	1.38E+06
504.000	7.53E-07	-139.507	8.704	6.05E-08	1.986	1.63E+10	-0.216304	1.38E+06
508.800	9.45E-07	-100.219	7.534	2.52E-08	1.426	1.63E+10	-0.271353	1.38E+06
513.600	9.94E-07	-67.183	6.197	5.13E-10	0.956201	1.63E+10	-0.285702	1.38E+06
518.400	9.49E-07	-40.729	4.857	-1.54E-08	0.579687	1.63E+10	-0.272768	1.38E+06
523.200	8.47E-07	-20.560	3.618	-2.44E-08	0.292621	1.63E+10	-0.243294	1.38E+06
528.000	7.15E-07	-5.996	2.541	-2.83E-08	0.085337	1.63E+10	-0.205470	1.38E+06
532.800	5.75E-07	3.834	1.651	-2.86E-08	0.054568	1.63E+10	-0.165212	1.38E+06

537.600	4.40E-07	9.857	0.951218	-2.66E-08	0.140296	1.63E+10	-0.126511	1.38E+06
542.400	3.20E-07	12.966	0.427241	-2.33E-08	0.184538	1.63E+10	-0.091813	1.38E+06
547.200	2.17E-07	13.959	0.057179	-1.93E-08	0.198672	1.63E+10	-0.062380	1.38E+06
552.000	1.34E-07	13.515	-0.185210	-1.52E-08	0.192351	1.63E+10	-0.038616	1.38E+06
556.800	7.08E-08	12.181	-0.326703	-1.15E-08	0.173366	1.63E+10	-0.020340	1.38E+06
561.600	2.44E-08	10.378	-0.392344	-8.14E-09	0.147712	1.63E+10	-0.007011	1.38E+06
566.400	-7.32E-09	8.414	-0.404119	-5.37E-09	0.119758	1.63E+10	0.002104	1.38E+06
571.200	-2.72E-08	6.499	-0.380345	-3.17E-09	0.092495	1.63E+10	0.007802	1.38E+06
576.000	-3.78E-08	4.763	-0.335557	-1.52E-09	0.067789	1.63E+10	0.010860	1.38E+06
580.800	-4.17E-08	3.277	-0.280730	-3.33E-10	0.046646	1.63E+10	0.011984	1.38E+06
585.600	-4.10E-08	2.068	-0.223700	4.54E-10	0.029432	1.63E+10	0.011778	1.38E+06
590.400	-3.74E-08	1.130	-0.169678	9.25E-10	0.016080	1.63E+10	0.010731	1.38E+06
595.200	-3.21E-08	0.438972	-0.121780	1.16E-09	0.006248	1.63E+10	0.009226	1.38E+06
600.000	-2.63E-08	-0.039288	-0.081535	1.22E-09	0.000559	1.63E+10	0.007543	1.38E+06
604.800	-2.04E-08	-0.343768	-0.049333	1.16E-09	0.004893	1.63E+10	0.005875	1.38E+06
609.600	-1.51E-08	-0.512887	-0.024800	1.03E-09	0.007300	1.63E+10	0.004347	1.38E+06
614.400	-1.05E-08	-0.581850	-0.007102	8.71E-10	0.008281	1.63E+10	0.003027	1.38E+06
619.200	-6.77E-09	-0.581063	0.004830	7.00E-10	0.008270	1.63E+10	0.001944	1.38E+06
624.000	-3.82E-09	-0.535486	0.012127	5.36E-10	0.007621	1.63E+10	0.001097	1.38E+06
628.800	-1.62E-09	-0.464645	0.015879	3.88E-10	0.006613	1.63E+10	0.000467	1.38E+06
633.600	-8.82E-11	-0.383052	0.017059	2.64E-10	0.005452	1.63E+10	2.54E-05	1.38E+06
638.400	9.06E-10	-0.300876	0.016495	1.63E-10	0.004282	1.63E+10	-0.000260	1.38E+06
643.200	1.48E-09	-0.224698	0.014853	8.55E-11	0.003198	1.63E+10	-0.000424	1.38E+06
648.000	1.73E-09	-0.158286	0.012645	2.91E-11	0.002253	1.63E+10	-0.000496	1.38E+06
652.800	1.75E-09	-0.103305	0.010245	-9.42E-12	0.001470	1.63E+10	-0.000504	1.38E+06
657.600	1.64E-09	-0.059938	0.007906	-3.35E-11	0.000853	1.63E+10	-0.000470	1.38E+06
662.400	1.43E-09	-0.027404	0.005790	-4.63E-11	0.000390	1.63E+10	-0.000412	1.38E+06
667.200	1.19E-09	-0.004359	0.003979	-5.10E-11	6.20E-05	1.63E+10	-0.000342	1.38E+06
672.000	9.44E-10	0.010798	0.002507	-5.00E-11	0.000154	1.63E+10	-0.000271	1.38E+06
676.800	7.11E-10	0.019706	0.001365	-4.56E-11	0.000280	1.63E+10	-0.000204	1.38E+06
681.600	5.07E-10	0.023906	0.000526	-3.91E-11	0.000340	1.63E+10	-0.000146	1.38E+06
686.400	3.36E-10	0.024752	-5.52E-05	-3.20E-11	0.000352	1.63E+10	-9.64E-05	1.38E+06
691.200	2.00E-10	0.023376	-0.000424	-2.49E-11	0.000333	1.63E+10	-5.74E-05	1.38E+06
696.000	9.68E-11	0.020678	-0.000629	-1.84E-11	0.000294	1.63E+10	-2.78E-05	1.38E+06
700.800	2.31E-11	0.017340	-0.000712	-1.28E-11	0.000247	1.63E+10	-6.64E-06	1.38E+06
705.600	-2.60E-11	0.013848	-0.000709	-8.21E-12	0.000197	1.63E+10	7.48E-06	1.38E+06
710.400	-5.56E-11	0.010529	-0.000653	-4.62E-12	0.000150	1.63E+10	1.60E-05	1.38E+06
715.200	-7.04E-11	0.007577	-0.000566	-1.95E-12	0.000108	1.63E+10	2.02E-05	1.38E+06
720.000	-7.44E-11	0.005092	-0.000466	-8.46E-14	7.25E-05	1.63E+10	2.14E-05	1.38E+06
724.800	-7.12E-11	0.003099	-0.000366	1.12E-12	4.41E-05	1.63E+10	2.04E-05	1.38E+06
729.600	-6.36E-11	0.001577	-0.000273	1.81E-12	2.24E-05	1.63E+10	1.83E-05	1.38E+06
734.400	-5.38E-11	0.000476	-0.000192	2.11E-12	6.78E-06	1.63E+10	1.55E-05	1.38E+06
739.200	-4.33E-11	-0.000269	-0.000125	2.14E-12	3.82E-06	1.63E+10	1.24E-05	1.38E+06
744.000	-3.32E-11	-0.000727	-7.25E-05	2.00E-12	1.03E-05	1.63E+10	9.54E-06	1.38E+06
748.800	-2.42E-11	-0.000965	-3.30E-05	1.75E-12	1.37E-05	1.63E+10	6.94E-06	1.38E+06
753.600	-1.64E-11	-0.001043	-4.97E-06	1.45E-12	1.48E-05	1.63E+10	4.73E-06	1.38E+06
758.400	-1.02E-11	-0.001013	1.34E-05	1.15E-12	1.44E-05	1.63E+10	2.94E-06	1.38E+06
763.200	-5.42E-12	-0.000915	2.42E-05	8.65E-13	1.30E-05	1.63E+10	1.56E-06	1.38E+06
768.000	-1.91E-12	-0.000780	2.93E-05	6.16E-13	1.11E-05	1.63E+10	5.50E-07	1.38E+06
772.800	4.89E-13	-0.000634	3.02E-05	4.07E-13	9.02E-06	1.63E+10	-1.40E-07	1.38E+06
777.600	2.00E-12	-0.000490	2.85E-05	2.42E-13	6.98E-06	1.63E+10	-5.73E-07	1.38E+06
782.400	2.81E-12	-0.000360	2.52E-05	1.17E-13	5.12E-06	1.63E+10	-8.07E-07	1.38E+06
787.200	3.12E-12	-0.000248	2.11E-05	2.71E-14	3.53E-06	1.63E+10	-8.95E-07	1.38E+06
792.000	3.07E-12	-0.000157	1.69E-05	-3.25E-14	2.24E-06	1.63E+10	-8.82E-07	1.38E+06
796.800	2.80E-12	-8.64E-05	1.28E-05	-6.84E-14	1.23E-06	1.63E+10	-8.05E-07	1.38E+06
801.600	2.41E-12	-3.42E-05	9.21E-06	-8.61E-14	4.86E-07	1.63E+10	-6.94E-07	1.38E+06
806.400	1.98E-12	2.05E-06	6.18E-06	-9.09E-14	2.91E-08	1.63E+10	-5.68E-07	1.38E+06
811.200	1.54E-12	2.52E-05	3.75E-06	-8.69E-14	3.58E-07	1.63E+10	-4.43E-07	1.38E+06
816.000	1.14E-12	3.81E-05	1.90E-06	-7.75E-14	5.42E-07	1.63E+10	-3.28E-07	1.38E+06
820.800	7.98E-13	4.34E-05	5.65E-07	-6.55E-14	6.18E-07	1.63E+10	-2.29E-07	1.38E+06
825.600	5.14E-13	4.35E-05	-3.39E-07	-5.27E-14	6.19E-07	1.63E+10	-1.48E-07	1.38E+06
830.400	2.91E-13	4.02E-05	-8.94E-07	-4.04E-14	5.72E-07	1.63E+10	-8.37E-08	1.38E+06
835.200	1.26E-13	3.49E-05	-1.18E-06	-2.94E-14	4.97E-07	1.63E+10	-3.61E-08	1.38E+06
840.000	9.48E-15	2.88E-05	-1.28E-06	-2.00E-14	4.10E-07	1.63E+10	-2.72E-09	1.38E+06
844.800	-6.60E-14	2.27E-05	-1.24E-06	-1.24E-14	3.23E-07	1.63E+10	1.90E-08	1.38E+06
849.600	-1.09E-13	1.70E-05	-1.12E-06	-6.55E-15	2.41E-07	1.63E+10	3.14E-08	1.38E+06
854.400	-1.29E-13	1.20E-05	-9.51E-07	-2.28E-15	1.70E-07	1.63E+10	3.70E-08	1.38E+06
859.200	-1.31E-13	7.84E-06	-7.71E-07	6.33E-16	1.12E-07	1.63E+10	3.77E-08	1.38E+06
864.000	-1.23E-13	4.57E-06	-5.96E-07	2.46E-15	6.50E-08	1.63E+10	3.53E-08	1.38E+06
868.800	-1.08E-13	2.11E-06	-4.37E-07	3.44E-15	3.01E-08	1.63E+10	3.09E-08	1.38E+06
873.600	-8.97E-14	3.71E-07	-3.01E-07	3.81E-15	5.29E-09	1.63E+10	2.58E-08	1.38E+06
878.400	-7.11E-14	-7.78E-07	-1.90E-07	3.75E-15	1.11E-08	1.63E+10	2.04E-08	1.38E+06
883.200	-5.37E-14	-1.46E-06	-1.04E-07	3.42E-15	2.07E-08	1.63E+10	1.54E-08	1.38E+06
888.000	-3.83E-14	-1.78E-06	-4.09E-08	2.95E-15	2.53E-08	1.63E+10	1.10E-08	1.38E+06
892.800	-2.54E-14	-1.85E-06	3.04E-09	2.41E-15	2.63E-08	1.63E+10	7.30E-09	1.38E+06
897.600	-1.51E-14	-1.75E-06	3.10E-08	1.88E-15	2.49E-08	1.63E+10	4.35E-09	1.38E+06
902.400	-7.34E-15	-1.55E-06	4.65E-08	1.40E-15	2.21E-08	1.63E+10	2.11E-09	1.38E+06
907.200	-1.74E-15	-1.30E-06	5.28E-08	9.75E-16	1.86E-08	1.63E+10	4.99E-10	1.38E+06
912.000	2.02E-15	-1.04E-06	5.26E-08	6.30E-16	1.49E-08	1.63E+10	-5.81E-10	1.38E+06
916.800	4.31E-15	-7.99E-07	4.82E-08	3.58E-16	1.14E-08	1.63E+10	-1.24E-09	1.38E+06
921.600	5.46E-15	-5.82E-07	4.15E-08	1.55E-16	8.28E-09	1.63E+10	-1.57E-09	1.38E+06

926.400	5.80E-15	-4.01E-07	3.37E-08	1.04E-17	5.70E-09	1.63E+10	-1.67E-09	1.38E+06
931.200	5.56E-15	-2.58E-07	2.59E-08	-8.67E-17	3.68E-09	1.63E+10	-1.60E-09	1.38E+06
936.000	4.96E-15	-1.53E-07	1.86E-08	-1.47E-16	2.17E-09	1.63E+10	-1.43E-09	1.38E+06
940.800	4.15E-15	-7.96E-08	1.23E-08	-1.81E-16	1.13E-09	1.63E+10	-1.19E-09	1.38E+06
945.600	3.22E-15	-3.42E-08	7.24E-09	-1.98E-16	4.87E-10	1.63E+10	-9.26E-10	1.38E+06
950.400	2.25E-15	-1.01E-08	3.47E-09	-2.05E-16	1.44E-10	1.63E+10	-6.46E-10	1.38E+06
955.200	1.26E-15	-8.86E-10	1.05E-09	-2.06E-16	1.26E-11	1.63E+10	-3.62E-10	1.38E+06
960.000	2.68E-16	0.000	0.000	-2.06E-16	0.000	1.63E+10	-7.69E-11	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection	=	2.28561954 in
Computed slope at pile head	=	-0.02291664
Maximum bending moment	=	3131064. lbs-in
Maximum shear force	=	-43035.39921 lbs
Depth of maximum bending moment	=	105.60000 in
Depth of maximum shear force	=	158.40000 in
Number of iterations	=	27
Number of zero deflection points	=	11

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 50000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	3.506	-3.46E-06	50000.	-0.032921	4.92E-08	1.63E+10	0.000	0.000
4.800	3.348	2.40E+05	50000.	-0.032885	3415.884	1.63E+10	0.000	0.000
9.600	3.190	4.80E+05	50000.	-0.032779	6831.768	1.63E+10	0.000	0.000
14.400	3.033	7.20E+05	49955.	-0.032603	10248.	1.63E+10	-18.747	29.670
19.200	2.877	9.60E+05	49764.	-0.032355	13657.	1.63E+10	-60.895	101.600
24.000	2.722	1.20E+06	49362.	-0.032038	17047.	1.63E+10	-106.416	187.634
28.800	2.569	1.43E+06	48742.	-0.031650	20402.	1.63E+10	-151.915	283.801
33.600	2.418	1.67E+06	47912.	-0.031194	23707.	1.63E+10	-193.994	385.027
38.400	2.270	1.89E+06	46896.	-0.030670	26949.	1.63E+10	-229.259	484.796
43.200	2.124	2.12E+06	45736.	-0.030079	30115.	1.63E+10	-254.312	574.708
48.000	1.981	2.33E+06	44488.	-0.029424	33198.	1.63E+10	-265.757	643.888
52.800	1.842	2.54E+06	43225.	-0.028707	36193.	1.63E+10	-260.199	678.206
57.600	1.706	2.75E+06	41898.	-0.027928	39104.	1.63E+10	-292.800	824.034
62.400	1.573	2.95E+06	40365.	-0.027089	41918.	1.63E+10	-345.909	1055.237
67.200	1.446	3.13E+06	38567.	-0.026194	44619.	1.63E+10	-403.264	1339.093
72.000	1.322	3.32E+06	36484.	-0.025244	47188.	1.63E+10	-464.863	1687.868
76.800	1.203	3.49E+06	34094.	-0.024243	49604.	1.63E+10	-530.708	2117.258
81.600	1.089	3.64E+06	31379.	-0.023193	51846.	1.63E+10	-600.799	2647.523
86.400	0.980505	3.79E+06	28316.	-0.022099	53891.	1.63E+10	-675.135	3305.080
91.200	0.877104	3.91E+06	24887.	-0.020965	55715.	1.63E+10	-753.716	4124.753
96.000	0.779237	4.03E+06	21071.	-0.019796	57292.	1.63E+10	-836.543	5152.998
100.800	0.687059	4.12E+06	16846.	-0.018597	58594.	1.63E+10	-923.614	6452.643
105.600	0.600701	4.19E+06	12194.	-0.017375	59594.	1.63E+10	-1014.928	8109.946
110.400	0.520262	4.23E+06	7092.783	-0.016135	60260.	1.63E+10	-1110.460	10245.
115.200	0.445809	4.26E+06	1523.587	-0.014884	60563.	1.63E+10	-1210.039	13028.
120.000	0.377374	4.25E+06	-4531.267	-0.013632	60469.	1.63E+10	-1312.817	16698.
124.800	0.314946	4.21E+06	-11079.	-0.012386	59944.	1.63E+10	-1415.572	21574.
129.600	0.258471	4.14E+06	-18098.	-0.011156	58955.	1.63E+10	-1508.913	28022.
134.400	0.207852	4.04E+06	-25492.	-0.009951	57471.	1.63E+10	-1571.969	36302.
139.200	0.162940	3.90E+06	-33035.	-0.008783	55472.	1.63E+10	-1570.806	46274.
144.000	0.123538	3.72E+06	-40332.	-0.007661	52957.	1.63E+10	-1469.754	57106.
148.800	0.089396	3.51E+06	-46873.	-0.006596	49961.	1.63E+10	-1255.613	67419.
153.600	0.060215	3.27E+06	-52174.	-0.005598	46553.	1.63E+10	-953.040	75971.

158.400	0.035658	3.01E+06	-55929.	-0.004673	42832.	1.63E+10	-611.392	82301.
163.200	0.015355	2.73E+06	-58062.	-0.003827	38911.	1.63E+10	-277.397	86715.
168.000	-0.001084	2.45E+06	-58679.	-0.003064	34899.	1.63E+10	20.287	89854.
172.800	-0.014056	2.17E+06	-57981.	-0.002383	30893.	1.63E+10	270.347	92319.
177.600	-0.023961	1.90E+06	-56200.	-0.001784	26976.	1.63E+10	471.895	94534.
182.400	-0.031186	1.63E+06	-53559.	-0.001265	23214.	1.63E+10	628.573	96748.
187.200	-0.036105	1.38E+06	-50261.	-0.000822	19658.	1.63E+10	745.294	99083.
192.000	-0.039072	1.15E+06	-46488.	-0.000449	16347.	1.63E+10	826.895	1.02E+05
196.800	-0.040416	9.35E+05	-42397.	-0.000142	13306.	1.63E+10	877.760	1.04E+05
201.600	-0.040438	7.42E+05	-38126.	0.000105	10554.	1.63E+10	901.854	1.07E+05
206.400	-0.039412	5.69E+05	-33795.	0.000298	8097.088	1.63E+10	902.846	1.10E+05
211.200	-0.037581	4.17E+05	-29506.	0.000443	5936.349	1.63E+10	884.226	1.13E+05
216.000	-0.035161	2.86E+05	-25346.	0.000546	4065.571	1.63E+10	849.087	1.16E+05
220.800	-0.032338	1.74E+05	-21386.	0.000614	2473.229	1.63E+10	800.942	1.19E+05
225.600	-0.029268	80345.	-17680.	0.000651	1143.536	1.63E+10	743.126	1.22E+05
230.400	-0.026085	4042.179	-14268.	0.000664	57.532	1.63E+10	678.509	1.25E+05
235.200	-0.022897	-56628.	-11176.	0.000656	805.972	1.63E+10	609.709	1.28E+05
240.000	-0.019788	-1.03E+05	-8419.206	0.000632	1469.537	1.63E+10	539.054	1.31E+05
244.800	-0.016825	-1.37E+05	-6000.935	0.000597	1956.333	1.63E+10	468.560	1.34E+05
249.600	-0.014057	-1.61E+05	-3916.591	0.000553	2289.477	1.63E+10	399.917	1.37E+05
254.400	-0.011516	-1.75E+05	-2154.020	0.000504	2491.478	1.63E+10	334.488	1.39E+05
259.200	-0.009223	-1.82E+05	-695.277	0.000451	2583.792	1.63E+10	273.321	1.42E+05
264.000	-0.007186	-1.82E+05	481.906	0.000398	2586.478	1.63E+10	217.172	1.45E+05
268.800	-0.005406	-1.77E+05	1402.786	0.000345	2517.947	1.63E+10	166.528	1.48E+05
273.600	-0.003876	-1.68E+05	2094.408	0.000294	2394.807	1.63E+10	121.648	1.51E+05
278.400	-0.002584	-1.57E+05	2584.574	0.000246	2231.777	1.63E+10	82.588	1.53E+05
283.200	-0.001513	-1.43E+05	2900.975	0.000202	2041.663	1.63E+10	49.245	1.56E+05
288.000	-0.000646	-1.29E+05	3070.475	0.000162	1835.401	1.63E+10	21.380	1.59E+05
292.800	3.98E-05	-1.14E+05	3118.567	0.000126	1622.128	1.63E+10	-1.342	1.62E+05
297.600	0.000564	-99017.	3068.945	9.46E-05	1409.295	1.63E+10	-19.333	1.65E+05
302.400	0.000948	-84509.	2943.223	6.76E-05	1202.801	1.63E+10	-33.051	1.67E+05
307.200	0.001213	-70762.	2760.753	4.48E-05	1007.146	1.63E+10	-42.979	1.70E+05
312.000	0.001378	-58006.	2538.538	2.58E-05	825.585	1.63E+10	-49.611	1.73E+05
316.800	0.001461	-46392.	2291.230	1.04E-05	660.292	1.63E+10	-53.434	1.76E+05
321.600	0.001478	-36010.	2031.189	-1.71E-06	512.522	1.63E+10	-54.916	1.78E+05
326.400	0.001445	-26893.	1768.594	-1.10E-05	382.760	1.63E+10	-54.498	1.81E+05
331.200	0.001373	-19031.	1511.593	-1.77E-05	270.869	1.63E+10	-52.585	1.84E+05
336.000	0.001274	-12381.	1266.482	-2.24E-05	176.223	1.63E+10	-49.544	1.87E+05
340.800	0.001158	-6873.058	1037.899	-2.52E-05	97.823	1.63E+10	-45.699	1.89E+05
345.600	0.001032	-2417.593	829.028	-2.66E-05	34.409	1.63E+10	-41.331	1.92E+05
350.400	0.000903	1085.614	641.806	-2.68E-05	15.451	1.63E+10	-36.679	1.95E+05
355.200	0.000776	3743.740	477.117	-2.60E-05	53.284	1.63E+10	-31.941	1.98E+05
360.000	0.000653	5665.938	334.991	-2.47E-05	80.642	1.63E+10	-27.278	2.00E+05
364.800	0.000539	6959.657	214.775	-2.28E-05	99.056	1.63E+10	-22.812	2.03E+05
369.600	0.000434	7727.783	115.297	-2.06E-05	109.988	1.63E+10	-18.637	2.06E+05
374.400	0.000341	8066.510	35.008	-1.83E-05	114.809	1.63E+10	-14.817	2.09E+05
379.200	0.000259	8063.863	-27.889	-1.59E-05	114.772	1.63E+10	-11.391	2.12E+05
384.000	0.000188	7798.775	-75.336	-1.36E-05	110.999	1.63E+10	-8.379	2.14E+05
388.800	0.000128	7340.637	-109.327	-1.14E-05	104.478	1.63E+10	-5.784	2.17E+05
393.600	7.85E-05	6749.235	-131.838	-9.30E-06	96.061	1.63E+10	-3.595	2.20E+05
398.400	3.87E-05	6074.994	-144.769	-7.41E-06	86.464	1.63E+10	-1.792	2.23E+05
403.200	7.38E-06	5359.458	-149.902	-5.73E-06	76.280	1.63E+10	-0.346437	2.25E+05
408.000	-1.63E-05	4635.939	-148.872	-4.25E-06	65.983	1.63E+10	0.775486	2.28E+05
412.800	-3.35E-05	3930.288	-143.148	-2.99E-06	55.939	1.63E+10	1.610	2.31E+05
417.600	-4.51E-05	3261.720	-134.022	-1.93E-06	46.424	1.63E+10	2.193	2.34E+05
422.400	-5.20E-05	2643.677	-122.609	-1.06E-06	37.627	1.63E+10	2.563	2.36E+05
427.200	-5.53E-05	2084.675	-109.849	-3.69E-07	29.671	1.63E+10	2.754	2.39E+05
432.000	-5.56E-05	1589.128	-96.517	1.72E-07	22.618	1.63E+10	2.801	2.42E+05
436.800	-5.36E-05	1158.112	-83.235	5.77E-07	16.483	1.63E+10	2.733	2.45E+05
441.600	-5.00E-05	790.073	-70.484	8.64E-07	11.245	1.63E+10	2.579	2.47E+05
446.400	-4.53E-05	481.461	-58.623	1.05E-06	6.853	1.63E+10	2.363	2.50E+05
451.200	-3.99E-05	227.290	-47.900	1.16E-06	3.235	1.63E+10	2.105	2.53E+05
456.000	-3.42E-05	21.621	-38.470	1.19E-06	0.307732	1.63E+10	1.824	2.56E+05
460.800	-2.85E-05	-142.020	-30.408	1.17E-06	2.021	1.63E+10	1.535	2.59E+05
465.600	-2.30E-05	-270.299	-23.725	1.11E-06	3.847	1.63E+10	1.250	2.61E+05
470.400	-1.78E-05	-369.781	-18.374	1.02E-06	5.263	1.63E+10	0.979583	2.64E+05
475.200	-1.32E-05	-446.693	-14.266	8.99E-07	6.358	1.63E+10	0.732392	2.67E+05
480.000	-9.18E-06	-506.730	-6.181	7.59E-07	7.212	1.63E+10	2.636	1.38E+06
484.800	-5.89E-06	-506.030	4.208	6.10E-07	7.202	1.63E+10	1.693	1.38E+06
489.600	-3.32E-06	-466.330	10.562	4.66E-07	6.637	1.63E+10	0.954794	1.38E+06
494.400	-1.41E-06	-404.631	13.829	3.38E-07	5.759	1.63E+10	0.406230	1.38E+06
499.200	-7.65E-08	-333.572	14.857	2.30E-07	4.748	1.63E+10	0.021988	1.38E+06
504.000	7.89E-07	-262.007	14.365	1.42E-07	3.729	1.63E+10	-0.226790	1.38E+06
508.800	1.28E-06	-195.667	12.935	7.44E-08	2.785	1.63E+10	-0.369165	1.38E+06
513.600	1.50E-06	-137.833	11.012	2.53E-08	1.962	1.63E+10	-0.432080	1.38E+06
518.400	1.53E-06	-89.954	8.921	-8.21E-09	1.280	1.63E+10	-0.439020	1.38E+06
523.200	1.43E-06	-52.190	6.885	-2.91E-08	0.742806	1.63E+10	-0.409430	1.38E+06
528.000	1.25E-06	-23.859	5.042	-4.03E-08	0.339577	1.63E+10	-0.358646	1.38E+06
532.800	1.04E-06	-3.791	3.465	-4.44E-08	0.053957	1.63E+10	-0.298172	1.38E+06
537.600	8.22E-07	9.407	2.183	-4.36E-08	0.133886	1.63E+10	-0.236159	1.38E+06
542.400	6.19E-07	17.164	1.189	-3.97E-08	0.244286	1.63E+10	-0.177966	1.38E+06

547.200	4.41E-07	20.820	0.457554	-3.41E-08	0.296326	1.63E+10	-0.126744	1.38E+06
552.000	2.92E-07	21.556	-0.048174	-2.78E-08	0.306804	1.63E+10	-0.083976	1.38E+06
556.800	1.74E-07	20.357	-0.369626	-2.17E-08	0.289744	1.63E+10	-0.049962	1.38E+06
561.600	8.43E-08	18.008	-0.547653	-1.60E-08	0.256300	1.63E+10	-0.024216	1.38E+06
566.400	2.01E-08	15.100	-0.619647	-1.11E-08	0.214915	1.63E+10	-0.005782	1.38E+06
571.200	-2.27E-08	12.059	-0.617877	-7.15E-09	0.171634	1.63E+10	0.006520	1.38E+06
576.000	-4.85E-08	9.168	-0.568813	-4.02E-09	0.130491	1.63E+10	0.013924	1.38E+06
580.800	-6.13E-08	6.598	-0.493144	-1.70E-09	0.093914	1.63E+10	0.017605	1.38E+06
585.600	-6.48E-08	4.434	-0.406237	-7.33E-11	0.063110	1.63E+10	0.018606	1.38E+06
590.400	-6.20E-08	2.699	-0.318845	9.77E-10	0.038408	1.63E+10	0.017807	1.38E+06
595.200	-5.54E-08	1.373	-0.237919	1.58E-09	0.019545	1.63E+10	0.015912	1.38E+06
600.000	-4.68E-08	0.414501	-0.167429	1.84E-09	0.005900	1.63E+10	0.013459	1.38E+06
604.800	-3.77E-08	-0.234110	-0.109116	1.87E-09	0.003332	1.63E+10	0.010838	1.38E+06
609.600	-2.89E-08	-0.633016	-0.063157	1.74E-09	0.009010	1.63E+10	0.008312	1.38E+06
614.400	-2.10E-08	-0.840416	-0.028706	1.52E-09	0.011962	1.63E+10	0.006043	1.38E+06
619.200	-1.43E-08	-0.908590	-0.004327	1.26E-09	0.012932	1.63E+10	0.004115	1.38E+06
624.000	-8.90E-09	-0.881951	0.011685	1.00E-09	0.012553	1.63E+10	0.002556	1.38E+06
628.800	-4.72E-09	-0.796413	0.021074	7.53E-10	0.011335	1.63E+10	0.001356	1.38E+06
633.600	-1.67E-09	-0.679637	0.025477	5.36E-10	0.009673	1.63E+10	0.000479	1.38E+06
638.400	4.26E-10	-0.551832	0.026332	3.55E-10	0.007854	1.63E+10	-0.000122	1.38E+06
643.200	1.74E-09	-0.426849	0.024839	2.11E-10	0.006075	1.63E+10	-0.000500	1.38E+06
648.000	2.45E-09	-0.313375	0.021953	1.02E-10	0.004460	1.63E+10	-0.000703	1.38E+06
652.800	2.71E-09	-0.216103	0.018394	2.36E-11	0.003076	1.63E+10	-0.000780	1.38E+06
657.600	2.67E-09	-0.136793	0.014679	-2.84E-11	0.001947	1.63E+10	-0.000768	1.38E+06
662.400	2.44E-09	-0.075186	0.011151	-5.96E-11	0.001070	1.63E+10	-0.000701	1.38E+06
667.200	2.10E-09	-0.029740	0.008018	-7.50E-11	0.000423	1.63E+10	-0.000604	1.38E+06
672.000	1.72E-09	0.001789	0.005382	-7.91E-11	2.55E-05	1.63E+10	-0.000495	1.38E+06
676.800	1.34E-09	0.021924	0.003269	-7.56E-11	0.000312	1.63E+10	-0.000386	1.38E+06
681.600	9.95E-10	0.033170	0.001657	-6.75E-11	0.000472	1.63E+10	-0.000286	1.38E+06
686.400	6.95E-10	0.037829	0.000492	-5.71E-11	0.000538	1.63E+10	-0.000200	1.38E+06
691.200	4.47E-10	0.037890	-0.000296	-4.59E-11	0.000539	1.63E+10	-0.000129	1.38E+06
696.000	2.54E-10	0.034991	-0.000779	-3.52E-11	0.000498	1.63E+10	-7.29E-05	1.38E+06
700.800	1.09E-10	0.030412	-0.001029	-2.56E-11	0.000433	1.63E+10	-3.14E-05	1.38E+06
705.600	8.24E-12	0.025109	-0.001110	-1.74E-11	0.000357	1.63E+10	-2.37E-06	1.38E+06
710.400	-5.75E-11	0.019752	-0.001077	-1.08E-11	0.000281	1.63E+10	1.65E-05	1.38E+06
715.200	-9.53E-11	0.014775	-0.000971	-5.70E-12	0.000210	1.63E+10	2.74E-05	1.38E+06
720.000	-1.12E-10	0.010429	-0.000828	-1.99E-12	0.000148	1.63E+10	3.22E-05	1.38E+06
724.800	-1.14E-10	0.006825	-0.000672	5.52E-13	9.71E-05	1.63E+10	3.29E-05	1.38E+06
729.600	-1.07E-10	0.003978	-0.000519	2.14E-12	5.66E-05	1.63E+10	3.07E-05	1.38E+06
734.400	-9.38E-11	0.001839	-0.000381	3.00E-12	2.62E-05	1.63E+10	2.69E-05	1.38E+06
739.200	-7.81E-11	0.000321	-0.000262	3.32E-12	4.58E-06	1.63E+10	2.24E-05	1.38E+06
744.000	-6.20E-11	-0.000680	-0.000166	3.26E-12	9.67E-06	1.63E+10	1.78E-05	1.38E+06
748.800	-4.68E-11	-0.001271	-9.09E-05	2.98E-12	1.81E-05	1.63E+10	1.34E-05	1.38E+06
753.600	-3.34E-11	-0.001552	-3.56E-05	2.56E-12	2.21E-05	1.63E+10	9.59E-06	1.38E+06
758.400	-2.22E-11	-0.001613	2.66E-06	2.10E-12	2.30E-05	1.63E+10	6.37E-06	1.38E+06
763.200	-1.32E-11	-0.001526	2.71E-05	1.63E-12	2.17E-05	1.63E+10	3.80E-06	1.38E+06
768.000	-6.48E-12	-0.001353	4.07E-05	1.21E-12	1.93E-05	1.63E+10	1.86E-06	1.38E+06
772.800	-1.63E-12	-0.001136	4.63E-05	8.44E-13	1.62E-05	1.63E+10	4.67E-07	1.38E+06
777.600	1.62E-12	-0.000909	4.63E-05	5.42E-13	1.29E-05	1.63E+10	-4.65E-07	1.38E+06
782.400	3.58E-12	-0.000692	4.27E-05	3.07E-13	9.85E-06	1.63E+10	-1.03E-06	1.38E+06
787.200	4.56E-12	-0.000499	3.71E-05	1.31E-13	7.10E-06	1.63E+10	-1.31E-06	1.38E+06
792.000	4.84E-12	-0.000336	3.06E-05	8.53E-15	4.78E-06	1.63E+10	-1.39E-06	1.38E+06
796.800	4.65E-12	-0.000205	2.40E-05	-7.12E-14	2.92E-06	1.63E+10	-1.33E-06	1.38E+06
801.600	4.16E-12	-0.000105	1.80E-05	-1.17E-13	1.50E-06	1.63E+10	-1.19E-06	1.38E+06
806.400	3.52E-12	-3.28E-05	1.27E-05	-1.37E-13	4.67E-07	1.63E+10	-1.01E-06	1.38E+06
811.200	2.84E-12	1.63E-05	8.28E-06	-1.40E-13	2.32E-07	1.63E+10	-8.16E-07	1.38E+06
816.000	2.18E-12	4.66E-05	4.81E-06	-1.30E-13	6.64E-07	1.63E+10	-6.27E-07	1.38E+06
820.800	1.59E-12	6.25E-05	2.21E-06	-1.14E-13	8.90E-07	1.63E+10	-4.57E-07	1.38E+06
825.600	1.09E-12	6.79E-05	3.70E-07	-9.51E-14	9.66E-07	1.63E+10	-3.12E-07	1.38E+06
830.400	6.76E-13	6.61E-05	-8.45E-07	-7.54E-14	9.41E-07	1.63E+10	-1.94E-07	1.38E+06
835.200	3.61E-13	5.98E-05	-1.56E-06	-5.69E-14	8.51E-07	1.63E+10	-1.04E-07	1.38E+06
840.000	1.30E-13	5.11E-05	-1.90E-06	-4.05E-14	7.27E-07	1.63E+10	-3.75E-08	1.38E+06
844.800	-2.80E-14	4.16E-05	-1.97E-06	-2.69E-14	5.91E-07	1.63E+10	8.05E-09	1.38E+06
849.600	-1.28E-13	3.22E-05	-1.86E-06	-1.60E-14	4.58E-07	1.63E+10	3.67E-08	1.38E+06
854.400	-1.82E-13	2.37E-05	-1.65E-06	-7.81E-15	3.37E-07	1.63E+10	5.23E-08	1.38E+06
859.200	-2.03E-13	1.64E-05	-1.38E-06	-1.91E-15	2.33E-07	1.63E+10	5.82E-08	1.38E+06
864.000	-2.00E-13	1.04E-05	-1.11E-06	2.03E-15	1.48E-07	1.63E+10	5.76E-08	1.38E+06
868.800	-1.83E-13	5.75E-06	-8.41E-07	4.40E-15	8.18E-08	1.63E+10	5.27E-08	1.38E+06
873.600	-1.58E-13	2.31E-06	-6.06E-07	5.59E-15	3.29E-08	1.63E+10	4.54E-08	1.38E+06
878.400	-1.30E-13	-7.19E-08	-4.08E-07	5.92E-15	1.02E-09	1.63E+10	3.72E-08	1.38E+06
883.200	-1.01E-13	-1.60E-06	-2.49E-07	5.67E-15	2.28E-08	1.63E+10	2.91E-08	1.38E+06
888.000	-7.52E-14	-2.46E-06	-1.27E-07	5.08E-15	3.50E-08	1.63E+10	2.16E-08	1.38E+06
892.800	-5.25E-14	-2.82E-06	-3.89E-08	4.30E-15	4.01E-08	1.63E+10	1.51E-08	1.38E+06
897.600	-3.39E-14	-2.83E-06	2.07E-08	3.47E-15	4.03E-08	1.63E+10	9.74E-09	1.38E+06
902.400	-1.92E-14	-2.62E-06	5.73E-08	2.66E-15	3.73E-08	1.63E+10	5.53E-09	1.38E+06
907.200	-8.31E-15	-2.28E-06	7.63E-08	1.94E-15	3.25E-08	1.63E+10	2.39E-09	1.38E+06
912.000	-6.05E-16	-1.89E-06	8.25E-08	1.33E-15	2.69E-08	1.63E+10	1.74E-10	1.38E+06
916.800	4.44E-15	-1.49E-06	7.98E-08	8.31E-16	2.12E-08	1.63E+10	-1.27E-09	1.38E+06
921.600	7.37E-15	-1.12E-06	7.17E-08	4.47E-16	1.60E-08	1.63E+10	-2.12E-09	1.38E+06
926.400	8.72E-15	-8.01E-07	6.06E-08	1.64E-16	1.14E-08	1.63E+10	-2.51E-09	1.38E+06
931.200	8.94E-15	-5.39E-07	4.84E-08	-3.38E-17	7.68E-09	1.63E+10	-2.57E-09	1.38E+06

936.000	8.40E-15	-3.36E-07	3.65E-08	-1.63E-16	4.79E-09	1.63E+10	-2.41E-09	1.38E+06
940.800	7.38E-15	-1.89E-07	2.56E-08	-2.40E-16	2.69E-09	1.63E+10	-2.12E-09	1.38E+06
945.600	6.09E-15	-9.09E-08	1.63E-08	-2.81E-16	1.29E-09	1.63E+10	-1.75E-09	1.38E+06
950.400	4.68E-15	-3.28E-08	8.86E-09	-3.00E-16	4.68E-10	1.63E+10	-1.34E-09	1.38E+06
955.200	3.22E-15	-5.78E-09	3.42E-09	-3.05E-16	8.23E-11	1.63E+10	-9.24E-10	1.38E+06
960.000	1.75E-15	0.000	0.000	-3.06E-16	0.000	1.63E+10	-5.02E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 5:

Pile-head deflection	=	3.50561134 in
Computed slope at pile head	=	-0.03292060
Maximum bending moment	=	4255146. lbs-in
Maximum shear force	=	-58678.72372 lbs
Depth of maximum bending moment	=	115.20000 in
Depth of maximum shear force	=	168.00000 in
Number of iterations	=	30
Number of zero deflection points	=	10

Summary of Pile Response(s)

Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment, y = pile-head displacment in
Type 2 = Shear and Slope, M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness, V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment, S = Pile-head Slope, radians
Type 5 = Deflection and Slope, R = Rot. Stiffness of Pile-head in-lbs/rad

Load Type	Pile-Head Condition 1	Pile-Head Condition 2	Axial Load lbs	Pile-Head Deflection in	Maximum Moment in-lbs	Maximum Shear lbs
1	V= 10000.	M= 0.000	0.0000	0.2019852	471374.	10000.0000
1	V= 20000.	M= 0.000	0.0000	0.6328768	1197227.	20000.0000
1	V= 30000.	M= 0.000	0.0000	1.3289	2105499.	30000.0000
1	V= 40000.	M= 0.000	0.0000	2.2856	3131064.	-43035.3992
1	V= 50000.	M= 0.000	0.0000	3.5056	4255146.	-58678.7237

The analysis ended normally.

APPENDIX H. LPILE ANALYSIS FOR TP5 (P-MULTIPLIER OF 0.25)

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                  LPILE Plus for Windows, Version 5.0 (5.0.47)

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method

                           (c) 1985-2010 by Ensoft, Inc.
                                All Rights Reserved

================================================================================

This program is licensed to:

J Price
RB&G Engineering

--------------------------------------------------------------------------------
                             Files Used for Analysis
--------------------------------------------------------------------------------

Path  to  file  locations:              C:\Users\jprice\Documents\Thesis\LPILE  03.23.11\Pioneer
Crossing\Peak Plus 1 Min\
Name of input data file:     phi28.k150.gam138.2.pmult0.25.lpd
Name of output file:         phi28.k150.gam138.2.pmult0.25.lpo
Name of plot output file:    phi28.k150.gam138.2.pmult0.25.lpp
Name of runtime file:        phi28.k150.gam138.2.pmult0.25.lpr


--------------------------------------------------------------------------------
                           Time and Date of Analysis
--------------------------------------------------------------------------------

               Date:  May  5, 2012     Time:   2:23:06


--------------------------------------------------------------------------------
                                 Problem Title
--------------------------------------------------------------------------------

New LPILE Plus 5.0 Data File


--------------------------------------------------------------------------------
                                 Program Options
--------------------------------------------------------------------------------

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 3:
- Computation of Nonlinear Bending Stiffness and Ultimate Bending Moment
  Capacity with Pile Response Computed Using Nonlinear EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis uses p-y multiplers for group action
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
```

- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 200
- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 960.00 in

Depth of ground surface below top of pile = 12.00 in

Slope angle of ground surface = 0.00 deg.

Structural properties of pile defined using 2 points

Point No.	Point Depth in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	16.00000000	562.0800	18.4100	29000000.
2	960.0000	16.00000000	562.0800	18.4100	29000000.

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of moment of inertia and modulus of are not used for any computations other than total stress due to combined axial loading and bending.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by API RP-2A, 1987
Distance from top of pile to top of layer = 12.000 in
Distance from top of pile to bottom of layer = 480.000 in
p-y subgrade modulus k for top of soil layer = 150.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 150.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 480.000 in
Distance from top of pile to bottom of layer = 1000.000 in

(Depth of lowest layer extends 40.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	12.00	0.08000
2	480.00	0.08000
3	480.00	0.06944
4	1000.00	0.06944

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	12.000	0.00000	28.00	------	------
2	480.000	0.00000	28.00	------	------
3	480.000	6.94444	0.00	0.00700	0.0
4	1000.000	6.94444	0.00	0.00700	0.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

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p-y Modification Factors

Distribution of p-y multipliers with depth defined using 2 points

Point No.	Depth X in	p-mult	y-mult
1	12.000	0.2500	1.0000
2	960.000	0.2500	1.0000

Loading Type

Static loading criteria was used for computation of p-y curves.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   3000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   6000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   9000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   12000.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head   =   17600.000 lbs
Bending moment at pile head =   0.000 in-lbs
Axial load at pile head   =   0.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Computation of Nonlinear Bending Stiffness for Section 1

Dimensions and Material Properties of Steel Pipe Section:

Outer Diameter of Pipe   =   16.00000 in.
Pipe Wall Thickness   =   0.37500 in.
Yield Stress of Pipe   =   60. ksi
Elastic Modulus   =   29000. ksi
Cross-sectional Area   =   18.40777 sq. in.
Moment of Inertia   =   562.084 in^4
Elastic Bending Stiffness =   16300439. kip-in2

Definition of Run Messages:

   Y = part of pipe section has yielded

Axial Thrust Force =   0.000 kips

Bending Curvature rad/in.	Bending Moment in-kip	Bending Stiffness kip-in2	Max Comp Strain in/in	Minimum Strain in/in	Depth to N Axis in	Run Msg
0.00000550	89.57501530	16299140.	0.00004397	-0.00004397	8.00000000	
0.00001099	179.15003	16299140.	0.00008793	-0.00008793	8.00000000	
0.00001649	268.72505	16299140.	0.00013190	-0.00013190	8.00000000	
0.00002198	358.30006	16299140.	0.00017586	-0.00017586	8.00000000	
0.00002748	447.87508	16299140.	0.00021983	-0.00021983	8.00000000	
0.00003297	537.45009	16299140.	0.00026379	-0.00026379	8.00000000	
0.00003847	627.02511	16299140.	0.00030776	-0.00030776	8.00000000	
0.00004397	716.60012	16299140.	0.00035172	-0.00035172	8.00000000	
0.00004946	806.17514	16299140.	0.00039569	-0.00039569	8.00000000	
0.00005496	895.75015	16299140.	0.00043966	-0.00043966	8.00000000	
0.00006045	985.32517	16299140.	0.00048362	-0.00048362	8.00000000	
0.00006595	1074.90018	16299140.	0.00052759	-0.00052759	8.00000000	
0.00007144	1164.47520	16299140.	0.00057155	-0.00057155	8.00000000	
0.00007694	1254.05021	16299140.	0.00061552	-0.00061552	8.00000000	
0.00008244	1343.62523	16299140.	0.00065948	-0.00065948	8.00000000	
0.00008793	1433.20024	16299140.	0.00070345	-0.00070345	8.00000000	
0.00009343	1522.77526	16299140.	0.00074741	-0.00074741	8.00000000	
0.00009892	1612.35028	16299140.	0.00079138	-0.00079138	8.00000000	
0.00010442	1701.92529	16299140.	0.00083534	-0.00083534	8.00000000	
0.00010991	1791.50031	16299140.	0.00087931	-0.00087931	8.00000000	
0.00011541	1881.07532	16299140.	0.00092328	-0.00092328	8.00000000	
0.00012091	1970.65034	16299140.	0.00096724	-0.00096724	8.00000000	
0.00012640	2060.22535	16299140.	0.00101121	-0.00101121	8.00000000	
0.00013190	2149.80037	16299140.	0.00105517	-0.00105517	8.00000000	
0.00013739	2239.37538	16299140.	0.00109914	-0.00109914	8.00000000	
0.00014289	2328.95040	16299140.	0.00114310	-0.00114310	8.00000000	
0.00014838	2418.52541	16299140.	0.00118707	-0.00118707	8.00000000	
0.00015388	2508.10043	16299140.	0.00123103	-0.00123103	8.00000000	
0.00015938	2597.67544	16299140.	0.00127500	-0.00127500	8.00000000	
0.00016487	2687.25046	16299140.	0.00131897	-0.00131897	8.00000000	
0.00017037	2776.82547	16299140.	0.00136293	-0.00136293	8.00000000	
0.00017586	2866.40049	16299140.	0.00140690	-0.00140690	8.00000000	
0.00018136	2955.97550	16299140.	0.00145086	-0.00145086	8.00000000	
0.00018685	3045.55052	16299140.	0.00149483	-0.00149483	8.00000000	
0.00019235	3135.12554	16299140.	0.00153879	-0.00153879	8.00000000	
0.00019784	3224.70055	16299140.	0.00158276	-0.00158276	8.00000000	
0.00020334	3314.27557	16299140.	0.00162672	-0.00162672	8.00000000	
0.00020884	3403.85058	16299140.	0.00167069	-0.00167069	8.00000000	
0.00021433	3493.42560	16299140.	0.00171466	-0.00171466	8.00000000	
0.00021983	3583.00061	16299140.	0.00175862	-0.00175862	8.00000000	
0.00022532	3672.57563	16299140.	0.00180259	-0.00180259	8.00000000	
0.00023082	3762.15064	16299140.	0.00184655	-0.00184655	8.00000000	

0.00023631	3851.72566	16299140.	0.00189052	-0.00189052	8.00000000	
0.00024181	3941.30067	16299140.	0.00193448	-0.00193448	8.00000000	
0.00024731	4030.87569	16299140.	0.00197845	-0.00197845	8.00000000	
0.00025280	4120.45070	16299140.	0.00202241	-0.00202241	8.00000000	
0.00025830	4210.02572	16299140.	0.00206638	-0.00206638	8.00000000	
0.00026379	4296.43113	16287124.	0.00211034	-0.00211034	8.00000000	Y
0.00026929	4373.42773	16240660.	0.00215431	-0.00215431	8.00000000	Y
0.00027478	4439.00035	16154479.	0.00219828	-0.00219828	8.00000000	Y
0.00028028	4495.55846	16039516.	0.00224224	-0.00224224	8.00000000	Y
0.00028578	4546.13334	15908038.	0.00228621	-0.00228621	8.00000000	Y
0.00029127	4592.05610	15765549.	0.00233017	-0.00233017	8.00000000	Y
0.00029677	4633.81340	15614302.	0.00237414	-0.00237414	8.00000000	Y
0.00030226	4671.83655	15456200.	0.00241810	-0.00241810	8.00000000	Y
0.00030776	4707.19007	15295071.	0.00246207	-0.00246207	8.00000000	Y
0.00031325	4740.26069	15132308.	0.00250603	-0.00250603	8.00000000	Y
0.00031875	4771.09192	14968131.	0.00255000	-0.00255000	8.00000000	Y
0.00032425	4799.32117	14801495.	0.00259397	-0.00259397	8.00000000	Y
0.00032974	4826.14536	14636153.	0.00263793	-0.00263793	8.00000000	Y
0.00033524	4851.49019	14471819.	0.00268190	-0.00268190	8.00000000	Y
0.00034073	4874.74421	14306649.	0.00272586	-0.00272586	8.00000000	Y
0.00034623	4897.17687	14144351.	0.00276983	-0.00276983	8.00000000	Y
0.00035172	4918.00554	13982564.	0.00281379	-0.00281379	8.00000000	Y
0.00035722	4937.78073	13822807.	0.00285776	-0.00285776	8.00000000	Y
0.00036272	4956.64343	13665374.	0.00290172	-0.00290172	8.00000000	Y
0.00036821	4974.21101	13509124.	0.00294569	-0.00294569	8.00000000	Y
0.00037371	4991.27486	13356122.	0.00298966	-0.00298966	8.00000000	Y
0.00037920	5007.02214	13204082.	0.00303362	-0.00303362	8.00000000	Y
0.00038470	5022.43782	13055524.	0.00307759	-0.00307759	8.00000000	Y
0.00039019	5036.70038	12908196.	0.00312155	-0.00312155	8.00000000	Y
0.00039569	5050.60468	12764055.	0.00316552	-0.00316552	8.00000000	Y
0.00040119	5063.67451	12621783.	0.00320948	-0.00320948	8.00000000	Y
0.00040668	5076.19222	12481999.	0.00325345	-0.00325345	8.00000000	Y
0.00041218	5088.32389	12345005.	0.00329741	-0.00329741	8.00000000	Y
0.00041767	5099.56942	12209495.	0.00334138	-0.00334138	8.00000000	Y
0.00042317	5110.81496	12077505.	0.00338534	-0.00338534	8.00000000	Y
0.00042866	5121.06351	11946573.	0.00342931	-0.00342931	8.00000000	Y
0.00043416	5131.14214	11818565.	0.00347328	-0.00347328	8.00000000	Y
0.00043966	5140.96479	11693174.	0.00351724	-0.00351724	8.00000000	Y
0.00044515	5149.97368	11569052.	0.00356121	-0.00356121	8.00000000	Y
0.00045065	5158.98257	11447957.	0.00360517	-0.00360517	8.00000000	Y
0.00045614	5167.55970	11328834.	0.00364914	-0.00364914	8.00000000	Y
0.00046164	5175.58878	11211359.	0.00369310	-0.00369310	8.00000000	Y
0.00046713	5183.61786	11096649.	0.00373707	-0.00373707	8.00000000	Y
0.00047263	5191.25387	10983774.	0.00378103	-0.00378103	8.00000000	Y
0.00047813	5198.38655	10872442.	0.00382500	-0.00382500	8.00000000	Y
0.00048362	5205.51924	10763640.	0.00386897	-0.00386897	8.00000000	Y
0.00048912	5212.48015	10656932.	0.00391293	-0.00391293	8.00000000	Y
0.00049461	5218.79394	10551287.	0.00395690	-0.00395690	8.00000000	Y
0.00050011	5225.10773	10447963.	0.00400086	-0.00400086	8.00000000	Y
0.00050560	5231.42152	10346886.	0.00404483	-0.00404483	8.00000000	Y
0.00051110	5237.19181	10246919.	0.00408879	-0.00408879	8.00000000	Y
0.00051659	5242.75882	10148686.	0.00413276	-0.00413276	8.00000000	Y
0.00052209	5248.32584	10052521.	0.00417672	-0.00417672	8.00000000	Y
0.00052759	5253.89285	9958359.	0.00422069	-0.00422069	8.00000000	Y
0.00053308	5258.80636	9864912.	0.00426466	-0.00426466	8.00000000	Y
0.00053858	5263.69376	9773325.	0.00430862	-0.00430862	8.00000000	Y
0.00054407	5268.58116	9683587.	0.00435259	-0.00435259	8.00000000	Y
0.00054957	5273.46856	9595644.	0.00439655	-0.00439655	8.00000000	Y
0.00055506	5277.81618	9508471.	0.00444052	-0.00444052	8.00000000	Y
0.00056056	5282.08657	9422869.	0.00448448	-0.00448448	8.00000000	Y
0.00056606	5286.35697	9338928.	0.00452845	-0.00452845	8.00000000	Y
0.00057155	5290.62736	9256603.	0.00457241	-0.00457241	8.00000000	Y
0.00057705	5294.66043	9175434.	0.00461638	-0.00461638	8.00000000	Y
0.00058254	5298.37219	9095245.	0.00466034	-0.00466034	8.00000000	Y
0.00058804	5302.08395	9016554.	0.00470431	-0.00470431	8.00000000	Y
0.00059353	5305.79571	8939322.	0.00474828	-0.00474828	8.00000000	Y
0.00059903	5309.50748	8863506.	0.00479224	-0.00479224	8.00000000	Y
0.00060453	5312.93644	8788601.	0.00483621	-0.00483621	8.00000000	Y
0.00061002	5316.14401	8714682.	0.00488017	-0.00488017	8.00000000	Y
0.00061552	5319.35157	8642084.	0.00492414	-0.00492414	8.00000000	Y
0.00062101	5322.55913	8570770.	0.00496810	-0.00496810	8.00000000	Y
0.00062651	5325.76669	8500708.	0.00501207	-0.00501207	8.00000000	Y
0.00063200	5328.87341	8431704.	0.00505603	-0.00505603	8.00000000	Y
0.00063750	5331.62752	8363337.	0.00510000	-0.00510000	8.00000000	Y
0.00064300	5334.38163	8296139.	0.00514397	-0.00514397	8.00000000	Y
0.00064849	5337.13574	8230079.	0.00518793	-0.00518793	8.00000000	Y
0.00065399	5339.88985	8165130.	0.00523190	-0.00523190	8.00000000	Y
0.00065948	5342.64396	8101264.	0.00527586	-0.00527586	8.00000000	Y
0.00066498	5345.26145	8038247.	0.00531983	-0.00531983	8.00000000	Y
0.00067047	5347.60938	7975862.	0.00536379	-0.00536379	8.00000000	Y
0.00067597	5349.95732	7914491.	0.00540776	-0.00540776	8.00000000	Y

0.00068147	5352.30525	7854110.	0.00545172	-0.00545172	8.00000000	Y
0.00068696	5354.65319	7794695.	0.00549569	-0.00549569	8.00000000	Y
0.00069246	5357.00112	7736223.	0.00553966	-0.00553966	8.00000000	Y
0.00069795	5359.34906	7678672.	0.00558362	-0.00558362	8.00000000	Y
0.00070345	5361.40220	7621601.	0.00562759	-0.00562759	8.00000000	Y
0.00070894	5363.38797	7565320.	0.00567155	-0.00567155	8.00000000	Y
0.00071444	5365.37374	7509905.	0.00571552	-0.00571552	8.00000000	Y
0.00071994	5367.35952	7455335.	0.00575948	-0.00575948	8.00000000	Y
0.00072543	5369.34529	7401593.	0.00580345	-0.00580345	8.00000000	Y
0.00073093	5371.33107	7348659.	0.00584741	-0.00584741	8.00000000	Y
0.00073642	5373.31684	7296514.	0.00589138	-0.00589138	8.00000000	Y
0.00074192	5375.12714	7244906.	0.00593534	-0.00593534	8.00000000	Y
0.00074741	5376.79167	7193862.	0.00597931	-0.00597931	8.00000000	Y
0.00075291	5378.45620	7143563.	0.00602328	-0.00602328	8.00000000	Y
0.00075841	5380.12073	7093992.	0.00606724	-0.00606724	8.00000000	Y
0.00076390	5381.78526	7045136.	0.00611121	-0.00611121	8.00000000	Y
0.00076940	5383.44979	6996977.	0.00615517	-0.00615517	8.00000000	Y
0.00077489	5385.11432	6949501.	0.00619914	-0.00619914	8.00000000	Y
0.00078039	5386.77885	6902694.	0.00624310	-0.00624310	8.00000000	Y

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Load	Axial Thrust	Interp. Mom. Cap.
1	0.000 kips	5386.8 in-kip

Please note that the values in the above table are not factored by a strength reduction factor for LRFD.

The value of the strength reduction factor depends on the provisions of the LRFD code being used.

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to the LRFD structural design standard being followed.

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 3000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.098815	1.08E-07	3000.000	-0.001136	1.54E-09	1.63E+10	0.000	0.000
4.800	0.093363	14400.	3000.000	-0.001134	204.953	1.63E+10	0.000	0.000
9.600	0.087932	28800.	3000.000	-0.001127	409.906	1.63E+10	0.000	0.000
14.400	0.082541	43200.	2988.002	-0.001117	614.859	1.63E+10	-4.999	290.706
19.200	0.077211	57485.	2939.518	-0.001102	818.173	1.63E+10	-15.203	945.112
24.000	0.071962	71419.	2843.143	-0.001083	1016.501	1.63E+10	-24.954	1664.457
28.800	0.066814	84779.	2702.387	-0.001060	1206.647	1.63E+10	-33.695	2420.641
33.600	0.061787	97362.	2522.862	-0.001033	1385.743	1.63E+10	-41.108	3193.537
38.400	0.056896	1.09E+05	2311.361	-0.001003	1551.359	1.63E+10	-47.018	3966.588
43.200	0.052160	1.20E+05	2075.358	-0.000969	1701.556	1.63E+10	-51.317	4722.409
48.000	0.047593	1.29E+05	1822.828	-0.000933	1834.926	1.63E+10	-53.903	5436.441
52.800	0.043208	1.37E+05	1562.463	-0.000893	1950.619	1.63E+10	-54.582	6063.533
57.600	0.039017	1.44E+05	1294.751	-0.000852	2048.414	1.63E+10	-56.965	7008.019
62.400	0.035029	1.49E+05	1016.421	-0.000809	2127.528	1.63E+10	-59.006	8085.538
67.200	0.031253	1.54E+05	731.881	-0.000764	2187.293	1.63E+10	-59.552	9146.402
72.000	0.027693	1.57E+05	447.954	-0.000718	2227.529	1.63E+10	-58.751	10183.
76.800	0.024355	1.58E+05	170.647	-0.000672	2248.499	1.63E+10	-56.793	11193.
81.600	0.021241	1.58E+05	-94.974	-0.000626	2250.845	1.63E+10	-53.882	12176.
86.400	0.018350	1.57E+05	-344.804	-0.000579	2235.522	1.63E+10	-50.214	13135.
91.200	0.015681	1.55E+05	-575.654	-0.000533	2203.733	1.63E+10	-45.974	14073.
96.000	0.013230	1.52E+05	-785.175	-0.000488	2156.868	1.63E+10	-41.326	14993.
100.800	0.010994	1.47E+05	-971.756	-0.000444	2096.450	1.63E+10	-36.416	15899.
105.600	0.008967	1.42E+05	-1134.442	-0.000402	2024.091	1.63E+10	-31.370	16793.
110.400	0.007140	1.36E+05	-1272.838	-0.000360	1941.445	1.63E+10	-26.295	17678.
115.200	0.005506	1.30E+05	-1387.032	-0.000321	1850.177	1.63E+10	-21.285	18556.

120.000	0.004056	1.23E+05	-1477.516	-0.000284	1751.928	1.63E+10	-16.417	19430.
124.800	0.002779	1.16E+05	-1545.126	-0.000249	1648.296	1.63E+10	-11.754	20299.
129.600	0.001667	1.08E+05	-1590.978	-0.000216	1540.809	1.63E+10	-7.351	21166.
134.400	0.000708	1.01E+05	-1616.414	-0.000185	1430.912	1.63E+10	-3.247	22032.
139.200	-0.000110	92740.	-1622.950	-0.000157	1319.950	1.63E+10	0.523960	22896.
144.000	-0.000796	84956.	-1612.235	-0.000130	1209.159	1.63E+10	3.941	23760.
148.800	-0.001362	77262.	-1586.006	-0.000107	1099.661	1.63E+10	6.988	24623.
153.600	-0.001819	69730.	-1546.052	-8.49E-05	992.455	1.63E+10	9.659	25486.
158.400	-0.002178	62420.	-1494.181	-6.55E-05	888.416	1.63E+10	11.954	26350.
163.200	-0.002448	55386.	-1432.186	-4.81E-05	788.297	1.63E+10	13.877	27213.
168.000	-0.002640	48671.	-1361.826	-3.28E-05	692.729	1.63E+10	15.440	28077.
172.800	-0.002763	42312.	-1284.795	-1.94E-05	602.223	1.63E+10	16.657	28940.
177.600	-0.002826	36337.	-1202.708	-7.82E-06	517.180	1.63E+10	17.546	29804.
182.400	-0.002838	30766.	-1117.082	2.06E-06	437.891	1.63E+10	18.131	30668.
187.200	-0.002806	25613.	-1029.326	1.04E-05	364.547	1.63E+10	18.434	31532.
192.000	-0.002738	20885.	-940.728	1.72E-05	297.249	1.63E+10	18.482	32397.
196.800	-0.002641	16582.	-852.451	2.27E-05	236.011	1.63E+10	18.300	33261.
201.600	-0.002520	12701.	-765.529	2.70E-05	180.774	1.63E+10	17.917	34125.
206.400	-0.002381	9233.030	-680.865	3.03E-05	131.412	1.63E+10	17.360	34990.
211.200	-0.002230	6164.858	-599.232	3.25E-05	87.743	1.63E+10	16.655	35854.
216.000	-0.002069	3480.407	-521.273	3.40E-05	49.536	1.63E+10	15.828	36718.
220.800	-0.001904	1160.639	-447.512	3.46E-05	16.519	1.63E+10	14.906	37582.
225.600	-0.001737	-815.704	-378.354	3.47E-05	11.610	1.63E+10	13.910	38447.
230.400	-0.001571	-2471.557	-314.095	3.42E-05	35.177	1.63E+10	12.864	39311.
235.200	-0.001408	-3831.020	-254.931	3.33E-05	54.526	1.63E+10	11.788	40175.
240.000	-0.001251	-4918.899	-200.965	3.20E-05	70.010	1.63E+10	10.699	41039.
244.800	-0.001101	-5760.279	-152.214	3.04E-05	81.985	1.63E+10	9.614	41903.
249.600	-0.000959	-6380.151	-108.625	2.86E-05	90.808	1.63E+10	8.548	42768.
254.400	-0.000826	-6803.078	-70.079	2.67E-05	96.827	1.63E+10	7.513	43632.
259.200	-0.000703	-7052.910	-36.403	2.46E-05	100.383	1.63E+10	6.519	44496.
264.000	-0.000590	-7152.549	-7.379	2.26E-05	101.801	1.63E+10	5.575	45360.
268.800	-0.000487	-7123.746	17.250	2.04E-05	101.391	1.63E+10	4.687	46224.
273.600	-0.000394	-6986.950	37.766	1.84E-05	99.444	1.63E+10	3.861	47088.
278.400	-0.000310	-6761.190	54.475	1.63E-05	96.231	1.63E+10	3.101	47952.
283.200	-0.000237	-6463.992	67.693	1.44E-05	92.001	1.63E+10	2.407	48816.
288.000	-0.000172	-6111.337	77.746	1.25E-05	86.982	1.63E+10	1.782	49680.
292.800	-0.000116	-5717.634	84.959	1.08E-05	81.378	1.63E+10	1.224	50544.
297.600	-6.84E-05	-5295.735	89.654	9.18E-06	75.373	1.63E+10	0.732497	51408.
302.400	-2.81E-05	-4856.958	92.145	7.69E-06	69.128	1.63E+10	0.305485	52272.
307.200	5.42E-06	-4411.144	92.734	6.32E-06	62.783	1.63E+10	-0.060048	53136.
312.000	3.27E-05	-3966.713	91.708	5.09E-06	56.458	1.63E+10	-0.367483	54000.
316.800	5.43E-05	-3530.749	89.336	3.99E-06	50.253	1.63E+10	-0.620634	54864.
321.600	7.09E-05	-3109.084	85.870	3.01E-06	44.251	1.63E+10	-0.823628	55728.
326.400	8.32E-05	-2706.395	81.540	2.15E-06	38.520	1.63E+10	-0.980797	56592.
331.200	9.16E-05	-2326.304	76.554	1.41E-06	33.110	1.63E+10	-1.097	57456.
336.000	9.67E-05	-1971.479	71.101	7.79E-07	28.060	1.63E+10	-1.175	58320.
340.800	9.91E-05	-1643.735	65.348	2.47E-07	23.395	1.63E+10	-1.222	59184.
345.600	9.91E-05	-1344.142	59.439	-1.93E-07	19.131	1.63E+10	-1.240	60048.
350.400	9.72E-05	-1073.117	53.502	-5.49E-07	15.274	1.63E+10	-1.234	60912.
355.200	9.38E-05	-830.521	47.642	-8.29E-07	11.821	1.63E+10	-1.208	61776.
360.000	8.93E-05	-615.753	41.947	-1.04E-06	8.764	1.63E+10	-1.165	62640.
364.800	8.38E-05	-427.827	36.489	-1.20E-06	6.089	1.63E+10	-1.109	63504.
369.600	7.78E-05	-265.457	31.323	-1.30E-06	3.778	1.63E+10	-1.043	64368.
374.400	7.14E-05	-127.123	26.492	-1.36E-06	1.809	1.63E+10	-0.970010	65232.
379.200	6.48E-05	-11.137	22.023	-1.38E-06	0.158518	1.63E+10	-0.892005	66096.
384.000	5.82E-05	84.296	17.935	-1.37E-06	1.200	1.63E+10	-0.811405	66960.
388.800	5.17E-05	161.035	14.235	-1.33E-06	2.292	1.63E+10	-0.730108	67824.
393.600	4.54E-05	220.952	10.923	-1.27E-06	3.145	1.63E+10	-0.649730	68688.
398.400	3.94E-05	265.899	7.992	-1.20E-06	3.784	1.63E+10	-0.571622	69552.
403.200	3.39E-05	297.676	5.428	-1.12E-06	4.237	1.63E+10	-0.496885	70416.
408.000	2.87E-05	318.005	3.212	-1.03E-06	4.526	1.63E+10	-0.426388	71280.
412.800	2.40E-05	328.509	1.323	-9.33E-07	4.676	1.63E+10	-0.360790	72144.
417.600	1.98E-05	330.702	-0.264632	-8.35E-07	4.707	1.63E+10	-0.300560	73008.
422.400	1.60E-05	325.969	-1.576	-7.39E-07	4.639	1.63E+10	-0.245997	73872.
427.200	1.27E-05	315.568	-2.640	-6.44E-07	4.491	1.63E+10	-0.197249	74736.
432.000	9.80E-06	300.623	-3.484	-5.54E-07	4.279	1.63E+10	-0.154333	75600.
436.800	7.35E-06	282.123	-4.136	-4.68E-07	4.015	1.63E+10	-0.117153	76464.
441.600	5.31E-06	260.922	-4.622	-3.88E-07	3.714	1.63E+10	-0.085518	77328.
446.400	3.63E-06	237.752	-4.969	-3.14E-07	3.384	1.63E+10	-0.059154	78192.
451.200	2.29E-06	213.219	-5.202	-2.48E-07	3.035	1.63E+10	-0.037722	79056.
456.000	1.25E-06	187.816	-5.342	-1.89E-07	2.673	1.63E+10	-0.020826	79920.
460.800	4.77E-07	161.934	-5.411	-1.37E-07	2.305	1.63E+10	-0.008024	80784.
465.600	-6.84E-08	135.867	-5.428	-9.36E-08	1.934	1.63E+10	0.001164	81648.
470.400	-4.22E-07	109.826	-5.408	-5.74E-08	1.563	1.63E+10	0.007246	82512.
475.200	-6.19E-07	83.953	-5.364	-2.89E-08	1.195	1.63E+10	0.010759	83376.
480.000	-6.99E-07	58.328	-4.857	-7.91E-09	0.830168	1.63E+10	0.200686	1.38E+06
484.800	-6.95E-07	37.326	-3.896	6.18E-09	0.531254	1.63E+10	0.199747	1.38E+06
489.600	-6.39E-07	20.926	-2.976	1.48E-08	0.297842	1.63E+10	0.183649	1.38E+06
494.400	-5.54E-07	8.758	-2.153	1.91E-08	0.124653	1.63E+10	0.159054	1.38E+06
499.200	-4.56E-07	0.254463	-1.457	2.05E-08	0.003622	1.63E+10	0.130901	1.38E+06
504.000	-3.57E-07	-5.233	-0.896916	1.97E-08	0.074484	1.63E+10	0.102646	1.38E+06

508.800	-2.66E-07	-8.356	-0.466931	1.77E-08	0.118929	1.63E+10	0.076515	1.38E+06
513.600	-1.87E-07	-9.716	-0.154227	1.51E-08	0.138283	1.63E+10	0.053778	1.38E+06
518.400	-1.22E-07	-9.837	0.058807	1.22E-08	0.140002	1.63E+10	0.034986	1.38E+06
523.200	-7.03E-08	-9.151	0.191229	9.38E-09	0.130248	1.63E+10	0.020189	1.38E+06
528.000	-3.17E-08	-8.001	0.261546	6.86E-09	0.113873	1.63E+10	0.009109	1.38E+06
532.800	-4.45E-09	-6.640	0.286473	4.70E-09	0.094511	1.63E+10	0.001277	1.38E+06
537.600	1.34E-08	-5.251	0.280281	2.95E-09	0.074731	1.63E+10	-0.003857	1.38E+06
542.400	2.39E-08	-3.950	0.254559	1.60E-09	0.056215	1.63E+10	-0.006860	1.38E+06
547.200	2.87E-08	-2.807	0.218275	6.01E-10	0.039949	1.63E+10	-0.008259	1.38E+06
552.000	2.96E-08	-1.854	0.178013	-8.54E-11	0.026391	1.63E+10	-0.008517	1.38E+06
556.800	2.79E-08	-1.098	0.138317	-5.20E-10	0.015626	1.63E+10	-0.008023	1.38E+06
561.600	2.47E-08	-0.526384	0.102063	-7.59E-10	0.007492	1.63E+10	-0.007083	1.38E+06
566.400	2.06E-08	-0.118076	0.070835	-8.54E-10	0.001681	1.63E+10	-0.005929	1.38E+06
571.200	1.65E-08	0.153629	0.045260	-8.49E-10	0.002187	1.63E+10	-0.004727	1.38E+06
576.000	1.25E-08	0.316422	0.025305	-7.80E-10	0.004504	1.63E+10	-0.003588	1.38E+06
580.800	8.97E-09	0.396556	0.010511	-6.75E-10	0.005644	1.63E+10	-0.002577	1.38E+06
585.600	6.01E-09	0.417324	0.000183	-5.55E-10	0.005940	1.63E+10	-0.001727	1.38E+06
590.400	3.64E-09	0.398308	-0.006473	-4.35E-10	0.005669	1.63E+10	-0.001046	1.38E+06
595.200	1.84E-09	0.355186	-0.010250	-3.24E-10	0.005055	1.63E+10	-0.000528	1.38E+06
600.000	5.33E-10	0.299908	-0.011884	-2.27E-10	0.004269	1.63E+10	-0.000153	1.38E+06
604.800	-3.46E-10	0.241101	-0.012013	-1.48E-10	0.003432	1.63E+10	9.95E-05	1.38E+06
609.600	-8.85E-10	0.184586	-0.011164	-8.50E-11	0.002627	1.63E+10	0.000254	1.38E+06
614.400	-1.16E-09	0.133929	-0.009752	-3.81E-11	0.001906	1.63E+10	0.000334	1.38E+06
619.200	-1.25E-09	0.090968	-0.008088	-5.02E-12	0.001295	1.63E+10	0.000359	1.38E+06
624.000	-1.21E-09	0.056287	-0.006390	1.67E-11	0.000801	1.63E+10	0.000348	1.38E+06
628.800	-1.09E-09	0.029621	-0.004803	2.93E-11	0.000422	1.63E+10	0.000313	1.38E+06
633.600	-9.29E-10	0.010177	-0.003410	3.52E-11	0.000145	1.63E+10	0.000267	1.38E+06
638.400	-7.53E-10	-0.003115	-0.002250	3.62E-11	4.43E-05	1.63E+10	0.000216	1.38E+06
643.200	-5.82E-10	-0.011420	-0.001329	3.41E-11	0.000163	1.63E+10	0.000167	1.38E+06
648.000	-4.26E-10	-0.015875	-0.000634	3.01E-11	0.000226	1.63E+10	0.000122	1.38E+06
652.800	-2.93E-10	-0.017508	-0.000138	2.51E-11	0.000249	1.63E+10	8.42E-05	1.38E+06
657.600	-1.85E-10	-0.017200	0.000192	2.00E-11	0.000245	1.63E+10	5.31E-05	1.38E+06
662.400	-1.01E-10	-0.015668	0.000389	1.52E-11	0.000223	1.63E+10	2.90E-05	1.38E+06
667.200	-3.91E-11	-0.013467	0.000485	1.09E-11	0.000192	1.63E+10	1.12E-05	1.38E+06
672.000	3.66E-12	-0.011008	0.000510	7.29E-12	0.000157	1.63E+10	-1.05E-06	1.38E+06
676.800	3.09E-11	-0.008573	0.000486	4.41E-12	0.000122	1.63E+10	-8.87E-06	1.38E+06
681.600	4.60E-11	-0.006342	0.000433	2.22E-12	9.03E-05	1.63E+10	-1.32E-05	1.38E+06
686.400	5.22E-11	-0.004415	0.000365	6.31E-13	6.28E-05	1.63E+10	-1.50E-05	1.38E+06
691.200	5.21E-11	-0.002834	0.000294	-4.36E-13	4.03E-05	1.63E+10	-1.50E-05	1.38E+06
696.000	4.80E-11	-0.001598	0.000225	-1.09E-12	2.27E-05	1.63E+10	-1.38E-05	1.38E+06
700.800	4.16E-11	-0.000679	0.000163	-1.42E-12	9.66E-06	1.63E+10	-1.20E-05	1.38E+06
705.600	3.43E-11	-3.50E-05	0.000110	-1.53E-12	4.98E-07	1.63E+10	-9.85E-06	1.38E+06
710.400	2.69E-11	0.000382	6.82E-05	-1.48E-12	5.43E-06	1.63E+10	-7.74E-06	1.38E+06
715.200	2.01E-11	0.000620	3.58E-05	-1.33E-12	8.82E-06	1.63E+10	-5.78E-06	1.38E+06
720.000	1.42E-11	0.000725	1.21E-05	-1.13E-12	1.03E-05	1.63E+10	-4.07E-06	1.38E+06
724.800	9.24E-12	0.000736	-4.00E-06	-9.17E-13	1.05E-05	1.63E+10	-2.65E-06	1.38E+06
729.600	5.36E-12	0.000686	-1.41E-05	-7.08E-13	9.77E-06	1.63E+10	-1.54E-06	1.38E+06
734.400	2.45E-12	0.000601	-1.95E-05	-5.18E-13	8.56E-06	1.63E+10	-7.03E-07	1.38E+06
739.200	3.84E-13	0.000500	-2.14E-05	-3.56E-13	7.11E-06	1.63E+10	-1.10E-07	1.38E+06
744.000	-9.72E-13	0.000396	-2.10E-05	-2.24E-13	5.63E-06	1.63E+10	2.79E-07	1.38E+06
748.800	-1.77E-12	0.000298	-1.91E-05	-1.22E-13	4.24E-06	1.63E+10	5.08E-07	1.38E+06
753.600	-2.14E-12	0.000212	-1.64E-05	-4.69E-14	3.02E-06	1.63E+10	6.16E-07	1.38E+06
758.400	-2.22E-12	0.000141	-1.34E-05	5.11E-15	2.00E-06	1.63E+10	6.37E-07	1.38E+06
763.200	-2.09E-12	8.36E-05	-1.04E-05	3.81E-14	1.19E-06	1.63E+10	6.02E-07	1.38E+06
768.000	-1.85E-12	4.05E-05	-7.71E-06	5.64E-14	5.76E-07	1.63E+10	5.32E-07	1.38E+06
772.800	-1.55E-12	9.61E-06	-5.36E-06	6.38E-14	1.37E-07	1.63E+10	4.46E-07	1.38E+06
777.600	-1.24E-12	-1.10E-05	-3.44E-06	6.36E-14	1.56E-07	1.63E+10	3.56E-07	1.38E+06
782.400	-9.42E-13	-2.34E-05	-1.93E-06	5.85E-14	3.33E-07	1.63E+10	2.71E-07	1.38E+06
787.200	-6.78E-13	-2.95E-05	-8.15E-07	5.07E-14	4.20E-07	1.63E+10	1.95E-07	1.38E+06
792.000	-4.56E-13	-3.12E-05	-3.30E-08	4.18E-14	4.44E-07	1.63E+10	1.31E-07	1.38E+06
796.800	-2.77E-13	-2.99E-05	4.72E-07	3.28E-14	4.25E-07	1.63E+10	7.96E-08	1.38E+06
801.600	-1.41E-13	-2.67E-05	7.60E-07	2.45E-14	3.80E-07	1.63E+10	4.05E-08	1.38E+06
806.400	-4.24E-14	-2.26E-05	8.87E-07	1.72E-14	3.21E-07	1.63E+10	1.22E-08	1.38E+06
811.200	2.43E-14	-1.82E-05	8.99E-07	1.12E-14	2.59E-07	1.63E+10	-6.98E-09	1.38E+06
816.000	6.53E-14	-1.39E-05	8.37E-07	6.48E-15	1.98E-07	1.63E+10	-1.87E-08	1.38E+06
820.800	8.65E-14	-1.01E-05	7.33E-07	2.94E-15	1.44E-07	1.63E+10	-2.49E-08	1.38E+06
825.600	9.35E-14	-6.89E-06	6.09E-07	4.38E-16	9.81E-08	1.63E+10	-2.69E-08	1.38E+06
830.400	9.07E-14	-4.28E-06	4.82E-07	-1.21E-15	6.09E-08	1.63E+10	-2.61E-08	1.38E+06
835.200	8.19E-14	-2.27E-06	3.63E-07	-2.17E-15	3.23E-08	1.63E+10	-2.35E-08	1.38E+06
840.000	6.99E-14	-7.99E-07	2.58E-07	-2.62E-15	1.14E-08	1.63E+10	-2.01E-08	1.38E+06
844.800	5.67E-14	2.08E-07	1.71E-07	-2.71E-15	2.96E-09	1.63E+10	-1.63E-08	1.38E+06
849.600	4.39E-14	8.39E-07	1.01E-07	-2.56E-15	1.19E-08	1.63E+10	-1.26E-08	1.38E+06
854.400	3.22E-14	1.18E-06	4.88E-08	-2.26E-15	1.68E-08	1.63E+10	-9.25E-09	1.38E+06
859.200	2.22E-14	1.31E-06	1.12E-08	-1.89E-15	1.86E-08	1.63E+10	-6.38E-09	1.38E+06
864.000	1.41E-14	1.29E-06	-1.38E-08	-1.51E-15	1.83E-08	1.63E+10	-4.04E-09	1.38E+06
868.800	7.72E-15	1.18E-06	-2.88E-08	-1.15E-15	1.67E-08	1.63E+10	-2.22E-09	1.38E+06
873.600	3.04E-15	1.01E-06	-3.62E-08	-8.25E-16	1.44E-08	1.63E+10	-8.74E-10	1.38E+06
878.400	-2.03E-16	8.28E-07	-3.81E-08	-5.54E-16	1.18E-08	1.63E+10	5.82E-11	1.38E+06
883.200	-2.28E-15	6.46E-07	-3.64E-08	-3.37E-16	9.19E-09	1.63E+10	6.54E-10	1.38E+06
888.000	-3.44E-15	4.78E-07	-3.25E-08	-1.71E-16	6.81E-09	1.63E+10	9.88E-10	1.38E+06
892.800	-3.92E-15	3.34E-07	-2.74E-08	-5.19E-17	4.75E-09	1.63E+10	1.13E-09	1.38E+06

897.600	-3.94E-15	2.15E-07	-2.20E-08	2.88E-17	3.06E-09	1.63E+10	1.13E-09	1.38E+06
902.400	-3.65E-15	1.22E-07	-1.68E-08	7.85E-17	1.74E-09	1.63E+10	1.05E-09	1.38E+06
907.200	-3.18E-15	5.40E-08	-1.21E-08	1.04E-16	7.68E-10	1.63E+10	9.14E-10	1.38E+06
912.000	-2.64E-15	6.58E-09	-8.05E-09	1.13E-16	9.37E-11	1.63E+10	7.59E-10	1.38E+06
916.800	-2.09E-15	-2.33E-08	-4.78E-09	1.11E-16	3.32E-10	1.63E+10	6.01E-10	1.38E+06
921.600	-1.58E-15	-3.93E-08	-2.25E-09	1.02E-16	5.60E-10	1.63E+10	4.53E-10	1.38E+06
926.400	-1.12E-15	-4.49E-08	-3.96E-10	8.93E-17	6.40E-10	1.63E+10	3.21E-10	1.38E+06
931.200	-7.20E-16	-4.32E-08	8.70E-10	7.63E-17	6.14E-10	1.63E+10	2.07E-10	1.38E+06
936.000	-3.84E-16	-3.66E-08	1.63E-09	6.46E-17	5.21E-10	1.63E+10	1.10E-10	1.38E+06
940.800	-9.96E-17	-2.75E-08	1.96E-09	5.52E-17	3.91E-10	1.63E+10	2.86E-11	1.38E+06
945.600	1.46E-16	-1.77E-08	1.93E-09	4.85E-17	2.52E-10	1.63E+10	-4.19E-11	1.38E+06
950.400	3.66E-16	-8.94E-09	1.58E-09	4.46E-17	1.27E-10	1.63E+10	-1.05E-10	1.38E+06
955.200	5.74E-16	-2.57E-09	9.32E-10	4.29E-17	3.66E-11	1.63E+10	-1.65E-10	1.38E+06
960.000	7.78E-16	0.000	0.000	4.25E-17	0.000	1.63E+10	-2.23E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	0.09881549 in
Computed slope at pile head	=	-0.00113585
Maximum bending moment	=	158144.39077 lbs-in
Maximum shear force	=	3000.00000 lbs
Depth of maximum bending moment	=	81.60000000 in
Depth of maximum shear force	=	9.60000000 in
Number of iterations	=	7
Number of zero deflection points	=	10

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 6000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.247069	7.85E-08	6000.000	-0.002677	1.12E-09	1.63E+10	0.000	0.000
4.800	0.234221	28800.	6000.000	-0.002672	409.906	1.63E+10	0.000	0.000
9.600	0.221414	57600.	6000.000	-0.002660	819.812	1.63E+10	0.000	0.000
14.400	0.208687	86400.	5985.985	-0.002639	1229.718	1.63E+10	-5.840	134.315
19.200	0.196084	1.15E+05	5926.646	-0.002609	1637.709	1.63E+10	-18.885	462.294
24.000	0.183642	1.43E+05	5802.608	-0.002571	2039.508	1.63E+10	-32.798	857.258
28.800	0.171403	1.71E+05	5612.338	-0.002525	2430.551	1.63E+10	-46.481	1301.672
33.600	0.159406	1.97E+05	5359.335	-0.002470	2806.351	1.63E+10	-58.936	1774.682
38.400	0.147687	2.22E+05	5051.646	-0.002409	3162.825	1.63E+10	-69.267	2251.265
43.200	0.136283	2.46E+05	4701.439	-0.002340	3496.585	1.63E+10	-76.652	2699.752
48.000	0.125226	2.67E+05	4324.834	-0.002264	3805.208	1.63E+10	-80.267	3076.686
52.800	0.114546	2.87E+05	3942.208	-0.002183	4087.510	1.63E+10	-79.161	3317.207
57.600	0.104273	3.05E+05	3541.349	-0.002095	4343.853	1.63E+10	-87.864	4044.629
62.400	0.094431	3.21E+05	3089.454	-0.002003	4571.383	1.63E+10	-100.426	5104.729
67.200	0.085043	3.35E+05	2580.853	-0.001907	4765.982	1.63E+10	-111.491	6292.800
72.000	0.076128	3.46E+05	2024.875	-0.001806	4924.019	1.63E+10	-120.166	7576.654
76.800	0.067703	3.54E+05	1434.678	-0.001703	5042.651	1.63E+10	-125.749	8915.385
81.600	0.059778	3.60E+05	826.009	-0.001598	5120.047	1.63E+10	-127.863	10267.
86.400	0.052362	3.62E+05	215.554	-0.001492	5155.513	1.63E+10	-126.493	11596.
91.200	0.045458	3.62E+05	-380.685	-0.001385	5149.499	1.63E+10	-121.940	12876.
96.000	0.039065	3.59E+05	-948.635	-0.001279	5103.498	1.63E+10	-114.706	14094.
100.800	0.033179	3.53E+05	-1476.863	-0.001174	5019.882	1.63E+10	-105.389	15247.
105.600	0.027792	3.44E+05	-1956.801	-0.001072	4901.706	1.63E+10	-94.585	16336.
110.400	0.022891	3.34E+05	-2382.620	-0.000972	4752.514	1.63E+10	-82.839	17370.
115.200	0.018463	3.22E+05	-2750.905	-0.000875	4576.156	1.63E+10	-70.613	18358.
120.000	0.014489	3.08E+05	-3060.256	-0.000783	4376.643	1.63E+10	-58.283	19309.
124.800	0.010949	2.92E+05	-3310.894	-0.000694	4158.017	1.63E+10	-46.149	20231.

129.600	0.007823	2.76E+05	-3504.309	-0.000611	3924.258	1.63E+10	-34.440	21132.
134.400	0.005086	2.59E+05	-3642.960	-0.000532	3679.204	1.63E+10	-23.331	22017.
139.200	0.002715	2.41E+05	-3730.032	-0.000459	3426.501	1.63E+10	-12.949	22892.
144.000	0.000684	2.23E+05	-3769.241	-0.000390	3169.550	1.63E+10	-3.388	23760.
148.800	-0.001032	2.05E+05	-3764.668	-0.000327	2911.489	1.63E+10	5.293	24623.
153.600	-0.002459	1.87E+05	-3720.637	-0.000270	2655.163	1.63E+10	13.054	25485.
158.400	-0.003622	1.69E+05	-3641.597	-0.000217	2403.118	1.63E+10	19.879	26345.
163.200	-0.004546	1.52E+05	-3532.043	-0.000170	2157.592	1.63E+10	25.769	27206.
168.000	-0.005257	1.35E+05	-3396.430	-0.000128	1920.517	1.63E+10	30.737	28066.
172.800	-0.005776	1.19E+05	-3239.113	-9.07E-05	1693.520	1.63E+10	34.812	28928.
177.600	-0.006128	1.04E+05	-3064.294	-5.79E-05	1477.939	1.63E+10	38.030	29790.
182.400	-0.006332	89570.	-2875.971	-2.94E-05	1274.829	1.63E+10	40.438	30654.
187.200	-0.006410	76231.	-2677.905	-5.01E-06	1084.980	1.63E+10	42.089	31518.
192.000	-0.006380	63862.	-2473.588	1.56E-05	908.933	1.63E+10	43.043	32382.
196.800	-0.006260	52484.	-2266.219	3.27E-05	747.000	1.63E+10	43.361	33247.
201.600	-0.006066	42106.	-2058.693	4.67E-05	599.287	1.63E+10	43.109	34112.
206.400	-0.005812	32721.	-1853.586	5.77E-05	465.710	1.63E+10	42.353	34978.
211.200	-0.005512	24311.	-1653.154	6.61E-05	346.022	1.63E+10	41.160	35844.
216.000	-0.005178	16851.	-1459.338	7.22E-05	239.831	1.63E+10	39.596	36709.
220.800	-0.004819	10302.	-1273.765	7.62E-05	146.625	1.63E+10	37.725	37574.
225.600	-0.004446	4622.367	-1097.764	7.83E-05	65.789	1.63E+10	35.609	38440.
230.400	-0.004067	-236.687	-932.374	7.90E-05	3.369	1.63E+10	33.304	39305.
235.200	-0.003688	-4328.421	-778.368	7.83E-05	61.606	1.63E+10	30.865	40170.
240.000	-0.003315	-7709.022	-636.271	7.66E-05	109.721	1.63E+10	28.342	41035.
244.800	-0.002953	-10437.	-506.379	7.39E-05	148.543	1.63E+10	25.780	41900.
249.600	-0.002606	-12570.	-388.785	7.05E-05	178.911	1.63E+10	23.218	42765.
254.400	-0.002277	-14169.	-283.400	6.66E-05	201.665	1.63E+10	20.693	43629.
259.200	-0.001967	-15291.	-189.975	6.22E-05	217.633	1.63E+10	18.234	44494.
264.000	-0.001679	-15993.	-108.127	5.76E-05	227.622	1.63E+10	15.869	45359.
268.800	-0.001414	-16329.	-37.361	5.28E-05	232.407	1.63E+10	13.617	46223.
273.600	-0.001172	-16351.	22.912	4.80E-05	232.727	1.63E+10	11.496	47087.
278.400	-0.000953	-16109.	73.350	4.33E-05	229.277	1.63E+10	9.519	47952.
283.200	-0.000757	-15647.	114.665	3.86E-05	222.705	1.63E+10	7.695	48816.
288.000	-0.000583	-15008.	147.604	3.41E-05	213.609	1.63E+10	6.029	49680.
292.800	-0.000430	-14230.	172.930	2.98E-05	202.537	1.63E+10	4.524	50544.
297.600	-0.000297	-13348.	191.416	2.57E-05	189.981	1.63E+10	3.179	51408.
302.400	-0.000183	-12393.	203.825	2.19E-05	176.382	1.63E+10	1.991	52272.
307.200	-8.64E-05	-11391.	210.901	1.84E-05	162.131	1.63E+10	0.956981	53136.
312.000	-6.13E-06	-10368.	213.363	1.52E-05	147.566	1.63E+10	0.069001	54000.
316.800	5.95E-05	-9343.046	211.896	1.23E-05	132.978	1.63E+10	-0.680375	54864.
321.600	0.000112	-8333.784	207.143	9.70E-06	118.613	1.63E+10	-1.300	55728.
326.400	0.000153	-7354.476	199.703	7.39E-06	104.675	1.63E+10	-1.800	56592.
331.200	0.000183	-6416.633	190.129	5.36E-06	91.327	1.63E+10	-2.190	57456.
336.000	0.000204	-5529.238	178.921	3.60E-06	78.697	1.63E+10	-2.480	58320.
340.800	0.000218	-4698.987	166.532	2.10E-06	66.880	1.63E+10	-2.682	59184.
345.600	0.000224	-3930.528	153.362	8.27E-07	55.943	1.63E+10	-2.806	60048.
350.400	0.000225	-3226.710	139.762	-2.27E-07	45.925	1.63E+10	-2.861	60912.
355.200	0.000222	-2588.809	126.036	-1.08E-06	36.846	1.63E+10	-2.858	61776.
360.000	0.000215	-2016.762	112.441	-1.76E-06	28.704	1.63E+10	-2.806	62640.
364.800	0.000205	-1509.376	99.191	-2.28E-06	21.483	1.63E+10	-2.714	63504.
369.600	0.000193	-1064.530	86.460	-2.66E-06	15.151	1.63E+10	-2.590	64368.
374.400	0.000180	-679.363	74.384	-2.92E-06	9.669	1.63E+10	-2.441	65232.
379.200	0.000165	-350.445	63.067	-3.07E-06	4.988	1.63E+10	-2.274	66096.
384.000	0.000150	-73.924	52.580	-3.13E-06	1.052	1.63E+10	-2.095	66960.
388.800	0.000135	154.325	42.970	-3.12E-06	2.196	1.63E+10	-1.909	67824.
393.600	0.000120	338.591	34.259	-3.05E-06	4.819	1.63E+10	-1.721	68688.
398.400	0.000106	483.212	26.448	-2.93E-06	6.877	1.63E+10	-1.534	69552.
403.200	9.22E-05	592.492	19.522	-2.77E-06	8.433	1.63E+10	-1.352	70416.
408.000	7.93E-05	670.621	13.451	-2.58E-06	9.545	1.63E+10	-1.178	71280.
412.800	6.74E-05	721.619	8.194	-2.38E-06	10.271	1.63E+10	-1.013	72144.
417.600	5.65E-05	749.282	3.701	-2.16E-06	10.664	1.63E+10	-0.859217	73008.
422.400	4.67E-05	757.149	-0.084325	-1.94E-06	10.776	1.63E+10	-0.718025	73872.
427.200	3.79E-05	748.473	-3.223	-1.72E-06	10.653	1.63E+10	-0.589956	74736.
432.000	3.02E-05	726.204	-5.780	-1.50E-06	10.336	1.63E+10	-0.475395	75600.
436.800	2.35E-05	692.982	-7.820	-1.29E-06	9.863	1.63E+10	-0.374413	76464.
441.600	1.78E-05	651.133	-9.407	-1.09E-06	9.267	1.63E+10	-0.286808	77328.
446.400	1.30E-05	602.677	-10.604	-9.07E-07	8.578	1.63E+10	-0.212143	78192.
451.200	9.09E-06	549.332	-11.473	-7.37E-07	7.819	1.63E+10	-0.149789	79056.
456.000	5.94E-06	492.537	-12.070	-5.84E-07	7.010	1.63E+10	-0.098950	79920.
460.800	3.49E-06	433.461	-12.448	-4.48E-07	6.169	1.63E+10	-0.058694	80784.
465.600	1.64E-06	373.034	-12.656	-3.29E-07	5.309	1.63E+10	-0.027976	81648.
470.400	3.29E-07	311.961	-12.737	-2.28E-07	4.440	1.63E+10	-0.005660	82512.
475.200	-5.45E-07	250.759	-12.728	-1.45E-07	3.569	1.63E+10	0.009470	83376.
480.000	-1.07E-06	189.774	-11.971	-8.04E-08	2.701	1.63E+10	0.306025	1.38E+06
484.800	-1.32E-06	135.841	-10.328	-3.24E-08	1.933	1.63E+10	0.378348	1.38E+06
489.600	-1.38E-06	90.624	-8.471	9.02E-10	1.290	1.63E+10	0.395506	1.38E+06
494.400	-1.31E-06	54.520	-6.620	2.23E-08	0.775977	1.63E+10	0.375861	1.38E+06
499.200	-1.16E-06	27.076	-4.916	3.43E-08	0.385369	1.63E+10	0.334075	1.38E+06
504.000	-9.79E-07	7.329	-3.439	3.94E-08	0.104312	1.63E+10	0.281294	1.38E+06
508.800	-7.85E-07	-5.937	-2.222	3.96E-08	0.084502	1.63E+10	0.225536	1.38E+06
513.600	-5.99E-07	-14.007	-1.268	3.66E-08	0.199357	1.63E+10	0.172189	1.38E+06

518.400	-4.33E-07	-18.109	-0.555807	3.19E-08	0.257747	1.63E+10	0.124531	1.38E+06
523.200	-2.93E-07	-19.343	-0.054789	2.64E-08	0.275300	1.63E+10	0.084227	1.38E+06
528.000	-1.80E-07	-18.635	0.271621	2.08E-08	0.265233	1.63E+10	0.051778	1.38E+06
532.800	-9.36E-08	-16.735	0.460438	1.56E-08	0.238187	1.63E+10	0.026896	1.38E+06
537.600	-3.07E-08	-14.215	0.546135	1.10E-08	0.202321	1.63E+10	0.008811	1.38E+06
542.400	1.22E-08	-11.492	0.558879	7.24E-09	0.163566	1.63E+10	-0.003501	1.38E+06
547.200	3.88E-08	-8.850	0.523723	4.24E-09	0.125958	1.63E+10	-0.011147	1.38E+06
552.000	5.29E-08	-6.464	0.460494	1.99E-09	0.092006	1.63E+10	-0.015198	1.38E+06
556.800	5.79E-08	-4.429	0.384119	3.82E-10	0.063039	1.63E+10	-0.016625	1.38E+06
561.600	5.66E-08	-2.777	0.305215	-6.79E-10	0.039522	1.63E+10	-0.016252	1.38E+06
566.400	5.13E-08	-1.499	0.230804	-1.31E-09	0.021335	1.63E+10	-0.014752	1.38E+06
571.200	4.40E-08	-0.561106	0.165055	-1.61E-09	0.007986	1.63E+10	-0.012643	1.38E+06
576.000	3.59E-08	0.085507	0.109975	-1.68E-09	0.001217	1.63E+10	-0.010307	1.38E+06
580.800	2.79E-08	0.494654	0.066028	-1.60E-09	0.007040	1.63E+10	-0.008005	1.38E+06
585.600	2.05E-08	0.719372	0.032648	-1.42E-09	0.010239	1.63E+10	-0.005904	1.38E+06
590.400	1.43E-08	0.808070	0.008651	-1.19E-09	0.011501	1.63E+10	-0.004095	1.38E+06
595.200	9.10E-09	0.802426	-0.007449	-9.56E-10	0.011421	1.63E+10	-0.002614	1.38E+06
600.000	5.08E-09	0.736556	-0.017225	-7.29E-10	0.010483	1.63E+10	-0.001459	1.38E+06
604.800	2.10E-09	0.637069	-0.022174	-5.27E-10	0.009067	1.63E+10	-0.000603	1.38E+06
609.600	2.15E-11	0.523684	-0.023637	-3.56E-10	0.007454	1.63E+10	-6.18E-06	1.38E+06
614.400	-1.32E-09	0.410156	-0.022744	-2.18E-10	0.005838	1.63E+10	0.000378	1.38E+06
619.200	-2.07E-09	0.305342	-0.020406	-1.13E-10	0.004346	1.63E+10	0.000596	1.38E+06
624.000	-2.40E-09	0.214262	-0.017319	-3.65E-11	0.003050	1.63E+10	0.000690	1.38E+06
628.800	-2.43E-09	0.139077	-0.013991	1.55E-11	0.001979	1.63E+10	0.000697	1.38E+06
633.600	-2.25E-09	0.079944	-0.010766	4.78E-11	0.001138	1.63E+10	0.000647	1.38E+06
638.400	-1.97E-09	0.035721	-0.007857	6.48E-11	0.000508	1.63E+10	0.000565	1.38E+06
643.200	-1.63E-09	0.004514	-0.005377	7.07E-11	6.42E-05	1.63E+10	0.000468	1.38E+06
648.000	-1.29E-09	-0.015903	-0.003366	6.91E-11	0.000226	1.63E+10	0.000370	1.38E+06
652.800	-9.67E-10	-0.027798	-0.001811	6.26E-11	0.000396	1.63E+10	0.000278	1.38E+06
657.600	-6.86E-10	-0.033290	-0.000671	5.36E-11	0.000474	1.63E+10	0.000197	1.38E+06
662.400	-4.52E-10	-0.034239	0.000114	4.37E-11	0.000487	1.63E+10	0.000130	1.38E+06
667.200	-2.67E-10	-0.032194	0.000610	3.39E-11	0.000458	1.63E+10	7.67E-05	1.38E+06
672.000	-1.27E-10	-0.028382	0.000882	2.50E-11	0.000404	1.63E+10	3.65E-05	1.38E+06
676.800	-2.71E-11	-0.023729	0.000988	1.73E-11	0.000338	1.63E+10	7.79E-06	1.38E+06
681.600	3.92E-11	-0.018897	0.000980	1.10E-11	0.000269	1.63E+10	-1.13E-05	1.38E+06
686.400	7.88E-11	-0.014324	0.000898	6.14E-12	0.000204	1.63E+10	-2.26E-05	1.38E+06
691.200	9.81E-11	-0.010272	0.000776	2.52E-12	0.000146	1.63E+10	-2.82E-05	1.38E+06
696.000	1.03E-10	-0.006870	0.000638	-5.05E-15	9.78E-05	1.63E+10	-2.96E-05	1.38E+06
700.800	9.81E-11	-0.004150	0.000499	-1.63E-12	5.91E-05	1.63E+10	-2.82E-05	1.38E+06
705.600	8.73E-11	-0.002079	0.000371	-2.54E-12	2.96E-05	1.63E+10	-2.51E-05	1.38E+06
710.400	7.37E-11	-0.000586	0.000260	-2.94E-12	8.34E-06	1.63E+10	-2.12E-05	1.38E+06
715.200	5.91E-11	0.000420	0.000169	-2.96E-12	5.97E-06	1.63E+10	-1.70E-05	1.38E+06
720.000	4.52E-11	0.001034	9.67E-05	-2.75E-12	1.47E-05	1.63E+10	-1.30E-05	1.38E+06
724.800	3.28E-11	0.001348	4.30E-05	-2.40E-12	1.92E-05	1.63E+10	-9.41E-06	1.38E+06
729.600	2.22E-11	0.001446	5.04E-06	-1.99E-12	2.06E-05	1.63E+10	-6.38E-06	1.38E+06
734.400	1.37E-11	0.001397	-1.97E-05	-1.57E-12	1.99E-05	1.63E+10	-3.94E-06	1.38E+06
739.200	7.17E-12	0.001257	-3.41E-05	-1.18E-12	1.79E-05	1.63E+10	-2.06E-06	1.38E+06
744.000	2.41E-12	0.001069	-4.07E-05	-8.34E-13	1.52E-05	1.63E+10	-6.94E-07	1.38E+06
748.800	-8.32E-13	0.000866	-4.18E-05	-5.49E-13	1.23E-05	1.63E+10	2.39E-07	1.38E+06
753.600	-2.86E-12	0.000668	-3.93E-05	-3.23E-13	9.50E-06	1.63E+10	8.20E-07	1.38E+06
758.400	-3.93E-12	0.000488	-3.46E-05	-1.53E-13	6.95E-06	1.63E+10	1.13E-06	1.38E+06
763.200	-4.32E-12	0.000335	-2.89E-05	-3.16E-14	4.77E-06	1.63E+10	1.24E-06	1.38E+06
768.000	-4.24E-12	0.000211	-2.30E-05	4.88E-14	3.00E-06	1.63E+10	1.22E-06	1.38E+06
772.800	-3.85E-12	0.000115	-1.74E-05	9.68E-14	1.63E-06	1.63E+10	1.11E-06	1.38E+06
777.600	-3.31E-12	4.38E-05	-1.25E-05	1.20E-13	6.23E-07	1.63E+10	9.51E-07	1.38E+06
782.400	-2.70E-12	-5.19E-06	-8.34E-06	1.26E-13	7.39E-08	1.63E+10	7.76E-07	1.38E+06
787.200	-2.10E-12	-3.63E-05	-5.03E-06	1.20E-13	5.16E-07	1.63E+10	6.04E-07	1.38E+06
792.000	-1.55E-12	-5.34E-05	-2.51E-06	1.06E-13	7.61E-07	1.63E+10	4.46E-07	1.38E+06
796.800	-1.08E-12	-6.03E-05	-6.93E-07	8.97E-14	8.59E-07	1.63E+10	3.10E-07	1.38E+06
801.600	-6.91E-13	-6.01E-05	5.28E-07	7.20E-14	8.55E-07	1.63E+10	1.98E-07	1.38E+06
806.400	-3.88E-13	-5.53E-05	1.27E-06	5.50E-14	7.87E-07	1.63E+10	1.11E-07	1.38E+06
811.200	-1.63E-13	-4.79E-05	1.65E-06	3.98E-14	6.82E-07	1.63E+10	4.68E-08	1.38E+06
816.000	-5.50E-15	-3.94E-05	1.77E-06	2.70E-14	5.61E-07	1.63E+10	1.58E-09	1.38E+06
820.800	9.61E-14	-3.09E-05	1.70E-06	1.66E-14	4.40E-07	1.63E+10	-2.76E-08	1.38E+06
825.600	1.54E-13	-2.31E-05	1.53E-06	8.66E-15	3.28E-07	1.63E+10	-4.42E-08	1.38E+06
830.400	1.79E-13	-1.62E-05	1.30E-06	2.88E-15	2.31E-07	1.63E+10	-5.15E-08	1.38E+06
835.200	1.82E-13	-1.06E-05	1.05E-06	-1.06E-15	1.50E-07	1.63E+10	-5.22E-08	1.38E+06
840.000	1.69E-13	-6.10E-06	8.12E-07	-3.52E-15	8.68E-08	1.63E+10	-4.85E-08	1.38E+06
844.800	1.48E-13	-2.76E-06	5.94E-07	-4.82E-15	3.93E-08	1.63E+10	-4.25E-08	1.38E+06
849.600	1.23E-13	-3.97E-07	4.07E-07	-5.29E-15	5.65E-09	1.63E+10	-3.52E-08	1.38E+06
854.400	9.70E-14	1.15E-06	2.56E-07	-5.17E-15	1.64E-08	1.63E+10	-2.79E-08	1.38E+06
859.200	7.30E-14	2.06E-06	1.38E-07	-4.70E-15	2.93E-08	1.63E+10	-2.10E-08	1.38E+06
864.000	5.19E-14	2.48E-06	5.23E-08	-4.03E-15	3.53E-08	1.63E+10	-1.49E-08	1.38E+06
868.800	3.43E-14	2.56E-06	-7.15E-09	-3.29E-15	3.64E-08	1.63E+10	-9.86E-09	1.38E+06
873.600	2.03E-14	2.41E-06	-4.48E-08	-2.56E-15	3.43E-08	1.63E+10	-5.84E-09	1.38E+06
878.400	9.75E-15	2.13E-06	-6.56E-08	-1.89E-15	3.03E-08	1.63E+10	-2.80E-09	1.38E+06
883.200	2.18E-15	1.78E-06	-7.38E-08	-1.31E-15	2.54E-08	1.63E+10	-6.27E-10	1.38E+06
888.000	-2.87E-15	1.42E-06	-7.33E-08	-8.42E-16	2.02E-08	1.63E+10	8.23E-10	1.38E+06
892.800	-5.90E-15	1.08E-06	-6.73E-08	-4.74E-16	1.54E-08	1.63E+10	1.70E-09	1.38E+06
897.600	-7.41E-15	7.76E-07	-5.81E-08	-2.01E-16	1.10E-08	1.63E+10	2.13E-09	1.38E+06
902.400	-7.83E-15	5.22E-07	-4.76E-08	-9.55E-18	7.42E-09	1.63E+10	2.25E-09	1.38E+06

907.200	-7.50E-15	3.19E-07	-3.70E-08	1.14E-16	4.54E-09	1.63E+10	2.16E-09	1.38E+06
912.000	-6.73E-15	1.66E-07	-2.72E-08	1.86E-16	2.37E-09	1.63E+10	1.93E-09	1.38E+06
916.800	-5.72E-15	5.82E-08	-1.86E-08	2.19E-16	8.28E-10	1.63E+10	1.64E-09	1.38E+06
921.600	-4.63E-15	-1.21E-08	-1.15E-08	2.26E-16	1.73E-10	1.63E+10	1.33E-09	1.38E+06
926.400	-3.56E-15	-5.18E-08	-5.82E-09	2.16E-16	7.38E-10	1.63E+10	1.02E-09	1.38E+06
931.200	-2.55E-15	-6.80E-08	-1.60E-09	1.99E-16	9.68E-10	1.63E+10	7.34E-10	1.38E+06
936.000	-1.65E-15	-6.72E-08	1.30E-09	1.79E-16	9.57E-10	1.63E+10	4.74E-10	1.38E+06
940.800	-8.40E-16	-5.55E-08	3.01E-09	1.61E-16	7.91E-10	1.63E+10	2.41E-10	1.38E+06
945.600	-1.09E-16	-3.83E-08	3.67E-09	1.47E-16	5.45E-10	1.63E+10	3.12E-11	1.38E+06
950.400	5.68E-16	-2.03E-08	3.35E-09	1.38E-16	2.90E-10	1.63E+10	-1.63E-10	1.38E+06
955.200	1.22E-15	-6.14E-09	2.12E-09	1.34E-16	8.75E-11	1.63E+10	-3.50E-10	1.38E+06
960.000	1.86E-15	0.000	0.000	1.33E-16	0.000	1.63E+10	-5.33E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	0.24706942 in
Computed slope at pile head	=	-0.00267672
Maximum bending moment	=	362226.35686 lbs-in
Maximum shear force	=	6000.00000 lbs
Depth of maximum bending moment	=	86.40000000 in
Depth of maximum shear force	=	9.60000000 in
Number of iterations	=	12
Number of zero deflection points	=	10

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 9000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.474061	-1.96E-07	9000.000	-0.004795	2.79E-09	1.63E+10	0.000	0.000
4.800	0.451044	43200.	9000.000	-0.004789	614.859	1.63E+10	0.000	0.000
9.600	0.428088	86400.	9000.000	-0.004770	1229.718	1.63E+10	0.000	0.000
14.400	0.405254	1.30E+05	8985.939	-0.004738	1844.577	1.63E+10	-5.859	69.392
19.200	0.382603	1.73E+05	8926.209	-0.004694	2457.515	1.63E+10	-19.029	238.734
24.000	0.360196	2.15E+05	8800.734	-0.004636	3064.213	1.63E+10	-33.252	443.115
28.800	0.338094	2.57E+05	8607.021	-0.004567	3660.007	1.63E+10	-47.462	673.832
33.600	0.316355	2.98E+05	8347.675	-0.004485	4240.236	1.63E+10	-60.599	919.451
38.400	0.295037	3.37E+05	8030.390	-0.004392	4800.594	1.63E+10	-71.604	1164.928
43.200	0.274196	3.75E+05	7667.923	-0.004287	5337.472	1.63E+10	-79.424	1390.384
48.000	0.253885	4.11E+05	7278.086	-0.004171	5848.304	1.63E+10	-83.008	1569.358
52.800	0.234155	4.45E+05	6883.773	-0.004045	6331.915	1.63E+10	-81.290	1666.376
57.600	0.215054	4.77E+05	6469.215	-0.003909	6788.870	1.63E+10	-91.443	2041.006
62.400	0.196627	5.07E+05	5990.850	-0.003764	7215.839	1.63E+10	-107.876	2633.440
67.200	0.178916	5.34E+05	5431.183	-0.003611	7607.432	1.63E+10	-125.319	3362.070
72.000	0.161962	5.59E+05	4786.351	-0.003450	7957.930	1.63E+10	-143.361	4248.742
76.800	0.145797	5.80E+05	4055.195	-0.003282	8261.417	1.63E+10	-161.287	5309.971
81.600	0.130453	5.98E+05	3240.846	-0.003109	8512.014	1.63E+10	-178.025	6550.396
86.400	0.115955	6.12E+05	2352.289	-0.002930	8704.231	1.63E+10	-192.207	7956.477
91.200	0.102321	6.21E+05	1405.300	-0.002749	8833.419	1.63E+10	-202.372	9493.538
96.000	0.089564	6.25E+05	422.125	-0.002566	8896.245	1.63E+10	-207.284	11109.
100.800	0.077691	6.25E+05	-570.313	-0.002382	8891.097	1.63E+10	-206.232	12742.
105.600	0.066701	6.20E+05	-1543.331	-0.002198	8818.320	1.63E+10	-199.193	14335.
110.400	0.056587	6.10E+05	-2469.690	-0.002017	8680.223	1.63E+10	-186.790	15845.
115.200	0.047334	5.96E+05	-3326.199	-0.001840	8480.873	1.63E+10	-170.089	17248.
120.000	0.038924	5.78E+05	-4095.214	-0.001667	8225.747	1.63E+10	-150.334	18539.
124.800	0.031331	5.57E+05	-4764.994	-0.001500	7921.322	1.63E+10	-128.741	19723.
129.600	0.024525	5.32E+05	-5329.239	-0.001340	7574.680	1.63E+10	-106.361	20817.
134.400	0.018471	5.05E+05	-5786.175	-0.001187	7193.160	1.63E+10	-84.029	21836.

139.200	0.013132	4.77E+05	-6137.541	-0.001042	6784.084	1.63E+10	-62.373	22799.
144.000	0.008466	4.46E+05	-6387.647	-0.000906	6354.554	1.63E+10	-41.838	23721.
148.800	0.004431	4.15E+05	-6542.595	-0.000779	5911.305	1.63E+10	-22.724	24613.
153.600	0.000984	3.84E+05	-6609.671	-0.000662	5460.605	1.63E+10	-5.225	25487.
158.400	-0.001921	3.52E+05	-6596.898	-0.000553	5008.191	1.63E+10	10.547	26350.
163.200	-0.004329	3.20E+05	-6512.697	-0.000454	4559.235	1.63E+10	24.537	27207.
168.000	-0.006284	2.89E+05	-6365.642	-0.000365	4118.326	1.63E+10	36.736	28061.
172.800	-0.007830	2.59E+05	-6164.276	-0.000284	3689.463	1.63E+10	47.167	28915.
177.600	-0.009009	2.30E+05	-5916.971	-0.000212	3276.068	1.63E+10	55.877	29770.
182.400	-0.009864	2.02E+05	-5631.817	-0.000148	2880.996	1.63E+10	62.937	30627.
187.200	-0.010432	1.76E+05	-5316.538	-9.24E-05	2506.563	1.63E+10	68.430	31487.
192.000	-0.010751	1.51E+05	-4978.418	-4.42E-05	2154.569	1.63E+10	72.453	32349.
196.800	-0.010856	1.28E+05	-4624.253	-3.00E-06	1826.335	1.63E+10	75.116	33213.
201.600	-0.010779	1.07E+05	-4260.299	3.17E-05	1522.733	1.63E+10	76.532	34079.
206.400	-0.010552	87419.	-3892.250	6.03E-05	1244.227	1.63E+10	76.822	34946.
211.200	-0.010201	69622.	-3525.213	8.34E-05	990.914	1.63E+10	76.110	35814.
216.000	-0.009751	53577.	-3163.704	0.000102	762.558	1.63E+10	74.518	36681.
220.800	-0.009226	39250.	-2811.650	0.000115	558.640	1.63E+10	72.171	37548.
225.600	-0.008645	26586.	-2472.381	0.000125	378.388	1.63E+10	69.191	38416.
230.400	-0.008027	15515.	-2148.659	0.000131	220.825	1.63E+10	65.693	39284.
235.200	-0.007387	5958.398	-1842.701	0.000134	84.805	1.63E+10	61.789	40152.
240.000	-0.006738	-2174.760	-1556.214	0.000135	30.953	1.63E+10	57.581	41019.
244.800	-0.006092	-8981.258	-1290.426	0.000133	127.829	1.63E+10	53.165	41887.
249.600	-0.005459	-14563.	-1046.124	0.000130	207.271	1.63E+10	48.628	42754.
254.400	-0.004847	-19024.	-823.700	0.000125	270.766	1.63E+10	44.049	43621.
259.200	-0.004262	-22470.	-623.187	0.000119	319.817	1.63E+10	39.498	44487.
264.000	-0.003708	-25007.	-444.305	0.000112	355.916	1.63E+10	35.036	45353.
268.800	-0.003190	-26736.	-286.507	0.000104	380.525	1.63E+10	30.714	46219.
273.600	-0.002709	-27757.	-149.015	9.60E-05	395.063	1.63E+10	26.575	47084.
278.400	-0.002268	-28166.	-30.862	8.78E-05	400.886	1.63E+10	22.655	47949.
283.200	-0.001866	-28053.	69.064	7.95E-05	399.280	1.63E+10	18.981	48814.
288.000	-0.001505	-27503.	151.991	7.13E-05	391.449	1.63E+10	15.572	49679.
292.800	-0.001182	-26594.	219.227	6.34E-05	378.512	1.63E+10	12.443	50543.
297.600	-0.000896	-25399.	272.128	5.57E-05	361.495	1.63E+10	9.599	51408.
302.400	-0.000647	-23982.	312.073	4.84E-05	341.330	1.63E+10	7.044	52272.
307.200	-0.000431	-22403.	340.439	4.16E-05	318.855	1.63E+10	4.775	53136.
312.000	-0.000247	-20714.	358.579	3.53E-05	294.814	1.63E+10	2.784	54000.
316.800	-9.28E-05	-18960.	367.806	2.94E-05	269.860	1.63E+10	1.061	54864.
321.600	3.50E-05	-17183.	369.379	2.41E-05	244.559	1.63E+10	-0.405899	55728.
326.400	0.000138	-15414.	364.486	1.93E-05	219.390	1.63E+10	-1.633	56592.
331.200	0.000220	-13684.	354.243	1.50E-05	194.757	1.63E+10	-2.636	57456.
336.000	0.000283	-12014.	339.677	1.12E-05	170.988	1.63E+10	-3.433	58320.
340.800	0.000328	-10423.	321.733	7.92E-06	148.345	1.63E+10	-4.044	59184.
345.600	0.000359	-8924.991	301.260	5.07E-06	127.028	1.63E+10	-4.486	60048.
350.400	0.000377	-7530.623	279.021	2.65E-06	107.182	1.63E+10	-4.780	60912.
355.200	0.000384	-6246.385	255.687	6.22E-07	88.904	1.63E+10	-4.943	61776.
360.000	0.000383	-5076.032	231.839	-1.05E-06	72.246	1.63E+10	-4.993	62640.
364.800	0.000374	-4020.728	207.979	-2.38E-06	57.226	1.63E+10	-4.948	63504.
369.600	0.000360	-3079.436	184.524	-3.43E-06	43.829	1.63E+10	-4.824	64368.
374.400	0.000341	-2249.293	161.821	-4.21E-06	32.014	1.63E+10	-4.636	65232.
379.200	0.000319	-1525.954	140.144	-4.77E-06	21.719	1.63E+10	-4.397	66096.
384.000	0.000295	-903.911	119.706	-5.13E-06	12.865	1.63E+10	-4.119	66960.
388.800	0.000270	-376.780	100.661	-5.32E-06	5.363	1.63E+10	-3.816	67824.
393.600	0.000244	62.434	83.114	-5.36E-06	0.888612	1.63E+10	-3.495	68688.
398.400	0.000219	421.115	67.125	-5.29E-06	5.994	1.63E+10	-3.167	69552.
403.200	0.000193	706.830	52.713	-5.13E-06	10.060	1.63E+10	-2.838	70416.
408.000	0.000169	927.158	39.866	-4.89E-06	13.196	1.63E+10	-2.515	71280.
412.800	0.000147	1089.543	28.544	-4.59E-06	15.507	1.63E+10	-2.203	72144.
417.600	0.000125	1201.178	18.683	-4.25E-06	17.096	1.63E+10	-1.906	73008.
422.400	0.000106	1268.903	10.204	-3.89E-06	18.060	1.63E+10	-1.627	73872.
427.200	8.80E-05	1299.134	3.010	-3.51E-06	18.490	1.63E+10	-1.370	74736.
432.000	7.21E-05	1297.803	-3.001	-3.13E-06	18.471	1.63E+10	-1.135	75600.
436.800	5.80E-05	1270.326	-7.940	-2.75E-06	18.080	1.63E+10	-0.923307	76464.
441.600	4.57E-05	1221.575	-11.922	-2.38E-06	17.386	1.63E+10	-0.735641	77328.
446.400	3.51E-05	1155.876	-15.059	-2.03E-06	16.451	1.63E+10	-0.571677	78192.
451.200	2.62E-05	1077.005	-17.465	-1.70E-06	15.329	1.63E+10	-0.430819	79056.
456.000	1.87E-05	988.208	-19.248	-1.40E-06	14.065	1.63E+10	-0.312092	79920.
460.800	1.27E-05	892.220	-20.512	-1.12E-06	12.699	1.63E+10	-0.214207	80784.
465.600	7.97E-06	791.297	-21.351	-8.74E-07	11.262	1.63E+10	-0.135608	81648.
470.400	4.34E-06	687.250	-21.855	-6.56E-07	9.782	1.63E+10	-0.074526	82512.
475.200	1.67E-06	581.486	-22.104	-4.70E-07	8.276	1.63E+10	-0.029008	83376.
480.000	-1.73E-07	475.053	-22.054	-3.14E-07	6.761	1.63E+10	0.049808	1.38E+06
484.800	-1.35E-06	369.768	-21.007	-1.90E-07	5.263	1.63E+10	0.386475	1.38E+06
489.600	-1.99E-06	273.387	-18.704	-9.50E-08	3.891	1.63E+10	0.572979	1.38E+06
494.400	-2.26E-06	190.208	-15.773	-2.67E-08	2.707	1.63E+10	0.648460	1.38E+06
499.200	-2.25E-06	121.969	-12.664	1.92E-08	1.736	1.63E+10	0.646697	1.38E+06
504.000	-2.07E-06	68.630	-9.683	4.73E-08	0.976802	1.63E+10	0.595402	1.38E+06
508.800	-1.80E-06	29.009	-7.015	6.17E-08	0.412884	1.63E+10	0.516236	1.38E+06
513.600	-1.48E-06	1.282	-4.756	6.61E-08	0.018254	1.63E+10	0.425289	1.38E+06
518.400	-1.16E-06	-16.646	-2.934	6.39E-08	0.236914	1.63E+10	0.333822	1.38E+06
523.200	-8.67E-07	-26.882	-1.535	5.75E-08	0.382614	1.63E+10	0.249114	1.38E+06

528.000	-6.10E-07	-31.380	-0.516152	4.89E-08	0.446623	1.63E+10	0.175323	1.38E+06
532.800	-3.98E-07	-31.838	0.178887	3.96E-08	0.453139	1.63E+10	0.114276	1.38E+06
537.600	-2.30E-07	-29.662	0.611929	3.05E-08	0.422180	1.63E+10	0.066158	1.38E+06
542.400	-1.05E-07	-25.963	0.842916	2.23E-08	0.369527	1.63E+10	0.030086	1.38E+06
547.200	-1.59E-08	-21.570	0.926062	1.53E-08	0.307008	1.63E+10	0.004558	1.38E+06
552.000	4.25E-08	-17.073	0.907695	9.65E-09	0.242995	1.63E+10	-0.012211	1.38E+06
556.800	7.67E-08	-12.857	0.825479	5.24E-09	0.182985	1.63E+10	-0.022046	1.38E+06
561.600	9.28E-08	-9.148	0.708585	2.00E-09	0.130205	1.63E+10	-0.026660	1.38E+06
566.400	9.59E-08	-6.054	0.578459	-2.39E-10	0.086167	1.63E+10	-0.027559	1.38E+06
571.200	9.05E-08	-3.595	0.449918	-1.66E-09	0.051167	1.63E+10	-0.026000	1.38E+06
576.000	8.00E-08	-1.735	0.332366	-2.45E-09	0.024693	1.63E+10	-0.022980	1.38E+06
580.800	6.70E-08	-0.404277	0.230999	-2.76E-09	0.005754	1.63E+10	-0.019256	1.38E+06
585.600	5.35E-08	0.482689	0.147902	-2.75E-09	0.006870	1.63E+10	-0.015368	1.38E+06
590.400	4.06E-08	1.016	0.082997	-2.53E-09	0.014455	1.63E+10	-0.011676	1.38E+06
595.200	2.92E-08	1.279	0.034825	-2.19E-09	0.018210	1.63E+10	-0.008396	1.38E+06
600.000	1.96E-08	1.350	0.001148	-1.80E-09	0.019213	1.63E+10	-0.005636	1.38E+06
604.800	1.19E-08	1.290	-0.020595	-1.41E-09	0.018367	1.63E+10	-0.003424	1.38E+06
609.600	6.04E-09	1.152	-0.032979	-1.05E-09	0.016399	1.63E+10	-0.001736	1.38E+06
614.400	1.80E-09	0.973882	-0.038384	-7.41E-10	0.013861	1.63E+10	-0.000516	1.38E+06
619.200	-1.07E-09	0.783694	-0.038882	-4.83E-10	0.011154	1.63E+10	0.000308	1.38E+06
624.000	-2.84E-09	0.600614	-0.036186	-2.79E-10	0.008548	1.63E+10	0.000815	1.38E+06
628.800	-3.75E-09	0.436305	-0.031646	-1.26E-10	0.006210	1.63E+10	0.001077	1.38E+06
633.600	-4.05E-09	0.296809	-0.026272	-1.80E-11	0.004224	1.63E+10	0.001162	1.38E+06
638.400	-3.92E-09	0.184090	-0.020779	5.28E-11	0.002620	1.63E+10	0.001127	1.38E+06
643.200	-3.54E-09	0.097332	-0.015635	9.42E-11	0.001385	1.63E+10	0.001017	1.38E+06
648.000	-3.02E-09	0.033995	-0.011115	1.14E-10	0.000484	1.63E+10	0.000867	1.38E+06
652.800	-2.45E-09	-0.009368	-0.007346	1.17E-10	0.000133	1.63E+10	0.000703	1.38E+06
657.600	-1.89E-09	-0.036524	-0.004353	1.10E-10	0.000520	1.63E+10	0.000544	1.38E+06
662.400	-1.39E-09	-0.051153	-0.002090	9.75E-11	0.000728	1.63E+10	0.000399	1.38E+06
667.200	-9.56E-10	-0.056591	-0.000474	8.16E-11	0.000805	1.63E+10	0.000275	1.38E+06
672.000	-6.05E-10	-0.055699	0.000603	6.51E-11	0.000793	1.63E+10	0.000174	1.38E+06
676.800	-3.31E-10	-0.050805	0.001248	4.94E-11	0.000723	1.63E+10	9.52E-05	1.38E+06
681.600	-1.30E-10	-0.043717	0.001566	3.55E-11	0.000622	1.63E+10	3.74E-05	1.38E+06
686.400	9.53E-12	-0.035769	0.001649	2.38E-11	0.000509	1.63E+10	-2.74E-06	1.38E+06
691.200	9.85E-11	-0.027884	0.001575	1.44E-11	0.000397	1.63E+10	-2.83E-05	1.38E+06
696.000	1.48E-10	-0.020650	0.001405	7.29E-12	0.000294	1.63E+10	-4.26E-05	1.38E+06
700.800	1.69E-10	-0.014398	0.001186	2.13E-12	0.000205	1.63E+10	-4.84E-05	1.38E+06
705.600	1.69E-10	-0.009260	0.000954	-1.35E-12	0.000132	1.63E+10	-4.84E-05	1.38E+06
710.400	1.56E-10	-0.005239	0.000731	-3.49E-12	7.46E-05	1.63E+10	-4.47E-05	1.38E+06
715.200	1.35E-10	-0.002246	0.000530	-4.59E-12	3.20E-05	1.63E+10	-3.88E-05	1.38E+06
720.000	1.11E-10	-0.000148	0.000360	-4.94E-12	2.11E-06	1.63E+10	-3.20E-05	1.38E+06
724.800	8.76E-11	0.001213	0.000223	-4.79E-12	1.73E-05	1.63E+10	-2.52E-05	1.38E+06
729.600	6.55E-11	0.001994	0.000118	-4.31E-12	2.84E-05	1.63E+10	-1.88E-05	1.38E+06
734.400	4.62E-11	0.002341	4.06E-05	-3.68E-12	3.33E-05	1.63E+10	-1.33E-05	1.38E+06
739.200	3.02E-11	0.002383	-1.21E-05	-2.98E-12	3.39E-05	1.63E+10	-8.67E-06	1.38E+06
744.000	1.76E-11	0.002225	-4.50E-05	-2.30E-12	3.17E-05	1.63E+10	-5.04E-06	1.38E+06
748.800	8.08E-12	0.001951	-6.27E-05	-1.69E-12	2.78E-05	1.63E+10	-2.32E-06	1.38E+06
753.600	1.35E-12	0.001623	-6.92E-05	-1.16E-12	2.31E-05	1.63E+10	-3.89E-07	1.38E+06
758.400	-3.07E-12	0.001287	-6.80E-05	-7.33E-13	1.83E-05	1.63E+10	8.83E-07	1.38E+06
763.200	-5.68E-12	0.000971	-6.20E-05	-4.01E-13	1.38E-05	1.63E+10	1.63E-06	1.38E+06
768.000	-6.92E-12	0.000692	-5.33E-05	-1.56E-13	9.85E-06	1.63E+10	1.99E-06	1.38E+06
772.800	-7.18E-12	0.000459	-4.36E-05	1.37E-14	6.53E-06	1.63E+10	2.06E-06	1.38E+06
777.600	-6.79E-12	0.000274	-3.39E-05	1.22E-13	3.90E-06	1.63E+10	1.95E-06	1.38E+06
782.400	-6.01E-12	0.000133	-2.51E-05	1.82E-13	1.90E-06	1.63E+10	1.73E-06	1.38E+06
787.200	-5.04E-12	3.28E-05	-1.75E-05	2.06E-13	4.66E-07	1.63E+10	1.45E-06	1.38E+06
792.000	-4.03E-12	-3.45E-05	-1.12E-05	2.06E-13	4.91E-07	1.63E+10	1.16E-06	1.38E+06
796.800	-3.07E-12	-7.50E-05	-6.34E-06	1.90E-13	1.07E-06	1.63E+10	8.81E-07	1.38E+06
801.600	-2.21E-12	-9.53E-05	-2.70E-06	1.65E-13	1.36E-06	1.63E+10	6.35E-07	1.38E+06
806.400	-1.49E-12	-0.000101	-1.49E-07	1.36E-13	1.44E-06	1.63E+10	4.27E-07	1.38E+06
811.200	-9.07E-13	-9.67E-05	1.50E-06	1.07E-13	1.38E-06	1.63E+10	2.61E-07	1.38E+06
816.000	-4.63E-13	-8.65E-05	2.45E-06	7.96E-14	1.23E-06	1.63E+10	1.33E-07	1.38E+06
820.800	-1.42E-13	-7.33E-05	2.86E-06	5.61E-14	1.04E-06	1.63E+10	4.09E-08	1.38E+06
825.600	7.50E-14	-5.90E-05	2.91E-06	3.66E-14	8.40E-07	1.63E+10	-2.16E-08	1.38E+06
830.400	2.09E-13	-4.53E-05	2.71E-06	2.12E-14	6.45E-07	1.63E+10	-6.01E-08	1.38E+06
835.200	2.79E-13	-3.30E-05	2.38E-06	9.72E-15	4.69E-07	1.63E+10	-8.02E-08	1.38E+06
840.000	3.02E-13	-2.25E-05	1.98E-06	1.55E-15	3.20E-07	1.63E+10	-8.69E-08	1.38E+06
844.800	2.94E-13	-1.40E-05	1.57E-06	-3.82E-15	1.99E-07	1.63E+10	-8.44E-08	1.38E+06
849.600	2.66E-13	-7.45E-06	1.18E-06	-6.98E-15	1.06E-07	1.63E+10	-7.63E-08	1.38E+06
854.400	2.27E-13	-2.67E-06	8.41E-07	-8.47E-15	3.79E-08	1.63E+10	-6.52E-08	1.38E+06
859.200	1.84E-13	6.18E-07	5.57E-07	-8.77E-15	8.79E-09	1.63E+10	-5.30E-08	1.38E+06
864.000	1.43E-13	2.68E-06	3.31E-07	-8.28E-15	3.82E-08	1.63E+10	-4.10E-08	1.38E+06
868.800	1.05E-13	3.80E-06	1.61E-07	-7.33E-15	5.41E-08	1.63E+10	-3.01E-08	1.38E+06
873.600	7.24E-14	4.22E-06	3.83E-08	-6.15E-15	6.01E-08	1.63E+10	-2.08E-08	1.38E+06
878.400	4.59E-14	4.17E-06	-4.32E-08	-4.91E-15	5.93E-08	1.63E+10	-1.32E-08	1.38E+06
883.200	2.53E-14	3.81E-06	-9.23E-08	-3.74E-15	5.42E-08	1.63E+10	-7.25E-09	1.38E+06
888.000	1.00E-14	3.28E-06	-1.17E-07	-2.69E-15	4.67E-08	1.63E+10	-2.87E-09	1.38E+06
892.800	-6.11E-16	2.69E-06	-1.23E-07	-1.82E-15	3.83E-08	1.63E+10	1.75E-10	1.38E+06
897.600	-7.42E-15	2.10E-06	-1.18E-07	-1.11E-15	2.99E-08	1.63E+10	2.13E-09	1.38E+06
902.400	-1.13E-14	1.56E-06	-1.05E-07	-5.71E-16	2.22E-08	1.63E+10	3.24E-09	1.38E+06
907.200	-1.29E-14	1.10E-06	-8.80E-08	-1.80E-16	1.56E-08	1.63E+10	3.71E-09	1.38E+06
912.000	-1.30E-14	7.16E-07	-7.01E-08	8.66E-17	1.02E-08	1.63E+10	3.73E-09	1.38E+06

916.800	-1.21E-14	4.22E-07	-5.28E-08	2.54E-16	6.01E-09	1.63E+10	3.47E-09	1.38E+06
921.600	-1.06E-14	2.09E-07	-3.72E-08	3.47E-16	2.97E-09	1.63E+10	3.03E-09	1.38E+06
926.400	-8.74E-15	6.51E-08	-2.39E-08	3.87E-16	9.27E-10	1.63E+10	2.51E-09	1.38E+06
931.200	-6.84E-15	-2.07E-08	-1.32E-08	3.94E-16	2.94E-10	1.63E+10	1.96E-09	1.38E+06
936.000	-4.96E-15	-6.13E-08	-5.04E-09	3.82E-16	8.72E-10	1.63E+10	1.42E-09	1.38E+06
940.800	-3.17E-15	-6.90E-08	5.68E-10	3.63E-16	9.83E-10	1.63E+10	9.10E-10	1.38E+06
945.600	-1.48E-15	-5.58E-08	3.77E-09	3.44E-16	7.95E-10	1.63E+10	4.24E-10	1.38E+06
950.400	1.38E-16	-3.28E-08	4.69E-09	3.31E-16	4.67E-10	1.63E+10	-3.96E-11	1.38E+06
955.200	1.71E-15	-1.08E-08	3.42E-09	3.25E-16	1.53E-10	1.63E+10	-4.90E-10	1.38E+06
960.000	3.26E-15	0.000	0.000	3.23E-16	0.000	1.63E+10	-9.36E-10	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	0.47406136 in
Computed slope at pile head	=	-0.00479526
Maximum bending moment	=	625050.16016 lbs-in
Maximum shear force	=	9000.00000 lbs
Depth of maximum bending moment	=	96.00000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	16
Number of zero deflection points	=	10

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 12000.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	0.775676	-7.07E-07	12000.	-0.007389	1.01E-08	1.63E+10	0.000	0.000
4.800	0.740210	57600.	12000.	-0.007380	819.812	1.63E+10	0.000	0.000
9.600	0.704826	1.15E+05	12000.	-0.007355	1639.624	1.63E+10	0.000	0.000
14.400	0.669605	1.73E+05	11986.	-0.007312	2459.436	1.63E+10	-5.859	41.997
19.200	0.634628	2.30E+05	11926.	-0.007253	3277.327	1.63E+10	-19.030	143.932
24.000	0.599976	2.87E+05	11801.	-0.007177	4088.978	1.63E+10	-33.255	266.053
28.800	0.565731	3.44E+05	11607.	-0.007084	4889.723	1.63E+10	-47.474	402.796
33.600	0.531971	3.99E+05	11348.	-0.006975	5674.901	1.63E+10	-60.624	547.011
38.400	0.498774	4.52E+05	11030.	-0.006849	6440.198	1.63E+10	-71.644	689.471
43.200	0.466218	5.05E+05	10667.	-0.006708	7182.002	1.63E+10	-79.473	818.224
48.000	0.434375	5.55E+05	10277.	-0.006552	7897.745	1.63E+10	-83.050	917.731
52.800	0.403316	6.03E+05	9882.892	-0.006382	8586.253	1.63E+10	-81.313	967.733
57.600	0.373109	6.50E+05	9468.139	-0.006197	9248.097	1.63E+10	-91.501	1177.145
62.400	0.343822	6.94E+05	8989.106	-0.005999	9879.936	1.63E+10	-108.096	1509.104
67.200	0.315515	7.36E+05	8427.242	-0.005789	10476.	1.63E+10	-126.013	1917.066
72.000	0.288249	7.75E+05	7776.251	-0.005566	11031.	1.63E+10	-145.233	2418.454
76.800	0.262079	8.11E+05	7030.024	-0.005333	11539.	1.63E+10	-165.695	3034.720
81.600	0.237055	8.43E+05	6182.987	-0.005089	11992.	1.63E+10	-187.237	3791.266
86.400	0.213221	8.70E+05	5230.849	-0.004837	12384.	1.63E+10	-209.487	4715.935
91.200	0.190618	8.93E+05	4171.949	-0.004578	12707.	1.63E+10	-231.721	5835.028
96.000	0.169277	9.10E+05	3009.279	-0.004312	12954.	1.63E+10	-252.725	7166.247
100.800	0.149222	9.22E+05	1752.931	-0.004042	13118.	1.63E+10	-270.754	8709.309
105.600	0.130470	9.27E+05	422.241	-0.003770	13193.	1.63E+10	-283.700	10437.
110.400	0.113028	9.26E+05	-953.438	-0.003497	13176.	1.63E+10	-289.500	12294.
115.200	0.096895	9.18E+05	-2336.278	-0.003226	13063.	1.63E+10	-286.684	14202.
120.000	0.082059	9.03E+05	-3683.909	-0.002958	12856.	1.63E+10	-274.829	16076.
124.800	0.068500	8.82E+05	-4954.727	-0.002695	12560.	1.63E+10	-254.678	17846.
129.600	0.056189	8.56E+05	-6112.865	-0.002439	12179.	1.63E+10	-227.880	19467.
134.400	0.045087	8.24E+05	-7131.453	-0.002192	11724.	1.63E+10	-196.532	20923.
139.200	0.035149	7.87E+05	-7993.671	-0.001954	11205.	1.63E+10	-162.725	22222.
144.000	0.026325	7.47E+05	-8692.012	-0.001728	10632.	1.63E+10	-128.251	23385.

148.800	0.018556	7.04E+05	-9226.570	-0.001515	10017.	1.63E+10	-94.482	24440.
153.600	0.011782	6.58E+05	-9603.050	-0.001314	9371.448	1.63E+10	-62.384	25415.
158.400	0.005939	6.12E+05	-9830.972	-0.001127	8705.161	1.63E+10	-32.583	26334.
163.200	0.000961	5.64E+05	-9922.241	-0.000954	8028.189	1.63E+10	-5.446	27216.
168.000	-0.003221	5.16E+05	-9890.103	-0.000795	7349.432	1.63E+10	18.837	28075.
172.800	-0.006672	4.69E+05	-9748.412	-0.000650	6676.852	1.63E+10	40.201	28923.
177.600	-0.009460	4.23E+05	-9511.137	-0.000519	6017.454	1.63E+10	58.663	29766.
182.400	-0.011650	3.78E+05	-9192.037	-0.000401	5377.294	1.63E+10	74.295	30610.
187.200	-0.013307	3.35E+05	-8804.438	-0.000296	4761.497	1.63E+10	87.205	31457.
192.000	-0.014490	2.93E+05	-8361.072	-0.000203	4174.297	1.63E+10	97.531	32308.
196.800	-0.015259	2.54E+05	-7873.972	-0.000123	3619.079	1.63E+10	105.427	33164.
201.600	-0.015669	2.18E+05	-7354.389	-5.32E-05	3098.434	1.63E+10	111.066	34025.
206.400	-0.015770	1.84E+05	-6812.726	5.85E-06	2614.209	1.63E+10	114.628	34889.
211.200	-0.015612	1.52E+05	-6258.493	5.53E-05	2167.574	1.63E+10	116.303	35757.
216.000	-0.015239	1.24E+05	-5700.297	9.59E-05	1759.078	1.63E+10	116.279	36625.
220.800	-0.014691	97571.	-5145.812	0.000129	1388.712	1.63E+10	114.757	37494.
225.600	-0.014005	74193.	-4601.743	0.000154	1055.978	1.63E+10	111.939	38364.
230.400	-0.013215	53394.	-4073.845	0.000173	759.951	1.63E+10	108.019	39236.
235.200	-0.012349	35084.	-3566.962	0.000186	499.347	1.63E+10	103.182	40108.
240.000	-0.011433	19151.	-3085.065	0.000194	272.578	1.63E+10	97.608	40980.
244.800	-0.010490	5467.485	-2631.288	0.000197	77.818	1.63E+10	91.465	41853.
249.600	-0.009539	-6109.016	-2207.987	0.000197	86.949	1.63E+10	84.910	42725.
254.400	-0.008597	-15729.	-1816.795	0.000194	223.871	1.63E+10	78.087	43596.
259.200	-0.007678	-23550.	-1458.683	0.000188	335.187	1.63E+10	71.126	44467.
264.000	-0.006791	-29733.	-1134.031	0.000180	423.179	1.63E+10	64.146	45337.
268.800	-0.005947	-34437.	-842.688	0.000171	490.136	1.63E+10	57.247	46206.
273.600	-0.005151	-37822.	-584.049	0.000160	538.320	1.63E+10	50.519	47074.
278.400	-0.004409	-40044.	-357.113	0.000149	569.937	1.63E+10	44.037	47942.
283.200	-0.003723	-41251.	-160.556	0.000137	587.114	1.63E+10	37.862	48808.
288.000	-0.003096	-41585.	7.211	0.000125	591.875	1.63E+10	32.042	49675.
292.800	-0.002528	-41181.	147.984	0.000112	586.129	1.63E+10	26.614	50540.
297.600	-0.002017	-40164.	263.707	0.000100	571.655	1.63E+10	21.604	51406.
302.400	-0.001564	-38650.	356.425	8.88E-05	550.097	1.63E+10	17.029	52271.
307.200	-0.001165	-36743.	428.240	7.77E-05	522.955	1.63E+10	12.894	53135.
312.000	-0.000818	-34539.	481.269	6.72E-05	491.584	1.63E+10	9.201	54000.
316.800	-0.000520	-32123.	517.607	5.74E-05	457.197	1.63E+10	5.940	54864.
321.600	-0.000267	-29570.	539.302	4.83E-05	420.861	1.63E+10	3.099	55728.
326.400	-5.60E-05	-26945.	548.326	4.00E-05	383.509	1.63E+10	0.660468	56592.
331.200	0.000117	-24306.	546.554	3.24E-05	345.940	1.63E+10	-1.398	57456.
336.000	0.000255	-21698.	535.753	2.57E-05	308.830	1.63E+10	-3.102	58320.
340.800	0.000363	-19163.	517.561	1.96E-05	272.738	1.63E+10	-4.478	59184.
345.600	0.000444	-16730.	493.487	1.44E-05	238.113	1.63E+10	-5.553	60048.
350.400	0.000501	-14425.	464.902	9.77E-06	205.310	1.63E+10	-6.357	60912.
355.200	0.000538	-12267.	433.037	5.84E-06	174.591	1.63E+10	-6.920	61776.
360.000	0.000557	-10268.	398.984	2.52E-06	146.142	1.63E+10	-7.269	62640.
364.800	0.000562	-8436.528	363.698	-2.34E-07	120.076	1.63E+10	-7.433	63504.
369.600	0.000555	-6776.412	328.002	-2.47E-06	96.448	1.63E+10	-7.440	64368.
374.400	0.000538	-5287.704	292.596	-4.25E-06	75.259	1.63E+10	-7.313	65232.
379.200	0.000514	-3967.488	258.059	-5.61E-06	56.469	1.63E+10	-7.077	66096.
384.000	0.000484	-2810.337	224.861	-6.61E-06	39.999	1.63E+10	-6.755	66960.
388.800	0.000451	-1808.822	193.371	-7.29E-06	25.745	1.63E+10	-6.366	67824.
393.600	0.000414	-953.974	163.867	-7.70E-06	13.578	1.63E+10	-5.928	68688.
398.400	0.000377	-235.701	136.543	-7.87E-06	3.355	1.63E+10	-5.457	69552.
403.200	0.000339	356.840	111.523	-7.86E-06	5.079	1.63E+10	-4.968	70416.
408.000	0.000301	834.916	88.864	-7.68E-06	11.883	1.63E+10	-4.473	71280.
412.800	0.000265	1209.938	68.573	-7.38E-06	17.221	1.63E+10	-3.982	72144.
417.600	0.000230	1493.216	50.607	-6.98E-06	21.253	1.63E+10	-3.504	73008.
422.400	0.000198	1695.764	34.887	-6.51E-06	24.136	1.63E+10	-3.046	73872.
427.200	0.000168	1828.135	21.305	-5.99E-06	26.020	1.63E+10	-2.614	74736.
432.000	0.000140	1900.288	9.725	-5.44E-06	27.047	1.63E+10	-2.211	75600.
436.800	0.000116	1921.496	-0.001564	-4.88E-06	27.348	1.63E+10	-1.842	76464.
441.600	9.35E-05	1900.273	-8.038	-4.32E-06	27.046	1.63E+10	-1.507	77328.
446.400	7.42E-05	1844.331	-14.554	-3.77E-06	26.250	1.63E+10	-1.208	78192.
451.200	5.74E-05	1760.556	-19.721	-3.24E-06	25.058	1.63E+10	-0.945076	79056.
456.000	4.31E-05	1655.007	-23.711	-2.73E-06	23.555	1.63E+10	-0.717539	79920.
460.800	3.11E-05	1532.926	-26.692	-2.26E-06	21.818	1.63E+10	-0.524233	80784.
465.600	2.14E-05	1398.766	-28.822	-1.83E-06	19.908	1.63E+10	-0.363485	81648.
470.400	1.36E-05	1256.232	-30.254	-1.44E-06	17.880	1.63E+10	-0.233205	82512.
475.200	7.54E-06	1108.325	-31.128	-1.09E-06	15.775	1.63E+10	-0.130961	83376.
480.000	3.08E-06	957.400	-33.566	-7.88E-07	13.627	1.63E+10	-0.884672	1.38E+06
484.800	-2.74E-08	786.093	-35.670	-5.31E-07	11.188	1.63E+10	0.007862	1.38E+06
489.600	-2.02E-06	614.967	-34.257	-3.25E-07	8.753	1.63E+10	0.581162	1.38E+06
494.400	-3.15E-06	457.230	-30.690	-1.67E-07	6.508	1.63E+10	0.904722	1.38E+06
499.200	-3.63E-06	320.339	-26.017	-5.28E-08	4.559	1.63E+10	1.043	1.38E+06
504.000	-3.66E-06	207.469	-20.994	2.49E-08	2.953	1.63E+10	1.050	1.38E+06
508.800	-3.39E-06	118.800	-16.135	7.29E-08	1.691	1.63E+10	0.973920	1.38E+06
513.600	-2.96E-06	52.570	-11.760	9.82E-08	0.748217	1.63E+10	0.849209	1.38E+06
518.400	-2.45E-06	5.906	-8.034	1.07E-07	0.084052	1.63E+10	0.703149	1.38E+06
523.200	-1.93E-06	-24.558	-5.015	1.04E-07	0.349533	1.63E+10	0.554690	1.38E+06
528.000	-1.45E-06	-42.242	-2.685	9.42E-08	0.601222	1.63E+10	0.416205	1.38E+06
532.800	-1.03E-06	-50.336	-0.978607	8.06E-08	0.716426	1.63E+10	0.294874	1.38E+06

537.600	-6.75E-07	-51.636	0.194656	6.56E-08	0.734934	1.63E+10	0.193985	1.38E+06
542.400	-3.97E-07	-48.467	0.933979	5.08E-08	0.689829	1.63E+10	0.114066	1.38E+06
547.200	-1.87E-07	-42.670	1.337	3.74E-08	0.607319	1.63E+10	0.053829	1.38E+06
552.000	-3.80E-08	-35.633	1.492	2.59E-08	0.507158	1.63E+10	0.010921	1.38E+06
556.800	6.10E-08	-28.344	1.476	1.64E-08	0.403415	1.63E+10	-0.017516	1.38E+06
561.600	1.20E-07	-21.459	1.352	9.12E-09	0.305416	1.63E+10	-0.034443	1.38E+06
566.400	1.48E-07	-15.367	1.167	3.69E-09	0.218711	1.63E+10	-0.042656	1.38E+06
571.200	1.55E-07	-10.258	0.957276	-8.02E-11	0.145995	1.63E+10	-0.044628	1.38E+06
576.000	1.48E-07	-6.177	0.748325	-2.50E-09	0.087914	1.63E+10	-0.042435	1.38E+06
580.800	1.31E-07	-3.074	0.555923	-3.86E-09	0.043748	1.63E+10	-0.037733	1.38E+06
585.600	1.11E-07	-0.839953	0.389086	-4.44E-09	0.011955	1.63E+10	-0.031783	1.38E+06
590.400	8.87E-08	0.661525	0.251629	-4.46E-09	0.009415	1.63E+10	-0.025491	1.38E+06
595.200	6.78E-08	1.576	0.143724	-4.14E-09	0.022426	1.63E+10	-0.019469	1.38E+06
600.000	4.90E-08	2.041	0.063192	-3.60E-09	0.029053	1.63E+10	-0.014086	1.38E+06
604.800	3.32E-08	2.182	0.006508	-2.98E-09	0.031061	1.63E+10	-0.009532	1.38E+06
609.600	2.04E-08	2.104	-0.030446	-2.35E-09	0.029942	1.63E+10	-0.005865	1.38E+06
614.400	1.06E-08	1.890	-0.051846	-1.76E-09	0.026901	1.63E+10	-0.003052	1.38E+06
619.200	3.50E-09	1.606	-0.061585	-1.25E-09	0.022858	1.63E+10	-0.001006	1.38E+06
624.000	-1.35E-09	1.299	-0.063070	-8.19E-10	0.018486	1.63E+10	0.000387	1.38E+06
628.800	-4.36E-09	1.001	-0.059133	-4.81E-10	0.014241	1.63E+10	0.001253	1.38E+06
633.600	-5.96E-09	0.731151	-0.052015	-2.26E-10	0.010406	1.63E+10	0.001713	1.38E+06
638.400	-6.53E-09	0.501209	-0.043403	-4.42E-11	0.007134	1.63E+10	0.001875	1.38E+06
643.200	-6.39E-09	0.314478	-0.034499	7.59E-11	0.004476	1.63E+10	0.001835	1.38E+06
648.000	-5.80E-09	0.170015	-0.026098	1.47E-10	0.002420	1.63E+10	0.001666	1.38E+06
652.800	-4.97E-09	0.063936	-0.018672	1.82E-10	0.000910	1.63E+10	0.001428	1.38E+06
657.600	-4.05E-09	-0.009233	-0.012448	1.90E-10	0.000131	1.63E+10	0.001165	1.38E+06
662.400	-3.15E-09	-0.055565	-0.007481	1.80E-10	0.000791	1.63E+10	0.000905	1.38E+06
667.200	-2.32E-09	-0.081048	-0.003706	1.60E-10	0.001154	1.63E+10	0.000668	1.38E+06
672.000	-1.61E-09	-0.091146	-0.000992	1.35E-10	0.001297	1.63E+10	0.000463	1.38E+06
676.800	-1.03E-09	-0.090570	0.000830	1.08E-10	0.001289	1.63E+10	0.000296	1.38E+06
681.600	-5.76E-10	-0.083175	0.001938	8.24E-11	0.001184	1.63E+10	0.000165	1.38E+06
686.400	-2.39E-10	-0.071968	0.002500	5.96E-11	0.001024	1.63E+10	6.86E-05	1.38E+06
691.200	-3.77E-12	-0.059179	0.002667	4.03E-11	0.000842	1.63E+10	1.08E-06	1.38E+06
696.000	1.48E-10	-0.046366	0.002568	2.47E-11	0.000660	1.63E+10	-4.24E-05	1.38E+06
700.800	2.34E-10	-0.034531	0.002305	1.28E-11	0.000491	1.63E+10	-6.71E-05	1.38E+06
705.600	2.71E-10	-0.024242	0.001957	4.17E-12	0.000345	1.63E+10	-7.78E-05	1.38E+06
710.400	2.74E-10	-0.015746	0.001581	-1.72E-12	0.000224	1.63E+10	-7.86E-05	1.38E+06
715.200	2.54E-10	-0.009061	0.001217	-5.37E-12	0.000129	1.63E+10	-7.31E-05	1.38E+06
720.000	2.22E-10	-0.004060	0.000889	-7.30E-12	5.78E-05	1.63E+10	-6.38E-05	1.38E+06
724.800	1.84E-10	-0.000530	0.000609	-7.98E-12	7.54E-06	1.63E+10	-5.29E-05	1.38E+06
729.600	1.46E-10	0.001782	0.000381	-7.80E-12	2.54E-05	1.63E+10	-4.18E-05	1.38E+06
734.400	1.09E-10	0.003130	0.000205	-7.07E-12	4.45E-05	1.63E+10	-3.14E-05	1.38E+06
739.200	7.76E-11	0.003754	7.65E-05	-6.06E-12	5.34E-05	1.63E+10	-2.23E-05	1.38E+06
744.000	5.12E-11	0.003864	-1.24E-05	-4.94E-12	5.50E-05	1.63E+10	-1.47E-05	1.38E+06
748.800	3.02E-11	0.003635	-6.85E-05	-3.83E-12	5.17E-05	1.63E+10	-8.69E-06	1.38E+06
753.600	1.44E-11	0.003206	-9.93E-05	-2.83E-12	4.56E-05	1.63E+10	-4.14E-06	1.38E+06
758.400	3.13E-12	0.002681	-0.000111	-1.96E-12	3.82E-05	1.63E+10	-8.98E-07	1.38E+06
763.200	-4.38E-12	0.002136	-0.000111	-1.25E-12	3.04E-05	1.63E+10	1.26E-06	1.38E+06
768.000	-8.87E-12	0.001620	-0.000101	-6.96E-13	2.31E-05	1.63E+10	2.55E-06	1.38E+06
772.800	-1.11E-11	0.001162	-8.77E-05	-2.87E-13	1.65E-05	1.63E+10	3.18E-06	1.38E+06
777.600	-1.16E-11	0.000778	-7.21E-05	-1.06E-15	1.11E-05	1.63E+10	3.34E-06	1.38E+06
782.400	-1.11E-11	0.000470	-5.64E-05	1.83E-13	6.69E-06	1.63E+10	3.18E-06	1.38E+06
787.200	-9.86E-12	0.000236	-4.20E-05	2.87E-13	3.36E-06	1.63E+10	2.83E-06	1.38E+06
792.000	-8.32E-12	6.71E-05	-2.94E-05	3.31E-13	9.55E-07	1.63E+10	2.39E-06	1.38E+06
796.800	-6.68E-12	-4.67E-05	-1.91E-05	3.34E-13	6.65E-07	1.63E+10	1.92E-06	1.38E+06
801.600	-5.11E-12	-0.000116	-1.10E-05	3.10E-13	1.65E-06	1.63E+10	1.47E-06	1.38E+06
806.400	-3.71E-12	-0.000152	-4.88E-06	2.71E-13	2.16E-06	1.63E+10	1.06E-06	1.38E+06
811.200	-2.51E-12	-0.000163	-5.93E-07	2.24E-13	2.32E-06	1.63E+10	7.22E-07	1.38E+06
816.000	-1.55E-12	-0.000158	2.21E-06	1.77E-13	2.24E-06	1.63E+10	4.46E-07	1.38E+06
820.800	-8.14E-13	-0.000142	3.84E-06	1.33E-13	2.02E-06	1.63E+10	2.34E-07	1.38E+06
825.600	-2.76E-13	-0.000121	4.59E-06	9.43E-14	1.72E-06	1.63E+10	7.92E-08	1.38E+06
830.400	9.19E-14	-9.78E-05	4.72E-06	6.21E-14	1.39E-06	1.63E+10	-2.64E-08	1.38E+06
835.200	3.21E-13	-7.55E-05	4.43E-06	3.66E-14	1.07E-06	1.63E+10	-9.22E-08	1.38E+06
840.000	4.43E-13	-5.52E-05	3.91E-06	1.74E-14	7.86E-07	1.63E+10	-1.27E-07	1.38E+06
844.800	4.88E-13	-3.80E-05	3.27E-06	3.65E-15	5.40E-07	1.63E+10	-1.40E-07	1.38E+06
849.600	4.78E-13	-2.39E-05	2.60E-06	-5.46E-15	3.40E-07	1.63E+10	-1.37E-07	1.38E+06
854.400	4.35E-13	-1.30E-05	1.97E-06	-1.09E-14	1.85E-07	1.63E+10	-1.25E-07	1.38E+06
859.200	3.74E-13	-4.99E-06	1.41E-06	-1.35E-14	7.10E-08	1.63E+10	-1.07E-07	1.38E+06
864.000	3.05E-13	5.49E-07	9.43E-07	-1.42E-14	7.81E-09	1.63E+10	-8.77E-08	1.38E+06
868.800	2.38E-13	4.07E-06	5.69E-07	-1.35E-14	5.79E-08	1.63E+10	-6.82E-08	1.38E+06
873.600	1.76E-13	6.01E-06	2.84E-07	-1.20E-14	8.56E-08	1.63E+10	-5.04E-08	1.38E+06
878.400	1.22E-13	6.80E-06	7.91E-08	-1.01E-14	9.67E-08	1.63E+10	-3.51E-08	1.38E+06
883.200	7.81E-14	6.77E-06	-5.89E-08	-8.15E-15	9.64E-08	1.63E+10	-2.24E-08	1.38E+06
888.000	4.38E-14	6.23E-06	-1.43E-07	-6.24E-15	8.87E-08	1.63E+10	-1.26E-08	1.38E+06
892.800	1.82E-14	5.40E-06	-1.86E-07	-4.52E-15	7.69E-08	1.63E+10	-5.24E-09	1.38E+06
897.600	3.53E-16	4.45E-06	-1.98E-07	-3.07E-15	6.33E-08	1.63E+10	-1.01E-10	1.38E+06
902.400	-1.13E-14	3.49E-06	-1.91E-07	-1.90E-15	4.97E-08	1.63E+10	3.23E-09	1.38E+06
907.200	-1.79E-14	2.62E-06	-1.71E-07	-1.00E-15	3.72E-08	1.63E+10	5.15E-09	1.38E+06
912.000	-2.09E-14	1.85E-06	-1.44E-07	-3.46E-16	2.64E-08	1.63E+10	6.00E-09	1.38E+06
916.800	-2.12E-14	1.23E-06	-1.15E-07	1.09E-16	1.75E-08	1.63E+10	6.10E-09	1.38E+06
921.600	-1.98E-14	7.50E-07	-8.67E-08	4.00E-16	1.07E-08	1.63E+10	5.70E-09	1.38E+06

926.400	-1.74E-14	3.99E-07	-6.10E-08	5.70E-16	5.68E-09	1.63E+10	5.00E-09	1.38E+06
931.200	-1.44E-14	1.64E-07	-3.91E-08	6.53E-16	2.33E-09	1.63E+10	4.13E-09	1.38E+06
936.000	-1.11E-14	2.37E-08	-2.15E-08	6.80E-16	3.37E-10	1.63E+10	3.20E-09	1.38E+06
940.800	-7.85E-15	-4.28E-08	-8.45E-09	6.77E-16	6.10E-10	1.63E+10	2.26E-09	1.38E+06
945.600	-4.63E-15	-5.74E-08	1.57E-10	6.63E-16	8.17E-10	1.63E+10	1.33E-09	1.38E+06
950.400	-1.49E-15	-4.13E-08	4.38E-09	6.48E-16	5.88E-10	1.63E+10	4.28E-10	1.38E+06
955.200	1.59E-15	-1.54E-08	4.31E-09	6.40E-16	2.19E-10	1.63E+10	-4.57E-10	1.38E+06
960.000	4.65E-15	0.000	0.000	6.37E-16	0.000	1.63E+10	-1.34E-09	6.89E+05

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of total stress due to combined axial stress and bending may not be representative of actual conditions.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection	=	0.77567595 in
Computed slope at pile head	=	-0.00738867
Maximum bending moment	=	926954.26058 lbs-in
Maximum shear force	=	12000.00000 lbs
Depth of maximum bending moment	=	105.60000 in
Depth of maximum shear force	=	9.60000000 in
Number of iterations	=	19
Number of zero deflection points	=	10

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Moment (Pile-head Condition Type 1)
Specified shear force at pile head = 17600.000 lbs
Specified moment at pile head = 0.000 in-lbs
Specified axial load at pile head = 0.000 lbs

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Flx. Rig. EI lbs-in**2	Soil Res. p lbs/in	Es*h F/L
0.000	1.537	-7.85E-07	17600.	-0.013353	1.12E-08	1.63E+10	0.000	0.000
4.800	1.473	84480.	17600.	-0.013340	1202.391	1.63E+10	0.000	0.000
9.600	1.409	1.69E+05	17600.	-0.013303	2404.782	1.63E+10	0.000	0.000
14.400	1.345	2.53E+05	17586.	-0.013241	3607.173	1.63E+10	-5.859	20.904
19.200	1.282	3.38E+05	17526.	-0.013154	4807.643	1.63E+10	-19.030	71.255
24.000	1.219	4.22E+05	17401.	-0.013042	6001.873	1.63E+10	-33.255	130.947
28.800	1.157	5.05E+05	17207.	-0.012905	7185.197	1.63E+10	-47.474	197.002
33.600	1.095	5.87E+05	16948.	-0.012745	8352.954	1.63E+10	-60.623	265.719
38.400	1.034	6.68E+05	16630.	-0.012560	9500.831	1.63E+10	-71.644	332.468
43.200	0.974539	7.47E+05	16267.	-0.012352	10625.	1.63E+10	-79.473	391.436
48.000	0.915778	8.24E+05	15877.	-0.012121	11724.	1.63E+10	-83.050	435.299
52.800	0.858182	8.99E+05	15483.	-0.011867	12795.	1.63E+10	-81.312	454.799
57.600	0.801856	9.72E+05	15068.	-0.011591	13839.	1.63E+10	-91.500	547.732
62.400	0.746905	1.04E+06	14589.	-0.011294	14853.	1.63E+10	-108.097	694.688
67.200	0.693429	1.11E+06	14027.	-0.010977	15832.	1.63E+10	-126.020	872.329
72.000	0.641526	1.18E+06	13376.	-0.010640	16770.	1.63E+10	-145.270	1086.937
76.800	0.591288	1.24E+06	12629.	-0.010284	17660.	1.63E+10	-165.847	1346.327
81.600	0.542804	1.30E+06	11781.	-0.009909	18496.	1.63E+10	-187.751	1660.272
86.400	0.496157	1.35E+06	10824.	-0.009519	19270.	1.63E+10	-210.980	2041.095
91.200	0.451424	1.40E+06	9752.235	-0.009113	19975.	1.63E+10	-235.532	2504.419
96.000	0.408674	1.45E+06	8559.614	-0.008693	20602.	1.63E+10	-261.393	3070.141
100.800	0.367971	1.49E+06	7239.839	-0.008261	21144.	1.63E+10	-288.513	3763.502
105.600	0.329368	1.52E+06	5787.244	-0.007819	21591.	1.63E+10	-316.736	4615.901
110.400	0.292909	1.54E+06	4197.480	-0.007369	21935.	1.63E+10	-345.666	5664.542
115.200	0.258629	1.56E+06	2469.231	-0.006912	22165.	1.63E+10	-374.437	6949.328
120.000	0.226550	1.56E+06	607.172	-0.006453	22272.	1.63E+10	-401.421	8505.039
124.800	0.196683	1.56E+06	-1373.852	-0.005992	22248.	1.63E+10	-424.006	10348.
129.600	0.169026	1.55E+06	-3444.312	-0.005533	22085.	1.63E+10	-438.686	12458.
134.400	0.143562	1.53E+06	-5557.159	-0.005080	21777.	1.63E+10	-441.667	14767.
139.200	0.120261	1.50E+06	-7649.115	-0.004634	21325.	1.63E+10	-429.982	17162.
144.000	0.099078	1.46E+06	-9647.390	-0.004199	20732.	1.63E+10	-402.633	19506.
148.800	0.079955	1.41E+06	-11480.	-0.003777	20007.	1.63E+10	-361.096	21678.
153.600	0.062818	1.35E+06	-13088.	-0.003372	19164.	1.63E+10	-308.858	23600.

158.400	0.047584	1.28E+06	-14430.	-0.002985	18219.	1.63E+10	-250.308	25249.
163.200	0.034160	1.21E+06	-15486.	-0.002619	17192.	1.63E+10	-189.633	26646.
168.000	0.022443	1.13E+06	-16254.	-0.002274	16103.	1.63E+10	-130.153	27836.
172.800	0.012326	1.05E+06	-16744.	-0.001953	14971.	1.63E+10	-74.140	28871.
177.600	0.003696	9.71E+05	-16977.	-0.001655	13815.	1.63E+10	-22.944	29802.
182.400	-0.003563	8.89E+05	-16977.	-0.001381	12651.	1.63E+10	22.763	30666.
187.200	-0.009565	8.08E+05	-16772.	-0.001131	11495.	1.63E+10	62.759	31495.
192.000	-0.014425	7.28E+05	-16388.	-0.000905	10360.	1.63E+10	97.094	32309.
196.800	-0.018256	6.50E+05	-15853.	-0.000702	9256.110	1.63E+10	125.972	33121.
201.600	-0.021168	5.76E+05	-15191.	-0.000522	8193.721	1.63E+10	149.677	33940.
206.400	-0.023266	5.04E+05	-14428.	-0.000363	7180.416	1.63E+10	168.533	34769.
211.200	-0.024652	4.37E+05	-13584.	-0.000224	6222.376	1.63E+10	182.888	35611.
216.000	-0.025419	3.74E+05	-12682.	-0.000105	5324.310	1.63E+10	193.065	36458.
220.800	-0.025657	3.15E+05	-11740.	-3.20E-06	4489.555	1.63E+10	199.433	37311.
225.600	-0.025449	2.61E+05	-10776.	8.17E-05	3720.199	1.63E+10	202.391	38173.
230.400	-0.024872	2.12E+05	-9804.429	0.000151	3017.212	1.63E+10	202.311	39043.
235.200	-0.023995	1.67E+05	-8839.931	0.000207	2380.567	1.63E+10	199.563	39920.
240.000	-0.022882	1.27E+05	-7894.154	0.000251	1809.365	1.63E+10	194.510	40802.
244.800	-0.021589	91475.	-6977.323	0.000283	1301.947	1.63E+10	187.503	41688.
249.600	-0.020167	60144.	-6098.004	0.000305	856.016	1.63E+10	178.880	42575.
254.400	-0.018660	32934.	-5263.176	0.000319	468.744	1.63E+10	168.965	43463.
259.200	-0.017106	9617.175	-4478.317	0.000325	136.880	1.63E+10	158.060	44351.
264.000	-0.015539	-10058.	-3747.496	0.000325	143.153	1.63E+10	146.449	45238.
268.800	-0.013986	-26359.	-3073.482	0.000320	375.161	1.63E+10	134.390	46124.
273.600	-0.012470	-39563.	-2457.862	0.000310	563.099	1.63E+10	122.118	47007.
278.400	-0.011010	-49954.	-1901.160	0.000297	710.991	1.63E+10	109.841	47887.
283.200	-0.009621	-57814.	-1402.963	0.000281	822.864	1.63E+10	97.741	48766.
288.000	-0.008313	-63423.	-962.050	0.000263	902.686	1.63E+10	85.973	49642.
292.800	-0.007095	-67050.	-576.509	0.000244	954.314	1.63E+10	74.669	50516.
297.600	-0.005972	-68957.	-243.864	0.000224	981.457	1.63E+10	63.933	51388.
302.400	-0.004946	-69391.	38.813	0.000203	987.635	1.63E+10	53.849	52258.
307.200	-0.004019	-68585.	274.796	0.000183	976.154	1.63E+10	44.477	53126.
312.000	-0.003188	-66753.	467.603	0.000163	950.088	1.63E+10	35.859	53994.
316.800	-0.002452	-64096.	620.913	0.000144	912.263	1.63E+10	28.019	54860.
321.600	-0.001806	-60792.	738.476	0.000126	865.249	1.63E+10	20.965	55726.
326.400	-0.001246	-57006.	824.052	0.000108	811.361	1.63E+10	14.691	56591.
331.200	-0.000767	-52882.	881.342	9.20E-05	752.655	1.63E+10	9.180	57456.
336.000	-0.000362	-48545.	913.944	7.71E-05	690.938	1.63E+10	4.404	58320.
340.800	-2.67E-05	-44108.	925.303	6.35E-05	627.778	1.63E+10	0.328788	59184.
345.600	0.000247	-39662.	918.682	5.11E-05	564.509	1.63E+10	-3.087	60048.
350.400	0.000464	-35288.	897.135	4.01E-05	502.253	1.63E+10	-5.891	60912.
355.200	0.000632	-31050.	863.486	3.03E-05	441.929	1.63E+10	-8.130	61776.
360.000	0.000755	-26999.	820.317	2.18E-05	384.271	1.63E+10	-9.857	62640.
364.800	0.000841	-23175.	769.964	1.44E-05	329.845	1.63E+10	-11.123	63503.
369.600	0.000893	-19607.	714.512	8.09E-06	279.066	1.63E+10	-11.981	64367.
374.400	0.000918	-16316.	655.800	2.80E-06	232.217	1.63E+10	-12.482	65231.
379.200	0.000920	-13312.	595.427	-1.56E-06	189.461	1.63E+10	-12.674	66095.
384.000	0.000903	-10599.	534.763	-5.08E-06	150.861	1.63E+10	-12.603	66959.
388.800	0.000872	-8177.798	474.957	-7.85E-06	116.393	1.63E+10	-12.316	67823.
393.600	0.000828	-6039.881	416.957	-9.94E-06	85.965	1.63E+10	-11.851	68687.
398.400	0.000776	-4175.008	361.523	-1.14E-05	59.422	1.63E+10	-11.247	69552.
403.200	0.000718	-2569.260	309.241	-1.24E-05	36.568	1.63E+10	-10.537	70416.
408.000	0.000657	-1206.293	260.544	-1.30E-05	17.169	1.63E+10	-9.753	71280.
412.800	0.000594	-68.040	215.725	-1.32E-05	0.968401	1.63E+10	-8.921	72144.
417.600	0.000530	864.667	174.958	-1.31E-05	12.307	1.63E+10	-8.065	73008.
422.400	0.000468	1611.553	138.309	-1.27E-05	22.937	1.63E+10	-7.205	73872.
427.200	0.000408	2192.436	105.758	-1.21E-05	31.205	1.63E+10	-6.358	74736.
432.000	0.000352	2626.831	77.207	-1.14E-05	37.387	1.63E+10	-5.538	75600.
436.800	0.000299	2933.627	52.499	-1.06E-05	41.754	1.63E+10	-4.757	76464.
441.600	0.000250	3130.817	31.424	-9.72E-06	44.560	1.63E+10	-4.024	77328.
446.400	0.000205	3235.297	13.738	-8.78E-06	46.047	1.63E+10	-3.345	78192.
451.200	0.000165	3262.705	-0.831495	-7.82E-06	46.438	1.63E+10	-2.726	79056.
456.000	0.000130	3227.314	-12.578	-6.87E-06	45.934	1.63E+10	-2.169	79920.
460.800	9.96E-05	3141.958	-21.804	-5.93E-06	44.719	1.63E+10	-1.676	80784.
465.600	7.33E-05	3017.994	-28.819	-5.02E-06	42.955	1.63E+10	-1.247	81648.
470.400	5.14E-05	2865.293	-33.931	-4.16E-06	40.781	1.63E+10	-0.882743	82512.
475.200	3.34E-05	2692.253	-37.443	-3.34E-06	38.318	1.63E+10	-0.580651	83376.
480.000	1.93E-05	2505.836	-52.151	-2.57E-06	35.665	1.63E+10	-5.548	1.38E+06
484.800	8.73E-06	2191.600	-71.488	-1.88E-06	31.193	1.63E+10	-2.509	1.38E+06
489.600	1.26E-06	1819.551	-78.377	-1.29E-06	25.897	1.63E+10	-0.360979	1.38E+06
494.400	-3.65E-06	1439.185	-76.727	-8.10E-07	20.484	1.63E+10	1.048	1.38E+06
499.200	-6.52E-06	1082.974	-69.715	-4.39E-07	15.414	1.63E+10	1.873	1.38E+06
504.000	-7.86E-06	769.925	-59.798	-1.66E-07	10.958	1.63E+10	2.258	1.38E+06
508.800	-8.11E-06	508.912	-48.784	2.24E-08	7.243	1.63E+10	2.331	1.38E+06
513.600	-7.65E-06	301.603	-37.917	1.42E-07	4.293	1.63E+10	2.197	1.38E+06
518.400	-6.75E-06	144.907	-27.989	2.07E-07	2.062	1.63E+10	1.940	1.38E+06
523.200	-5.65E-06	32.910	-19.434	2.34E-07	0.468405	1.63E+10	1.625	1.38E+06
528.000	-4.51E-06	-41.658	-12.426	2.32E-07	0.592910	1.63E+10	1.296	1.38E+06
532.800	-3.42E-06	-86.375	-6.955	2.14E-07	1.229	1.63E+10	0.983642	1.38E+06
537.600	-2.46E-06	-108.428	-2.898	1.85E-07	1.543	1.63E+10	0.706738	1.38E+06
542.400	-1.65E-06	-114.199	-0.064907	1.52E-07	1.625	1.63E+10	0.473867	1.38E+06

547.200	-1.00E-06	-109.052	1.762	1.19E-07	1.552	1.63E+10	0.287373	1.38E+06
552.000	-5.05E-07	-97.283	2.800	8.88E-08	1.385	1.63E+10	0.145165	1.38E+06
556.800	-1.48E-07	-82.170	3.250	6.24E-08	1.170	1.63E+10	0.042464	1.38E+06
561.600	9.35E-08	-66.079	3.288	4.05E-08	0.940487	1.63E+10	-0.026868	1.38E+06
566.400	2.41E-07	-50.606	3.057	2.34E-08	0.720270	1.63E+10	-0.069365	1.38E+06
571.200	3.18E-07	-36.732	2.671	1.05E-08	0.522801	1.63E+10	-0.091311	1.38E+06
576.000	3.42E-07	-24.962	2.216	1.42E-09	0.355274	1.63E+10	-0.098340	1.38E+06
580.800	3.31E-07	-15.457	1.752	-4.53E-09	0.219996	1.63E+10	-0.095232	1.38E+06
585.600	2.99E-07	-8.146	1.317	-8.01E-09	0.115946	1.63E+10	-0.085846	1.38E+06
590.400	2.55E-07	-2.814	0.935398	-9.62E-09	0.040048	1.63E+10	-0.073153	1.38E+06
595.200	2.06E-07	0.833435	0.617472	-9.91E-09	0.011862	1.63E+10	-0.059317	1.38E+06
600.000	1.59E-07	3.114	0.365147	-9.33E-09	0.044321	1.63E+10	-0.045819	1.38E+06
604.800	1.17E-07	4.339	0.174577	-8.23E-09	0.061754	1.63E+10	-0.033586	1.38E+06
609.600	8.05E-08	4.790	0.038497	-6.89E-09	0.068174	1.63E+10	-0.023114	1.38E+06
614.400	5.08E-08	4.708	-0.051990	-5.49E-09	0.067014	1.63E+10	-0.014588	1.38E+06
619.200	2.78E-08	4.291	-0.106142	-4.16E-09	0.061070	1.63E+10	-0.007975	1.38E+06
624.000	1.08E-08	3.689	-0.132729	-2.99E-09	0.052512	1.63E+10	-0.003103	1.38E+06
628.800	-9.39E-10	3.017	-0.139529	-2.00E-09	0.042935	1.63E+10	0.000270	1.38E+06
633.600	-8.42E-09	2.350	-0.133080	-1.21E-09	0.033447	1.63E+10	0.002418	1.38E+06
638.400	-1.26E-08	1.739	-0.118610	-6.10E-10	0.024752	1.63E+10	0.003611	1.38E+06
643.200	-1.43E-08	1.211	-0.100106	-1.75E-10	0.017241	1.63E+10	0.004099	1.38E+06
648.000	-1.43E-08	0.778034	-0.080443	1.18E-10	0.011074	1.63E+10	0.004094	1.38E+06
652.800	-1.31E-08	0.439075	-0.061559	2.97E-10	0.006249	1.63E+10	0.003774	1.38E+06
657.600	-1.14E-08	0.187063	-0.044642	3.89E-10	0.002662	1.63E+10	0.003275	1.38E+06
662.400	-9.40E-09	0.010507	-0.030302	4.18E-10	0.000150	1.63E+10	0.002700	1.38E+06
667.200	-7.38E-09	-0.103835	-0.018730	4.05E-10	0.001478	1.63E+10	0.002121	1.38E+06
672.000	-5.51E-09	-0.169305	-0.009837	3.64E-10	0.002410	1.63E+10	0.001584	1.38E+06
676.800	-3.89E-09	-0.198270	-0.003355	3.10E-10	0.002822	1.63E+10	0.001116	1.38E+06
681.600	-2.54E-09	-0.201516	0.001073	2.51E-10	0.002868	1.63E+10	0.000729	1.38E+06
686.400	-1.47E-09	-0.187973	0.003837	1.94E-10	0.002675	1.63E+10	0.000423	1.38E+06
691.200	-6.74E-10	-0.164684	0.005316	1.42E-10	0.002344	1.63E+10	0.000194	1.38E+06
696.000	-1.08E-10	-0.136935	0.005856	9.77E-11	0.001949	1.63E+10	3.11E-05	1.38E+06
700.800	2.64E-10	-0.108471	0.005748	6.16E-11	0.001544	1.63E+10	-7.59E-05	1.38E+06
705.600	4.83E-10	-0.081755	0.005233	3.35E-11	0.001164	1.63E+10	-0.000139	1.38E+06
710.400	5.86E-10	-0.058234	0.004496	1.29E-11	0.000829	1.63E+10	-0.000168	1.38E+06
715.200	6.07E-10	-0.038594	0.003673	-1.32E-12	0.000549	1.63E+10	-0.000174	1.38E+06
720.000	5.73E-10	-0.022971	0.002859	-1.04E-11	0.000327	1.63E+10	-0.000165	1.38E+06
724.800	5.07E-10	-0.011143	0.002114	-1.54E-11	0.000159	1.63E+10	-0.000146	1.38E+06
729.600	4.25E-10	-0.002674	0.001471	-1.74E-11	3.81E-05	1.63E+10	-0.000122	1.38E+06
734.400	3.40E-10	0.002979	0.000943	-1.74E-11	4.24E-05	1.63E+10	-9.76E-05	1.38E+06
739.200	2.58E-10	0.006383	0.000531	-1.60E-11	9.09E-05	1.63E+10	-7.42E-05	1.38E+06
744.000	1.86E-10	0.008077	0.000225	-1.39E-11	0.000115	1.63E+10	-5.34E-05	1.38E+06
748.800	1.25E-10	0.008540	1.02E-05	-1.14E-11	0.000122	1.63E+10	-3.59E-05	1.38E+06
753.600	7.61E-11	0.008175	-0.000129	-8.99E-12	0.000116	1.63E+10	-2.19E-05	1.38E+06
758.400	3.88E-11	0.007306	-0.000208	-6.71E-12	0.000104	1.63E+10	-1.11E-05	1.38E+06
763.200	1.17E-11	0.006181	-0.000243	-4.72E-12	8.80E-05	1.63E+10	-3.37E-06	1.38E+06
768.000	-6.55E-12	0.004978	-0.000246	-3.08E-12	7.08E-05	1.63E+10	1.88E-06	1.38E+06
772.800	-1.78E-11	0.003818	-0.000229	-1.78E-12	5.43E-05	1.63E+10	5.11E-06	1.38E+06
777.600	-2.37E-11	0.002776	-0.000201	-8.11E-13	3.95E-05	1.63E+10	6.80E-06	1.38E+06
782.400	-2.56E-11	0.001891	-0.000167	-1.23E-13	2.69E-05	1.63E+10	7.35E-06	1.38E+06
787.200	-2.48E-11	0.001175	-0.000132	3.28E-13	1.67E-05	1.63E+10	7.14E-06	1.38E+06
792.000	-2.24E-11	0.000624	-9.94E-05	5.93E-13	8.88E-06	1.63E+10	6.45E-06	1.38E+06
796.800	-1.91E-11	0.000221	-7.08E-05	7.17E-13	3.14E-06	1.63E+10	5.50E-06	1.38E+06
801.600	-1.55E-11	-5.56E-05	-4.68E-05	7.42E-13	7.91E-07	1.63E+10	4.47E-06	1.38E+06
806.400	-1.20E-11	-0.000229	-2.78E-05	7.00E-13	3.26E-06	1.63E+10	3.46E-06	1.38E+06
811.200	-8.83E-12	-0.000323	-1.34E-05	6.18E-13	4.59E-06	1.63E+10	2.54E-06	1.38E+06
816.000	-6.09E-12	-0.000358	-3.14E-06	5.18E-13	5.09E-06	1.63E+10	1.75E-06	1.38E+06
820.800	-3.86E-12	-0.000353	3.72E-06	4.14E-13	5.02E-06	1.63E+10	1.11E-06	1.38E+06
825.600	-2.12E-12	-0.000322	7.85E-06	3.14E-13	4.58E-06	1.63E+10	6.09E-07	1.38E+06
830.400	-8.41E-13	-0.000277	9.89E-06	2.26E-13	3.95E-06	1.63E+10	2.41E-07	1.38E+06
835.200	4.83E-14	-0.000227	1.04E-05	1.52E-13	3.23E-06	1.63E+10	-1.39E-08	1.38E+06
840.000	6.16E-13	-0.000177	9.98E-06	9.22E-14	2.52E-06	1.63E+10	-1.77E-07	1.38E+06
844.800	9.33E-13	-0.000131	8.91E-06	4.68E-14	1.87E-06	1.63E+10	-2.68E-07	1.38E+06
849.600	1.07E-12	-9.17E-05	7.53E-06	1.39E-14	1.31E-06	1.63E+10	-3.06E-07	1.38E+06
854.400	1.07E-12	-5.91E-05	6.06E-06	-8.27E-15	8.41E-07	1.63E+10	-3.07E-07	1.38E+06
859.200	9.86E-13	-3.35E-05	4.64E-06	-2.19E-14	4.77E-07	1.63E+10	-2.83E-07	1.38E+06
864.000	8.57E-13	-1.45E-05	3.37E-06	-2.90E-14	2.06E-07	1.63E+10	-2.46E-07	1.38E+06
868.800	7.08E-13	-1.13E-06	2.29E-06	-3.13E-14	1.61E-08	1.63E+10	-2.03E-07	1.38E+06
873.600	5.57E-13	7.54E-06	1.42E-06	-3.03E-14	1.07E-07	1.63E+10	-1.60E-07	1.38E+06
878.400	4.16E-13	1.25E-05	7.53E-07	-2.74E-14	1.78E-07	1.63E+10	-1.20E-07	1.38E+06
883.200	2.94E-13	1.48E-05	2.63E-07	-2.34E-14	2.10E-07	1.63E+10	-8.44E-08	1.38E+06
888.000	1.92E-13	1.51E-05	-7.20E-08	-1.90E-14	2.14E-07	1.63E+10	-5.52E-08	1.38E+06
892.800	1.12E-13	1.41E-05	-2.81E-07	-1.47E-14	2.00E-07	1.63E+10	-3.21E-08	1.38E+06
897.600	5.12E-14	1.24E-05	-3.94E-07	-1.08E-14	1.76E-07	1.63E+10	-1.47E-08	1.38E+06
902.400	8.12E-15	1.03E-05	-4.35E-07	-7.45E-15	1.47E-07	1.63E+10	-2.33E-09	1.38E+06
907.200	-2.04E-14	8.18E-06	-4.26E-07	-4.73E-15	1.16E-07	1.63E+10	5.85E-09	1.38E+06
912.000	-3.73E-14	6.20E-06	-3.86E-07	-2.61E-15	8.83E-08	1.63E+10	1.07E-08	1.38E+06
916.800	-4.54E-14	4.47E-06	-3.29E-07	-1.04E-15	6.37E-08	1.63E+10	1.31E-08	1.38E+06
921.600	-4.73E-14	3.04E-06	-2.65E-07	6.62E-17	4.33E-08	1.63E+10	1.36E-08	1.38E+06
926.400	-4.48E-14	1.92E-06	-2.02E-07	7.98E-16	2.74E-08	1.63E+10	1.29E-08	1.38E+06
931.200	-3.96E-14	1.10E-06	-1.44E-07	1.24E-15	1.57E-08	1.63E+10	1.14E-08	1.38E+06

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 936.000 -3.29E-14  5.45E-07 -9.37E-08  1.49E-15  7.76E-09  1.63E+10  9.44E-09  1.38E+06
 940.800 -2.54E-14  2.04E-07 -5.36E-08  1.60E-15  2.90E-09  1.63E+10  7.28E-09  1.38E+06
 945.600 -1.75E-14  3.05E-08 -2.40E-08  1.63E-15  4.35E-10  1.63E+10  5.04E-09  1.38E+06
 950.400 -9.70E-15 -2.66E-08 -5.22E-09  1.63E-15  3.78E-10  1.63E+10  2.79E-09  1.38E+06
 955.200 -1.88E-15 -1.95E-08  2.77E-09  1.62E-15  2.78E-10  1.63E+10  5.41E-10  1.38E+06
 960.000  5.90E-15     0.000     0.000  1.62E-15     0.000  1.63E+10 -1.70E-09  6.89E+05

Please note that because this analysis makes computations of ultimate moment
capacity and pile response using nonlinear bending stiffness that the above
values of total stress due to combined axial stress and bending may not be
representative of actual conditions.


Output Verification:

Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No.  5:

Pile-head deflection             =     1.53708176 in
Computed slope at pile head      =    -0.01335267
Maximum bending moment           =      1564852. lbs-in
Maximum shear force              =    17600.00000 lbs
Depth of maximum bending moment  =      120.00000 in
Depth of maximum shear force     =     9.60000000 in
Number of iterations             =             23
Number of zero deflection points =             10




--------------------------------------------------------------------------------
                          Summary of Pile Response(s)
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Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment,          y = pile-head displacment in
Type 2 = Shear and Slope,           M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness,  V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment,     S = Pile-head Slope, radians
Type 5 = Deflection and Slope,      R = Rot. Stiffness of Pile-head in-lbs/rad

Load  Pile-Head    Pile-Head       Axial    Pile-Head    Maximum     Maximum
Type  Condition    Condition       Load     Deflection    Moment      Shear
         1           2            lbs         in        in-lbs       lbs
---- ------------ ------------ ----------- ----------- ----------- -----------
  1  V=  3000.000 M=     0.000      0.0000   0.0988155     158144.   3000.0000
  1  V=  6000.000 M=     0.000      0.0000   0.2470694     362226.   6000.0000
  1  V=  9000.000 M=     0.000      0.0000   0.4740614     625050.   9000.0000
  1  V=    12000. M=     0.000      0.0000   0.7756760     926954.  12000.0000
  1  V=    17600. M=     0.000      0.0000      1.5371    1564852.  17600.0000

The analysis ended normally.
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