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Lateral Resistance of Piles Near Vertical MSE Abutment Walls at Provo Center Street

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A thesis submitted to the faculty of
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in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

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Full scale lateral load tests were performed on four piles located at various distances behind MSE walls. Three of the four test piles were production piles used to support bridges, and the other pile a production pile used as part of 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. Lateral load-displacement curves were developed for pile at various spacing and with various reinforcement ratio (reinforcement length, L divided by wall height, H). The force in the reinforcement was measured using strain gauges.

Lateral load analyses were performed to determine the minimum spacing required to eliminate any effect of the wall on the pile resistance (p-multiplier of 1) and the reduction in soil resistance at closer spacings (p-multiplier less than 1). With the addition of the data fro Price (2012) tentative curves have been developed showing p-multiplier vs. normalized spacing behind wall for a length to height ratio of 1.6, 1.2, and 1.1. 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 1.2 and 1.1 a p-multiplier of 1 can be used when the pile is at least 4.5 and 5.2 pile diameters behind the wall respectively. For smaller spacings, the p-multipliers decreased essentially linearly with normalized distance from the wall.

A plot showing the increased 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 tensile force of approximately 0.12. The data show that the increase in tensile 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 3 ft. of the wall with L/H values at 1.2.

Keywords: Lateral load, pile, MSE wall, abutment, load test, Kent R. Nelson

DISCLAIMER

The authors alone are responsible for the preparation and accuracy of the information, data, analysis, discussions, recommendations, and conclusions presented herein. The contents do not necessarily reflect the views, opinions, endorsements, or policies of the Utah Department of Transportation, the US Department of Transportation or other agencies that provided funding for the project. The Utah Department of Transportation makes no representation or warranty of any kind, and assumes no liability therefore.

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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. The earthquake and thermal expansion and contraction loads found at these sites are inertia loads. Increasingly, right-of-way constraints are leading to vertical mechanically stabilized earth (MSE) walls at abutment faces. Currently, 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 assume that the soil provides no resistance whatsoever which leads to larger pile diameters and increased foundation cost. Other designers increase the distance between the wall and abutment piles 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. Still other designers position the pile close to the wall face and reduce the lateral pile resistance using engineering judgment. However, the appropriate reduction factor to use as a function of pile spacing is not well defined. 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). The pile spacing for this site was determined by the engineers at Baker and HDR using the FHWA-NHI -10-024 publication.

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. Due to the fact that 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.

More research than that done by Pierson (2009) will be required to enable engineers to know what reduction factors can be used or how far back from the wall face to place the piles. Reasons for that include the difference in wall types, reinforcement types, and bridge foundation types.

To improve understanding of pile-MSE wall interaction, lateral load tests were performed on four piles located behind an MSE wall by. The four piles were located on the West side of the I-15 overpass structure for Provo Center Street. Provo is approximately 45 miles to the South of Salt Lake City. Figure 1.1 is a map showing the location of Provo. Three of the piles were extra piles driven for the purposes of this test while the last pile was driven as a production pile used to support the bridge. All four piles extend below the bottom of the MSE wall and were considered to be long elastic piles in the lateral load analysis. The three extra piles were not driven to the depth of the production piles. This does not affect their performance in the tests run. The reasons for that are discussed in chapter six. The piles are 12.75 in. open ended pipe

piles. The MSE wall where the tests were performed is a two-stage wall with metal strips and a welded wire facing.

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. The test procedures, results and analysis are described herein.

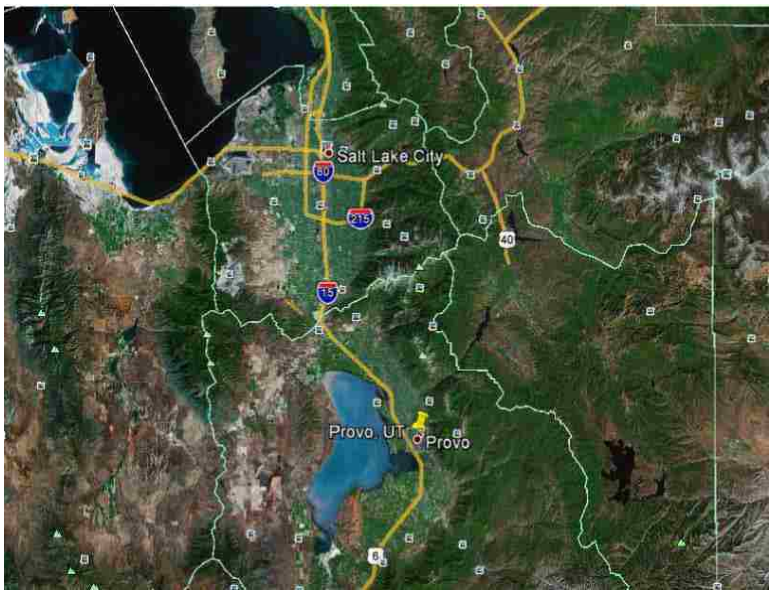

Figure 1.1: Location of test site.

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 strip reinforcements are used in the MSE walls at all three test sites as outlined previously, so the analysis of inextensible reinforcement will be discussed in further detail. The steps for the internal design process are 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.

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

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.

$$\sigma_H = K_r \sigma_v + \Delta\sigma_H \quad (2\text{-}2)$$

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.

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

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.

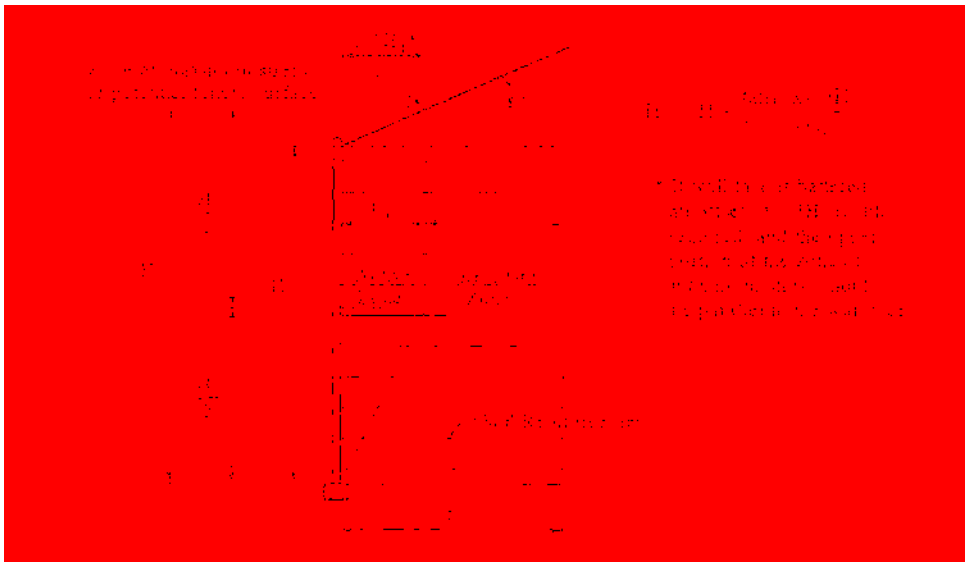

Figure 2.1: Location of critical slip surface for MSE wall with inextensible reinforcement (Elias and Christopher, 1997).

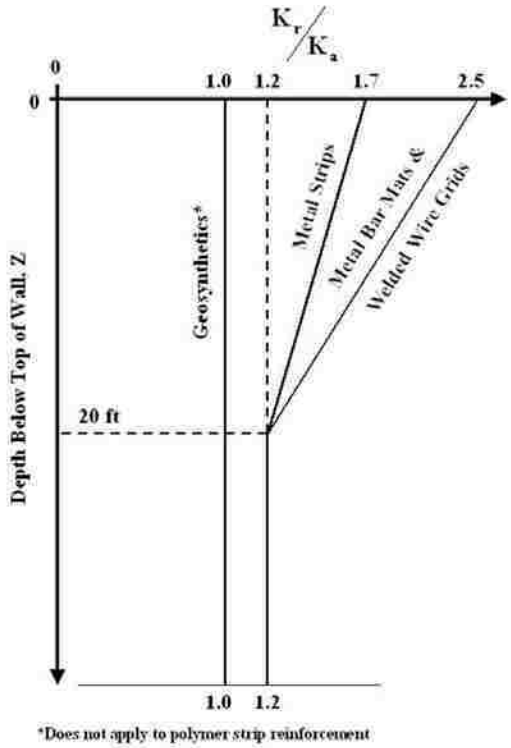

Figure 2.2: Variation of the coefficient of lateral stress ratio with depth in a MSE wall (Elias and Christopher, 1997).

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

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.

$$F^{*} = 20(t/St),\ Z = 0$$
$$= 10(t/St),\ Z >= 20 \quad (2\text{-}5)$$

where

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

S_t is the spacing between transverse bars.

$$R_c = b/S_h \quad (2\text{-}6)$$

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). The factor of safety against tensile failure is the tensile

capacity of a reinforcement divided by the maximum tensile force in the reinforcement. Once again a factor of safety of 1.5 is typically required.

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.

Research has been performed on full scale bridge piles at the edge of a slope (Myrzoyan and Rollins, 2007). Tests were performed on piles at three different distances from the edge of a slope. One was placed at the edge of the 30º slope a second pile was placed at three pile diameters from the edge of the 30º slope and a third was placed on horizontal ground. The well

graded clean sand in which the piles were embedded was compacted to 95% of the modified Proctor unit weight.

Results from the testing indicate that the closer to the edge of the slope the pile is the less lateral pile resistance there is. Figure 2.3 shows the load deflection curves for the three tests performed as well as the layout of the three test piles.

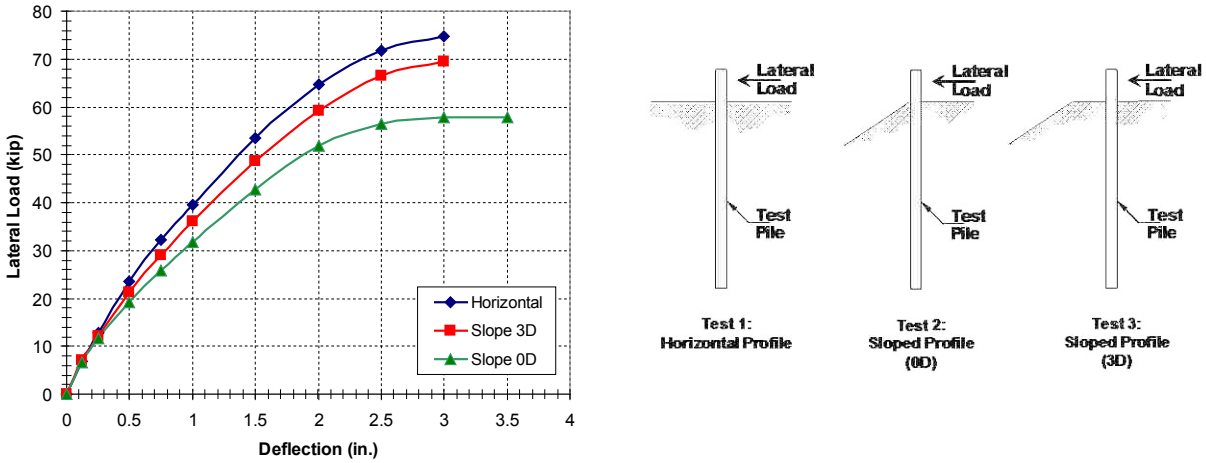

Figure 2.3: (a) Load deflection curve for piles tested along with (b) Illustration of the soil geometries for the three tests performed on the single pile.

The pile at three pile diameters from the edge of the slope experienced about a 10% reduction in lateral resistance. This would probably equate to a P-multiplier of about 0.7 to 0.8. This is higher than the P-multipliers found in this study for piles near MSE walls at a comparable distance from the wall. Discussion of P-multipliers found in this study is found in chapter six.

2.3 Full Scale Testing of Piles Behind MSE Walls

A literature review indicates that only two series of large scale tests have 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 only embedded 15 to 20 ft. into the reinforced fill (short piles, D/B=5 to 6.7) 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, so that the shafts could be loaded to failure. Each shaft was instrumented with inclinometers, which were monitored at various load levels during testing. These instruments indicated that the shaft was rotating at its base. The geogrid reinforcement was instrumented with strain gauges located at varying distances from the wall face and showed a substantial decrease with transverse distance from the pile. Pressure cells were placed against the back face of the wall directly in front 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 2.4 shows the load-displacement curves for the shafts tested.

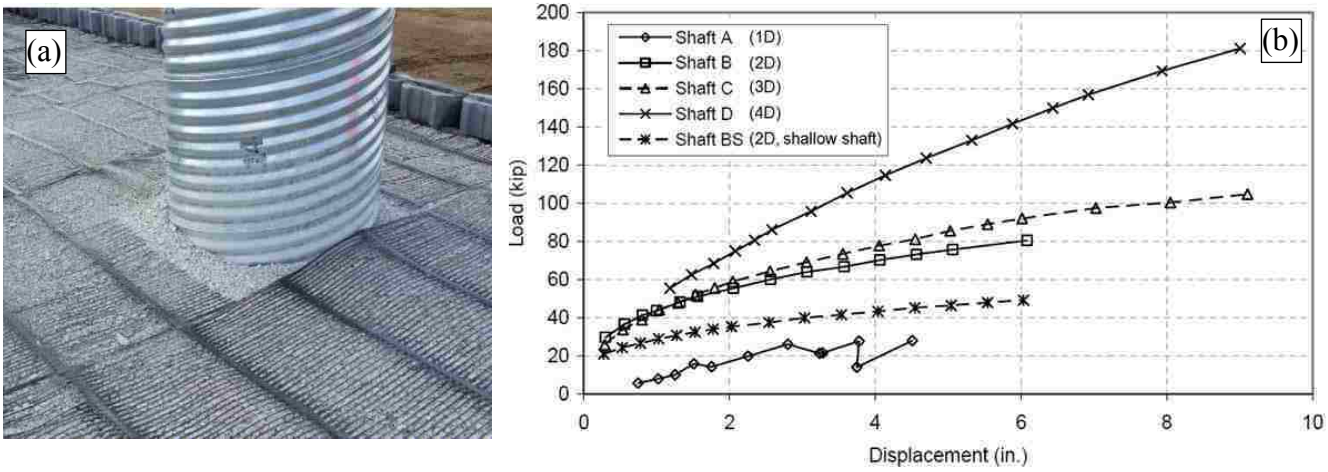

Figure 2.4: (a) Shaft and geogrid near masonry block with along with (b) Load vs. deflection for curves for for shafts at different distances behind the wall (after Piersons et al, 2009).

The testing showed that the lateral resistance of the shaft decreased as the spacing between the pile and the wall decreased. For example, the shaft spaced two pile diameters behind the wall provided less than 50% of the resistance provided by the shaft located four diameters behind the wall as shown in Figure 2.4. After testing, cracking was observed behind the reinforced zone indicating that additional capacity may be gained by longer reinforcements.

The other series of tests performed were done by Price (2012). The tests were done at two different locations. Tests were performed on two piles at the US 89 structure over UPRR in Pleasant Grove, UT and three piles at Pioneer Crossing over UPRR in Lehi, UT. Pleasant Grove and Lehi are approximately 30 miles south of Salt Lake City. The two piles in Pleasant Grove, one of the piles in Lehi were production piles used to support the bridges. The remaining two piles in Lehi were 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 were considered to be long elastic piles in the lateral load analysis. The piles are 12.75 in. open ended pipe piles in Pleasant Grove while the piles in Lehi are 16in. The MSE walls at Pleasant Grove and Lehi use welded wire grid reinforcements with concrete facing panels.

Load deflection curves as seen in Figure 2.4 from the tests performed by Price at the Pioneer Crossing site show the loads applied to those piles. It also shows that the further the pile is from the wall the more load is required to reach a given deflection.

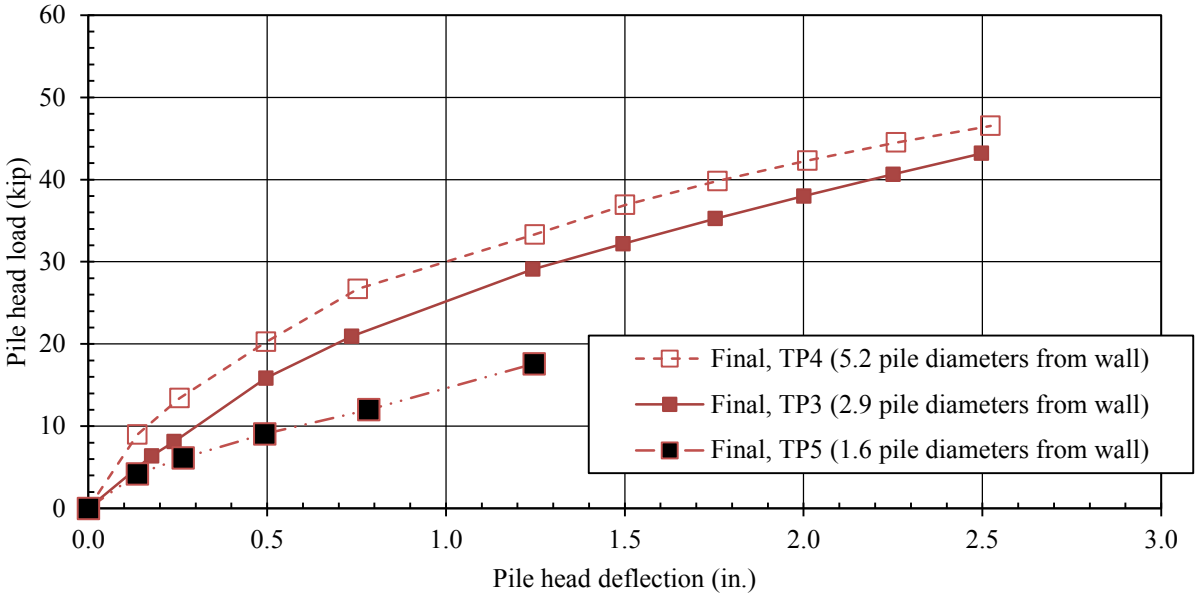

Figure 2.5: Load-deflection curve for piles at Pioneer Crossing Site (Price, 2012)

The piles in Figure 2.4 are labeled TP3, TP4, and TP5. That indicates that they are the third, fourth, and fifth test piles in the series of tests performed by Price. They are not the same as the piles labeled TP1, TP2, TP3, and TP4 for the tests performed at Provo Center Street. The tests performed by Price and those done for this report were done in conjunction with each other and some of the results from Price will be used later for comparison. However, the numbering of the test piles starts at one for both the tests performed at Provo Center Street and for the tests performed by Price.

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 thermal loading does not induce significant lateral loads to an MSE wall for the conditions investigated where the maximum pile head displacement was approximately 0.9 in.

In a numerical model 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 2.5 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 K_p is the Rankine passive earth pressure coefficient. Although placing a sleeve around the pile reduced the load transferred to the wall, the lateral earth pressure induced by the laterally loaded pile was still substantially greater than at-rest earth pressure conditions.

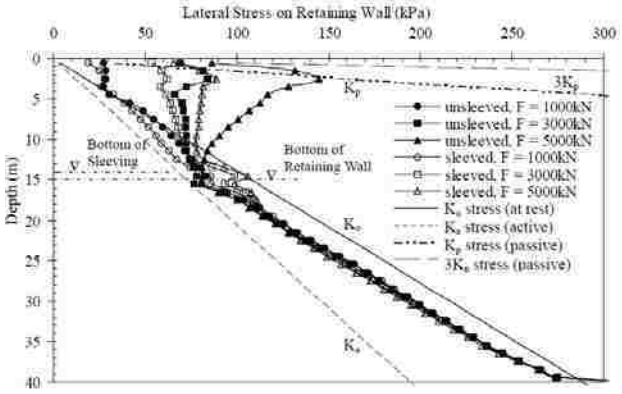

Figure 2.6: Lateral earth pressures on a retaining wall with a laterally loaded pile located 1.5 pile diameters from the wall (Ng and Chung 2005)

3 LAYOUT

3.1 Provo Center Street

The four lateral pile load tests were performed at a new overpass structure that was under construction Center Street as it crosses UTA and the Union Pacific railroad lines in Provo, UT. All of the tests were performed on the West side of the overpass. Two tests were performed on piles donated by Atlas Steel while the other test was performed on a pile supporting the bridge using a donated pile as a reaction pile. Figure 3.1 shows a picture of the lower level of metal strip reinforcement. Figure 3.2 shows how the strips were attached to the wire mesh facing panels with the wires for the strain gauges attached. A top view of the pile layout is shown in Figure 3.3.

Figure 3.1: Test piles with bottom instrumented layer of steel strip reinforcement

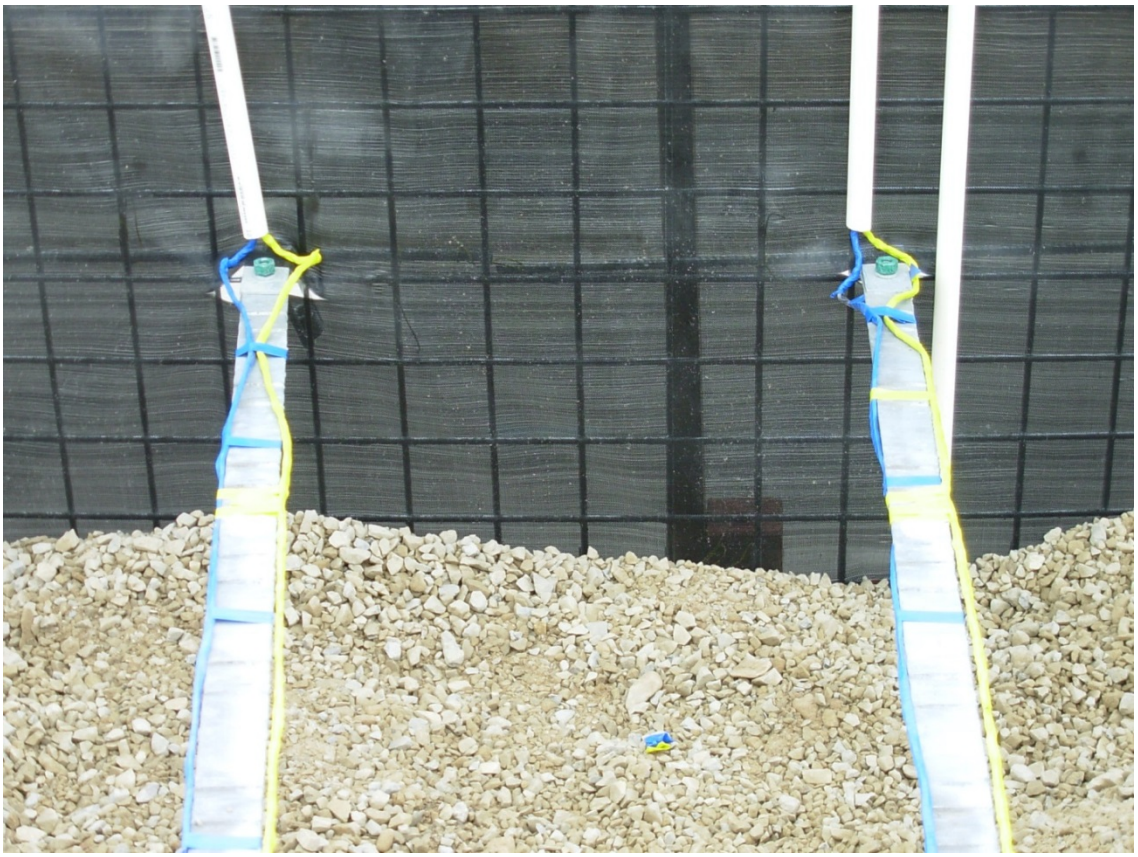

Figure 3.2: Top layer of instrumented strips attached to wire mesh facing.

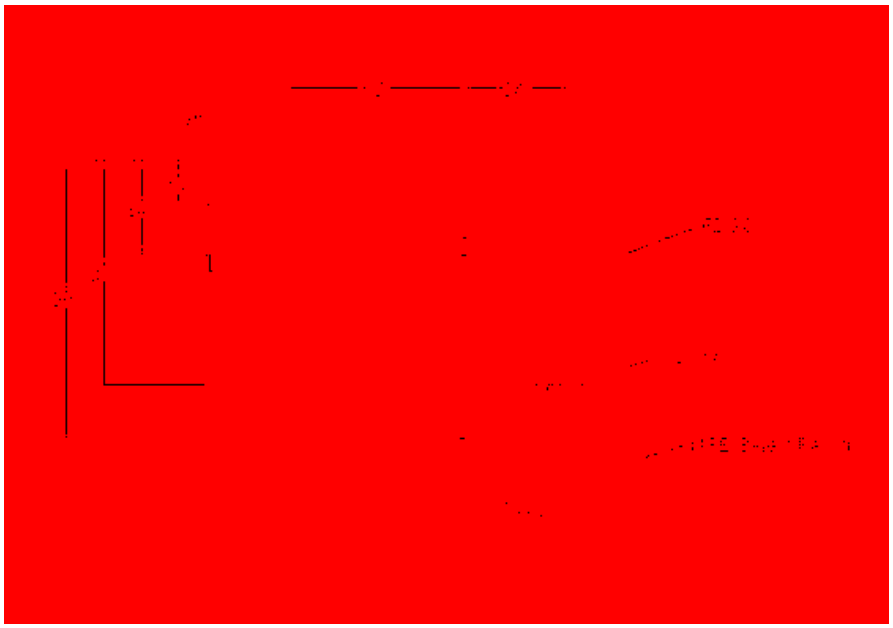

Figure 3.3: Plan view of the west abutment for the Provo Center Street bridge over UPRR and UTA

The test piles are 12.75 in. outside diameter steel pipe piles with a wall thickness of 0.375 in. The construction sequence for the Provo Center Street Bridge is typical of that on I-15 construction in which the piles were driven closed ended prior to construction of the MSE wall. The piles for the bridge extend through layered silty sand and gravel to a sand bearing layer at a depth of approximately 120 ft. below the base of the wall while the test piles only extended 20 feet below the MSE wall. The piles for the bridges were hollow at the time of testing but were eventually filled with reinforced concrete and embedded into the abutment backwall. To ensure that the strain gauge wires attached to the piles were not damaged during construction of the wall, angle irons were placed over the wires and tack welded to the piles at regular intervals. Figure 3.4 shows the test piles with the angle irons. The pile detail from the bridge plans provided by UDOT is shown in figure 3.5. The steel conforms to ASTM A252 Grade 3 specifications and has a specified minimum yield strength of 45 ksi based on the 0.2% offset criteria. The abutment has 16 piles with a typical center to center spacing of 6.8 ft. The typical spacing from the face of the wire mesh of the MSE wall to the center of the piles is 34 in. (2.7 pile diameters).

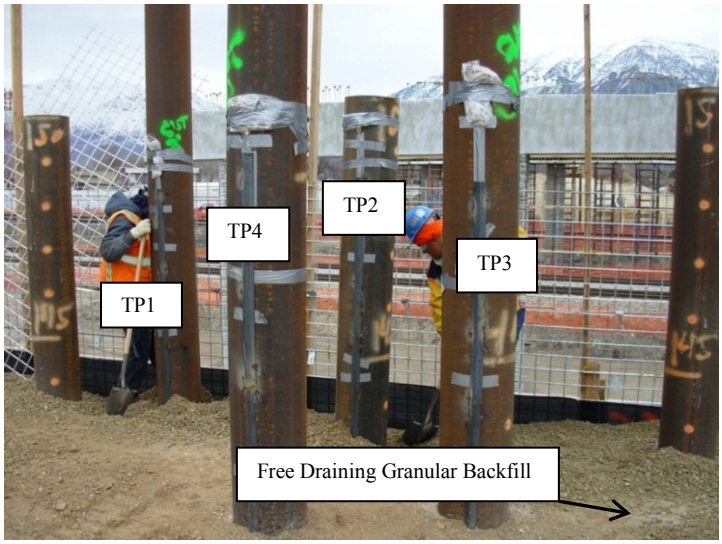

Figure 3.4: Test piles with angle irons and strain gauges.

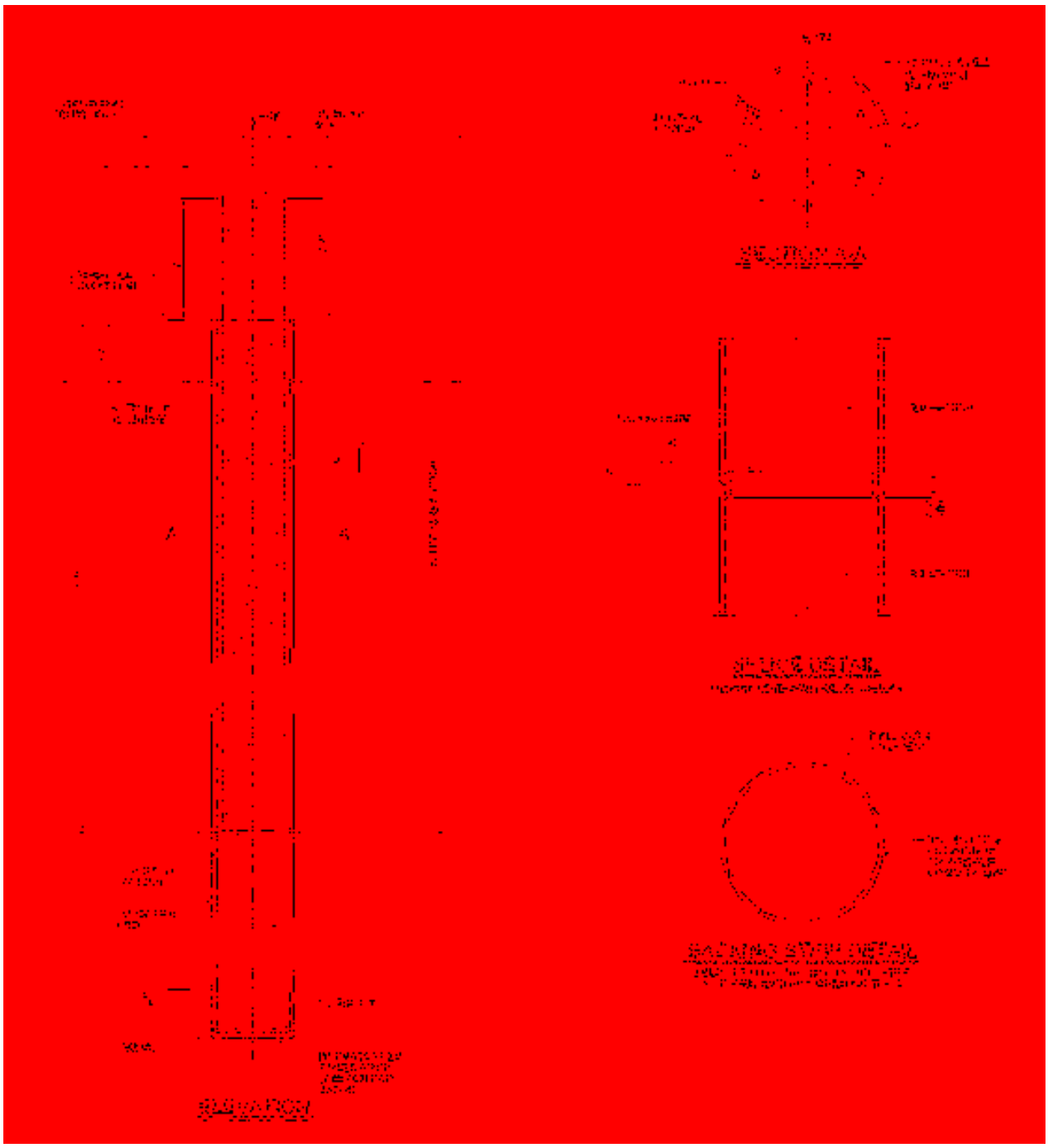

Figure 3.5: Pipe pile detail for the Provo Center Street over UTA and UPRR

The two stage MSE wall was designed by Reinforced Earth Co. and consist of galvanized metal strips connected to wire mesh panels. Two stage walls on the I-15 Corridor Expansion project were utilized when there was an expected settlement of more than one foot during

construction. The wall employs non-rigid welded wire panels covered with geo fabric. This allows for the expected deformation to take place. At a later date concrete panels are placed in front of the wall to protect to soil from weathering and for aesthetic purposes. The galvanized strips were 2 in wide and an eighth of an inch thick. The length of the strips varied across the wall; however, the strips in the vicinity of the test piles were 28 ft. long. The vertical spacing of the reinforcing is typically 2.0 ft. The wire mesh wall panels are 4.8 ft. high by 9.75 ft. wide. 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 Provo Center Street Site

Pile	TP1	TP2	TP3
Wall height (ft)	22.25	22.25	22.25
Design height from top of leveling pad to top of roadway (ft)	35.7	35.7	35.7
Strip length (ft)	28	28	28
Strip length to wall height ratio at time of test	1.2	1.2	1.2
Strip length to design height ratio	0.78	0.78	0.78

The design height from Table 3.3 includes the abutment wall, backfill and roadway section which were not present at the time of testing. No significant surcharge load was present at the time of testing for any of the 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 132.2 pcf with an optimum moisture content of 7%. Nuclear density tests indicate that the soil was compacted to about 97.4% of the maximum dry density with a water content of about 4.8%. However, immediately adjacent to the wall, a free draining granular backfill was placed with a minimum width of 12 inches past the first stage wire facing and reduced compaction requirements. The free draining

backfill was placed next to the wall in approximately 2 ft. lifts. For compaction the crew passed over the lifts with a vibratory plate compactor with a minimum of three passes. The dry density and wet density of the granular backfill can be assumed to be approximately the same due to the ability of the backfill to drain water. The average dry density was measured with a nuclear density gauge to be 90.1 pcf. As shown in Figure 3.16, the free-draining granular fill often extended back to the test piles which was acceptable according to UDOT specification 02832S Part 3.1 B19.

The free draining granular backfill is placed specifically to drain water from the backfill and reduce erosion. It is a requirement in all walls built for UDOT projects. Therefore it can be assumed that the there are several walls that will be built in the future which will have the same layout. However due to construction practices, pile placement, and the ambiguity of the specifications not all walls will have the same amount of free draining granular backfill.

The static factor of safety against pull-out for the MSE wall geometry at the time of testing was approximately 2.6 for piles TP1, TP2, and TP3 using procedures specified by FHWA (Elias and Christopher, 2003). The centers of the test piles are located approximately 1.25, 3, and 6.5 ft. behind the two stage wire mesh panels of the MSE wall, respectively. The piles were laterally loaded normal to the MSE wall on planes shown in the profile views in Figures 3.6 through 8.

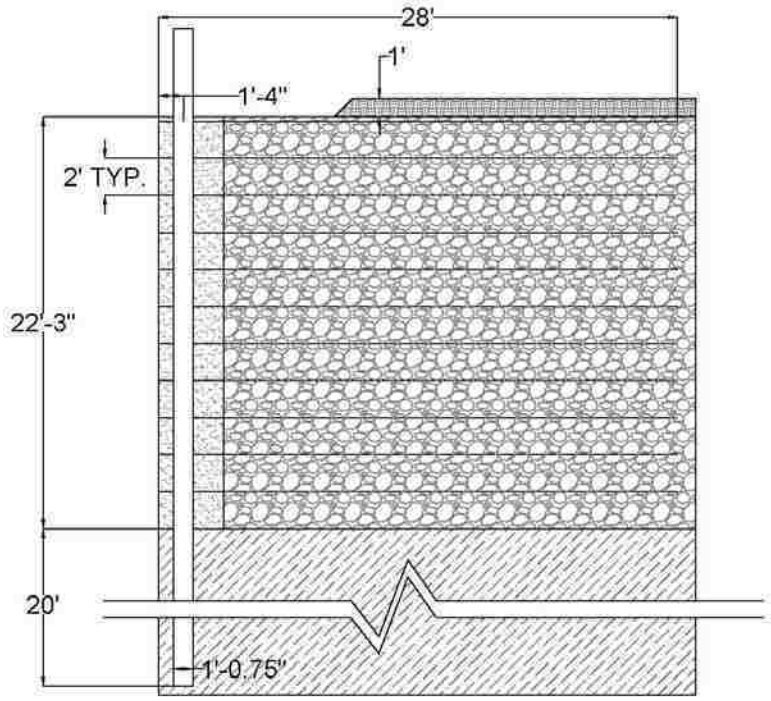

Figure 3.6: Profile view of Test Pile 1 (TP1); cross section A-A from Figure 3.3

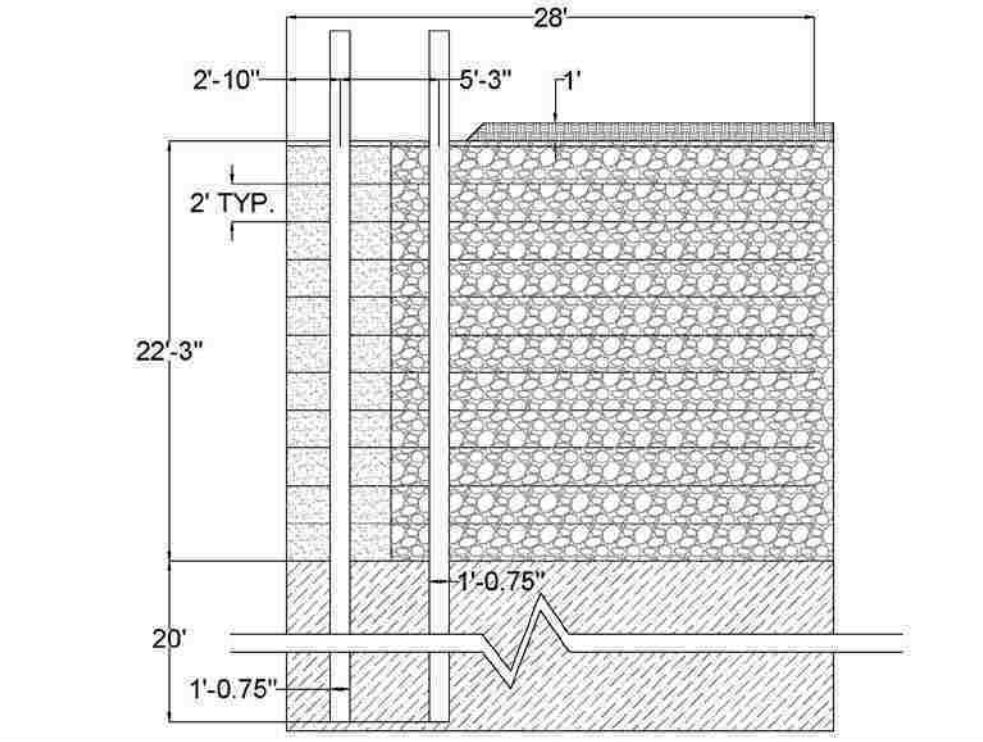

Figure 3.7: Profile view of Test Piles 2 and 4 (TP2 and 4); cross-section B-B from Figure 3.3

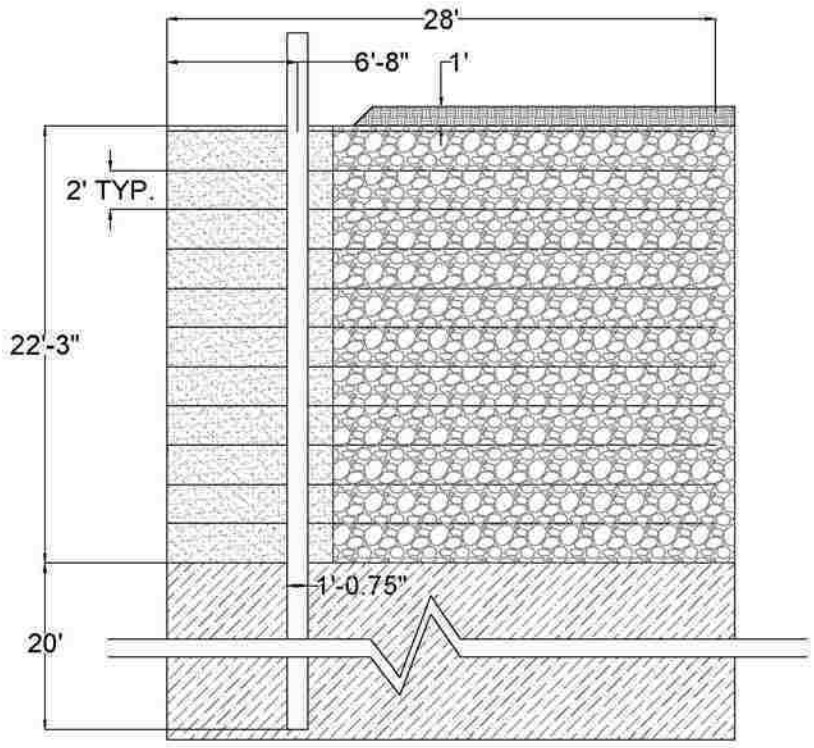

Figure 3.8: Profile view of Test Pile 3 (TP3); cross-section C-C from Figure 3.3

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.

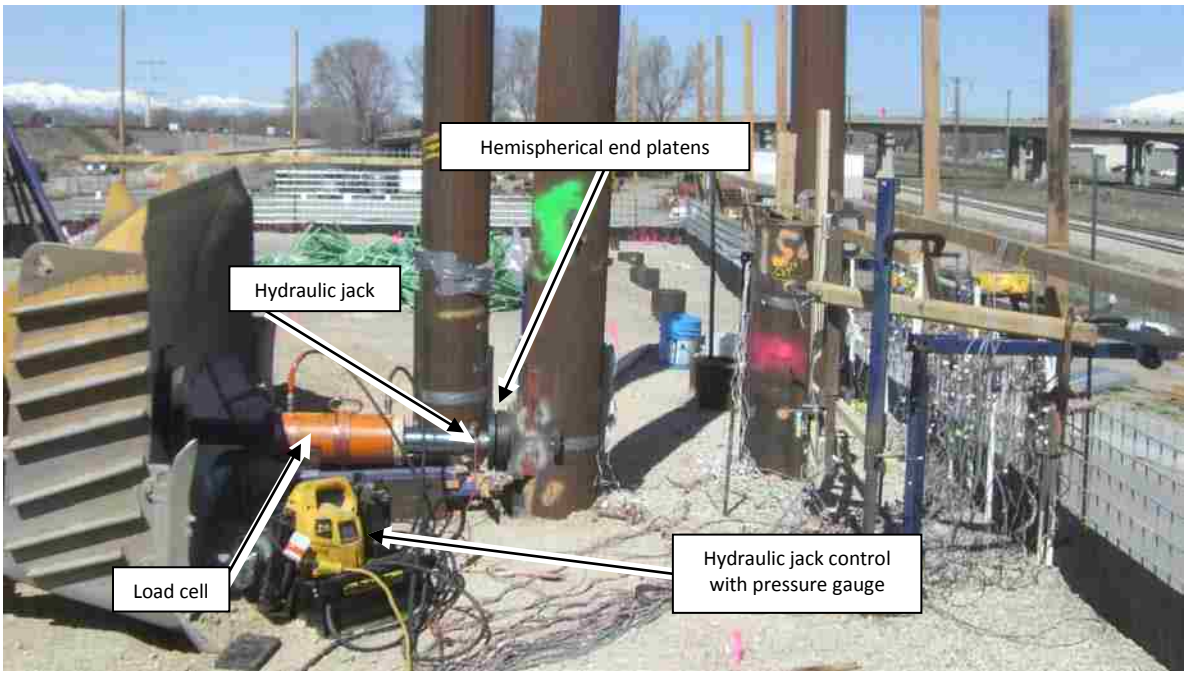

Figure 4.1: Typical load cell and pressure gauge configuration as shown at Provo Center Street

4.2.1 Reinforcement Load

General purpose Texas Measurements Group standard electrical resistance strain gauges were mounted on select strips 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 reinforcements 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 reinforcement was protected and stored at the lab until the contractor was ready to install them.

Reinforcing strips from the top two levels of reinforcements were selected for instrumentation. Gauges on either side of all the piles were chosen. There were six strips from the top row and five strips from the second row that were instrumented.

The strain gauges were mounted in pairs with one located on the top and one on the bottom of the strip. Strain gauge installation in pairs provides redundancy in case of damage during the installation and backfill placement. In addition, they allow corrections for bending in the reinforcement. Gauge pairs were installed at varying distances from the wall to provide an assessment of the shear transfer in the reinforcement as lateral load was applied to the pile. The lead wires for the gauges were taped to the edges of the longitudinal reinforcement to prevent interference with the friction on the top and bottom of the strips 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 strip that was instrumented in relation to the test piles at the Provo Center street site, along with the location of the strain gauges on the strip in relation to the back face of the MSE wall. The transverse 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. A photograph of the installed strips at the Provo Center Street site are shown in Figure 4.4: View of reinforcing strips that were instrumented near TP2 (Provo Center Street).

Table 4.1: Location of instrumented metal strips at the Provo Center Street site.

	Strip Name	Location on Strip	Distance from center line of pile (ft)	Distance from top of backfill (ft)	Strain gauge distances from back face of wall (ft)
TP1	T1	Top	1.67L	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L1	Top	3.58L	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T2	Top	0.33R	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L2	Top	1R	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T3	Top	2.67R	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L3	Top	2.67R	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
TP2	T3	Top	2.75L	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L3	Top	2.75L	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T	Top	0.33L	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T4	Top	1R	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L4	Top	2.42R	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
TP3	T3	Top	5.58L	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L3	Top	5.58L	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T	Top	3.17L	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T4	Top	1.83L	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L4	Top	0.42L	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	T5	Top	1.92R	1.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18
	L5	Top	1.92R	3.25	2, 4, 6, 9, 12, 15
		Bottom			2, 4, 6, 9, 12, 15, 18

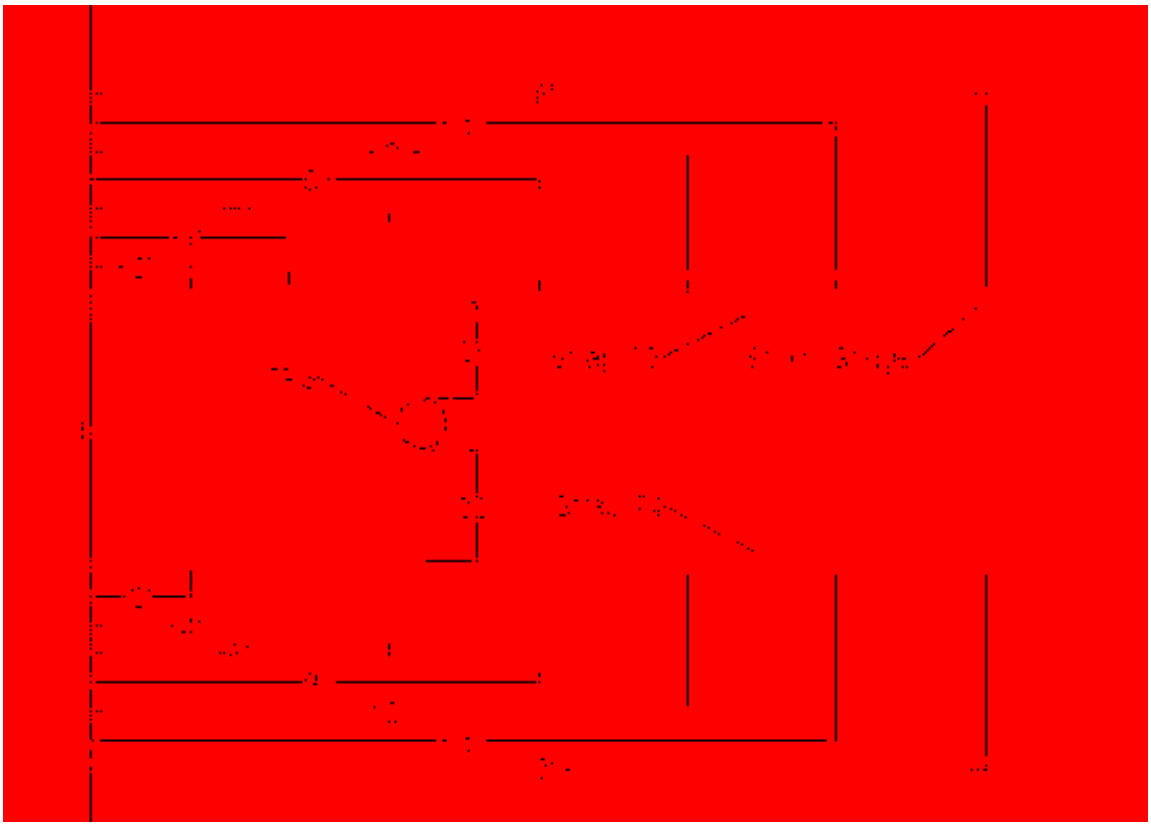

Figure 4.2: Plan view of top layer of reinforcement at TP3.

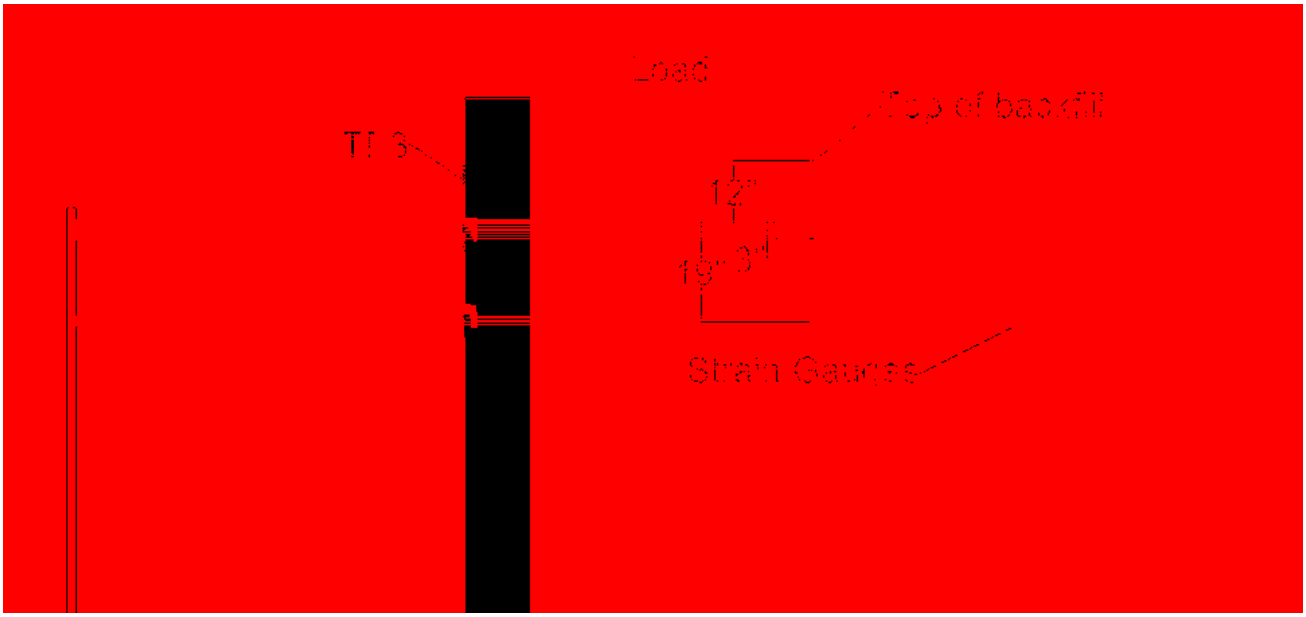

Figure 4.3: Profile view of top three layers of reinforcement at TP3; section A-A from Figure 4.2.

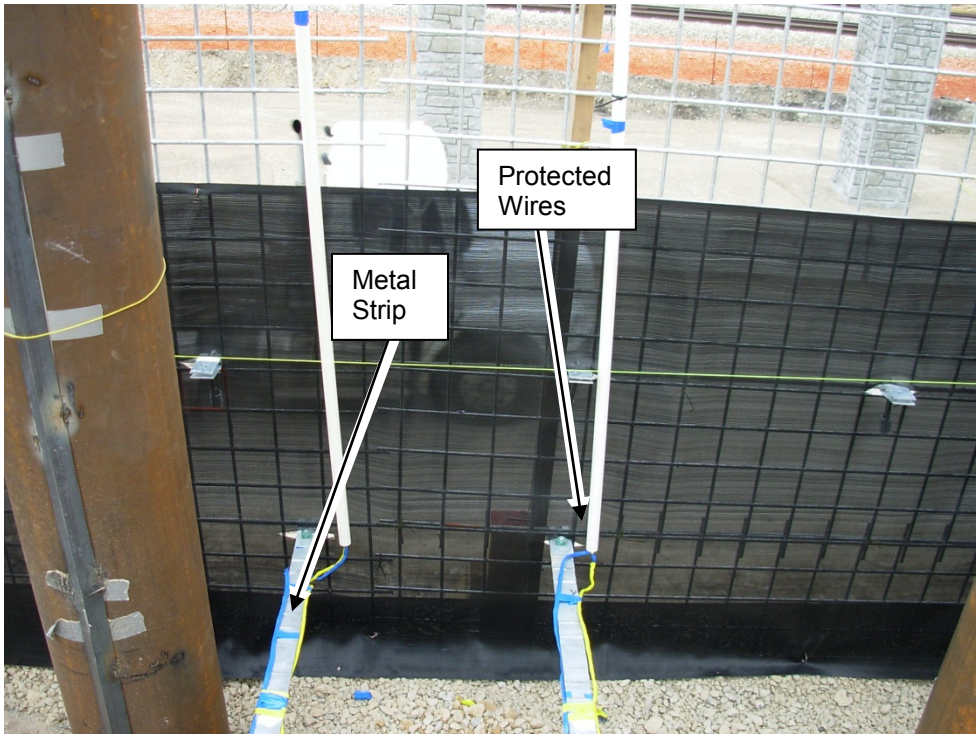

Figure 4.4: View of reinforcing strips that were instrumented near TP2 (Provo Center Street)

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.

For the piles at the Provo Center Street 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 about 12 inches 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 4.2 shows the location of the strain gauge pairs for each test pile.

Table 4.2: Location of strain gauge pairs for each test pile.

Test Pile	Strain gauge depth below ground surface (ft)	Strain gauge wire protection
TP1	0, 3, 6, 9, 12	Steel angle welded onto pile
TP2	0, 3, 6, 9, 12	Steel angle welded onto pile
TP3	0, 3, 6, 9, 12	Steel angle welded onto pile
TP4	0, 3, 6, 9, 12	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.

For the test piles at the Provo Center Street site the string pots were attached to an independent reference frame to isolate them from the movement of the ground around the pile. The frame was constructed by welding 6 ft. long steel angle onto each of the piles adjacent to TP1, TP2, and 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 4.5 shows the independent reference frame for TP3.

For TP4 there were no adjacent piles due to the location of the pile being farther from the wall than the rest of the piles. However TP4 was used in the same test as was TP2 so the independent reference frame was already in place.

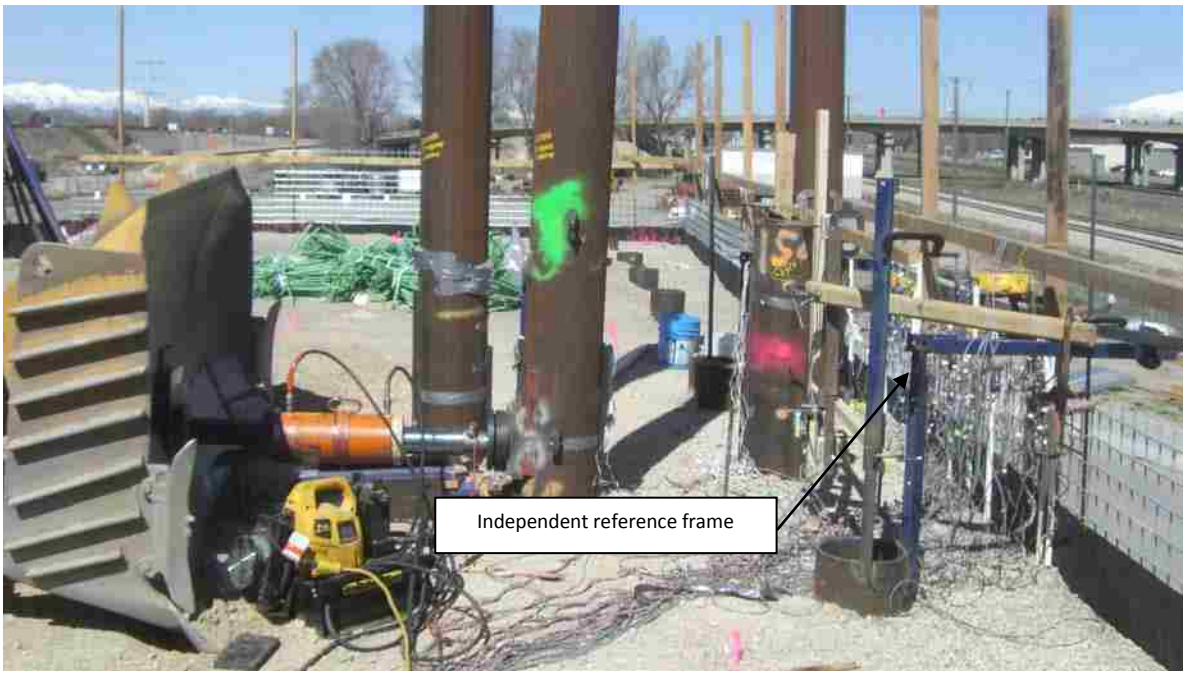

Figure 4.5: Independent reference frame at TP3 (Provo Center Street site)

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 the independent reference frame described previously. 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 string potentiometer was also mounted 3 ft. above the load level and to the independent reference frame at the same elevation. The difference between the two string potentiometer readings could then be used to determine the rotation of the pile during testing assuming that the pile above the test load was straight.

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 4.33 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 to the center of the pin. Figure 4.6 and 8 show the plan and profile view, respectively, of instrumentation installed at TP3 to demonstrate the notation in Table 4.3.

Table 4.3: 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	0.0, 1.3	1.3
TP2	0.0, 1.7	2.8
TP3	0.0, 2.0, 4.4	6.7
TP4	0.0, 1.7, 2.8	7.7

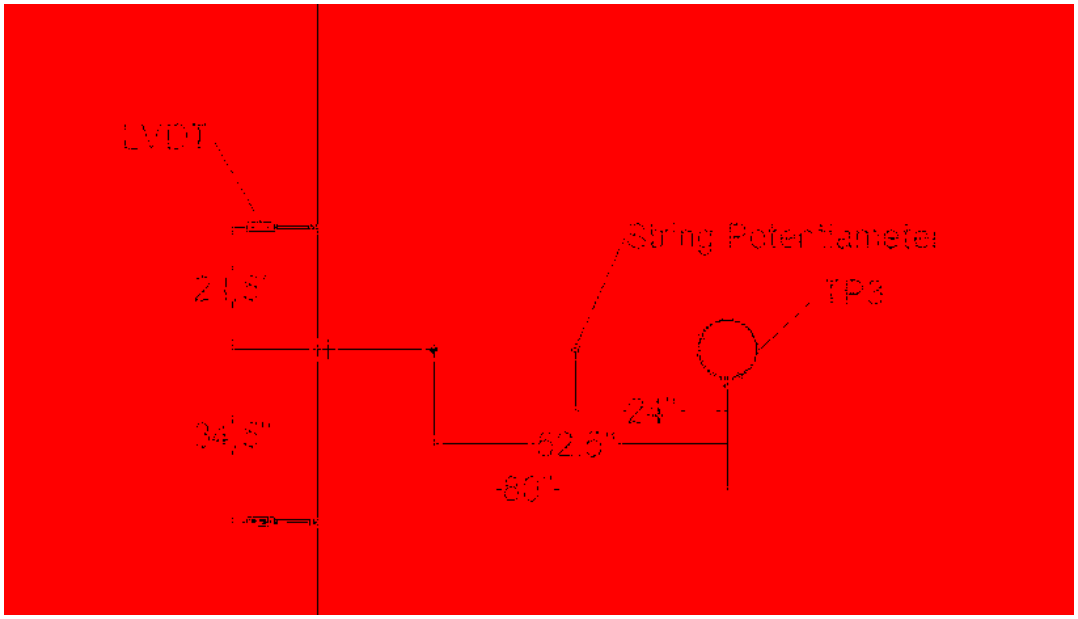

Figure 4.6: Plan view of instrumentation installed at TP3

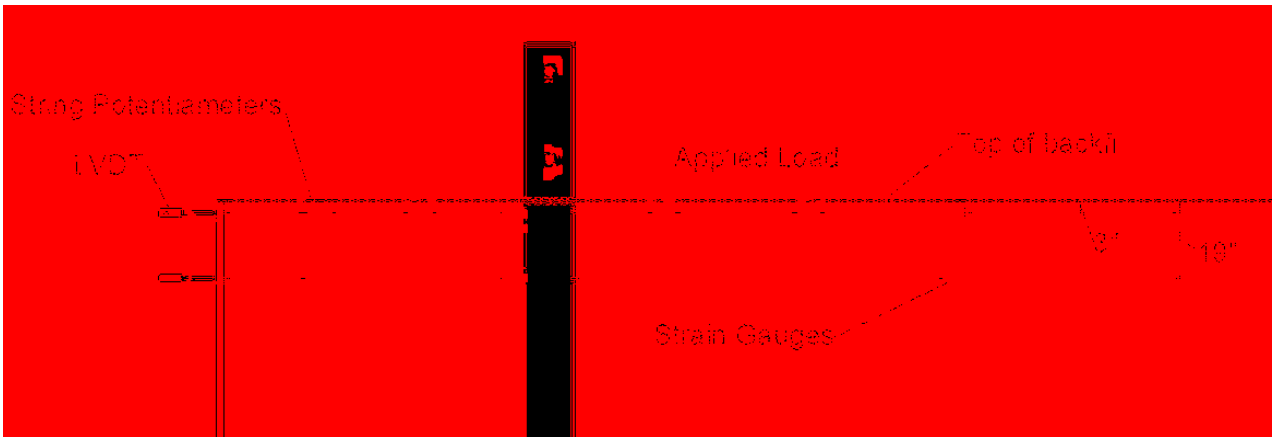

Figure 4.7: Profile view of instrumentation installed at TP3

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 4.4 shows the location of the LVDTs for the tests at the Provo Center Street site.

Table 4.4: Location of LVDTs on wall face at the Provo Center Street site.

Test Pile	Panel width (ft)	Panel height (ft)	Distance along wall face from center line of pile to LVDT (ft)	Distance from top of wall (ft)
TP1	9.83	4.83	3.67 L	0.25, 1.58
				0.25, 1.58
			3.0 R	0.25, 1.58
				0.25, 1.58
TP2	9.83	4.83	2.88 L	0.25, 1.58
			2.04 R	0.25, 1.58
TP3	9.83	4.83	2.46 L	0.25, 1.58
			2.88 R	0.25, 1.58

5 LATERAL LOAD TESTING

The lateral load tests were 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 one inch. Once a deflection of one inch was reached the load was applied to reach displacement increments of 0.5 in. until it was determined that further displacement could jeopardize the integrity of the wall. This approach was adopted to define the load-displacement curve in a reasonable manner. After reaching each displacement increment, the displacement of the hydraulic jack was locked off and the applied load decreased slightly as that increment was held constant for a period of at least 2 minutes before moving to the next displacement increment.

Figure 5.1 shows the Caterpillar D6 dozer which was used as a reaction for the tests performed on piles TP1 and TP3. No separate reaction was required for the tests on piles TP2 and TP4 because those two piles reacted against each other as shown in Fig 5.2.

Figure 5.1: Reaction for load at TP1

Figure 5.2: Reaction for load at TP2

Results of the lateral load testing are discussed in the sections that follow. The data for the tests was collected by the Megadac data logger 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 into the hold time at the desired displacement.

5.1 Provo Center Street Site

5.1.1 Load Displacement Curves

Figure 5.3 is a comparison of the load-displacement curves for the test piles at the Provo Center Street site (TP1, TP2, TP3, and TP4) for the peak data points while Figure 5.4 is a comparison of the load-displacement curves for the final data points. On average, the final load for TP1 is 27% lower than the peak load. The average difference for TP2 (34 inches from the wall) between final and peak loading is 8%. The average difference for TP3 between final and peak loading is 12%. For TP4 the average difference between peak and final loading is 5%. The additional relaxation for TP1 has two possible explanations. First, TP1 is closest to the wall of any of the piles and the displacement may be caused by the gradual pullout in the reinforcements produced by the pile-wall interaction. The second reason is that the only material between this pile and the wall is the looser free draining granular backfill and the close spacing likely made compaction in this zone particularly problematic.

The results in Figure 5.4 clearly show that the resistance of a test pile decreases as the spacing between the pile and the wall decreases for a given deflection increment. The piles at a

distance of 1.3D and 2.7D from the wall typically provided only 40% and 70%, respectively of the resistance of the pile at 6.3D from the wall. This decrease in resistance with decreasing distance from the wall is also consistent with results from the previous studies conducted by Pierson et al. (2009) and Price (2009)

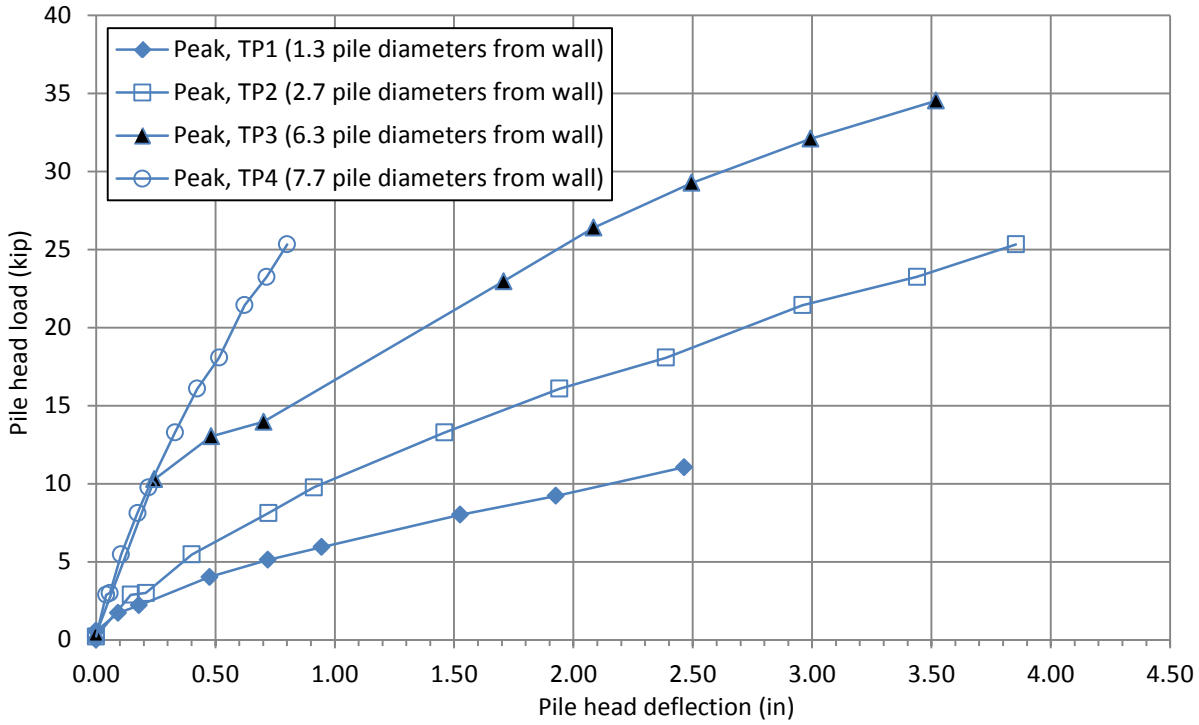

Figure 5.3: Comparison of load-displacement curves for TP1 through TP4 for the peak data points

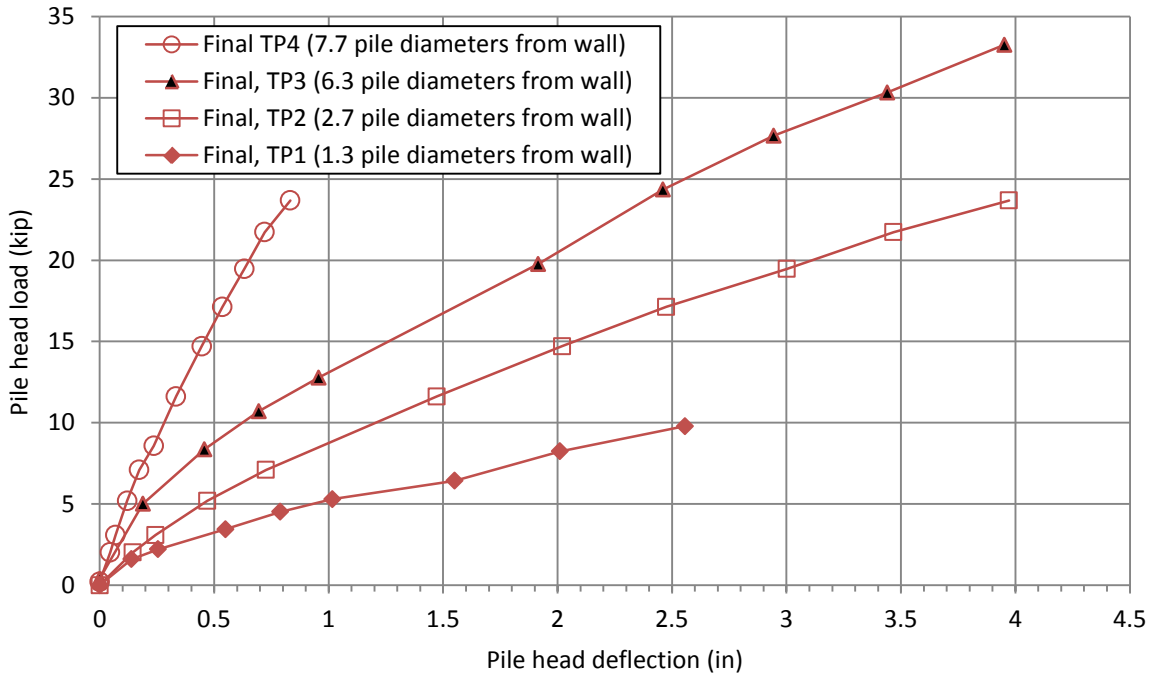

Figure 5.4: Comparison of load-displacement curves for TP1 through TP4 for the final data points

Comparing these results with those from the tests performed by Price (2012) show similarities and differences in the two tests. The first difference in load-deflection curves from Price show a much higher load than the tests performed at Provo Center Street. The highest load at Provo Center Street was 33.3 kips whiles the loading reached well over 45 kips for the tests performed by Price. Secondly, the load-deflection curves have a steeper slope for the tests performed by Price than at Provo Center Street. This is due to the piles being further from the wall, the different reinforcement type, and wall type. A similarity in the data from the different test sites is that the further the pile is from the wall the steeper the load-deflection curve is.

5.1.2 Reinforcement Strip Performance

The load on the entire metal strip was calculated from the strain gauge data using Equation 5-1. 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.

$$T_i = EA(\mu\varepsilon_i - \mu\varepsilon_o)(10^{-6}) \qquad (5\text{-}1)$$

where

T_i is the equivalent induced force in kips for the wire strip 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.

One of the piles, TP1, was placed closer to the wall (16 inches to the center of the pile) than the closest strain gauge (24 inches to the wall). The maximum tensile load in that test was found to be as close to the pile as could be measured Figure 5.6 through 8 show the measured tensile force in the reinforcing strips at the maximum pile load for TP1, TP2 and TP3 respectively. Graphs showing the measured tensile force in each strip at varying pile loads are included in the Appendix. Figure 5.5 is a plot of the induced load in one of the strips vs. distance from the wall. Strip T4 was in the top layer of reinforcement and located 22 inches to the left of the pile as one stands on the reinforcement facing the wall. It can be seen in this plot that the induced load increases with an increase in lateral load. At the pile there is a small peak in the induced load at lower load levels. However, at higher load levels, the peak in induced load moves towards the wall.

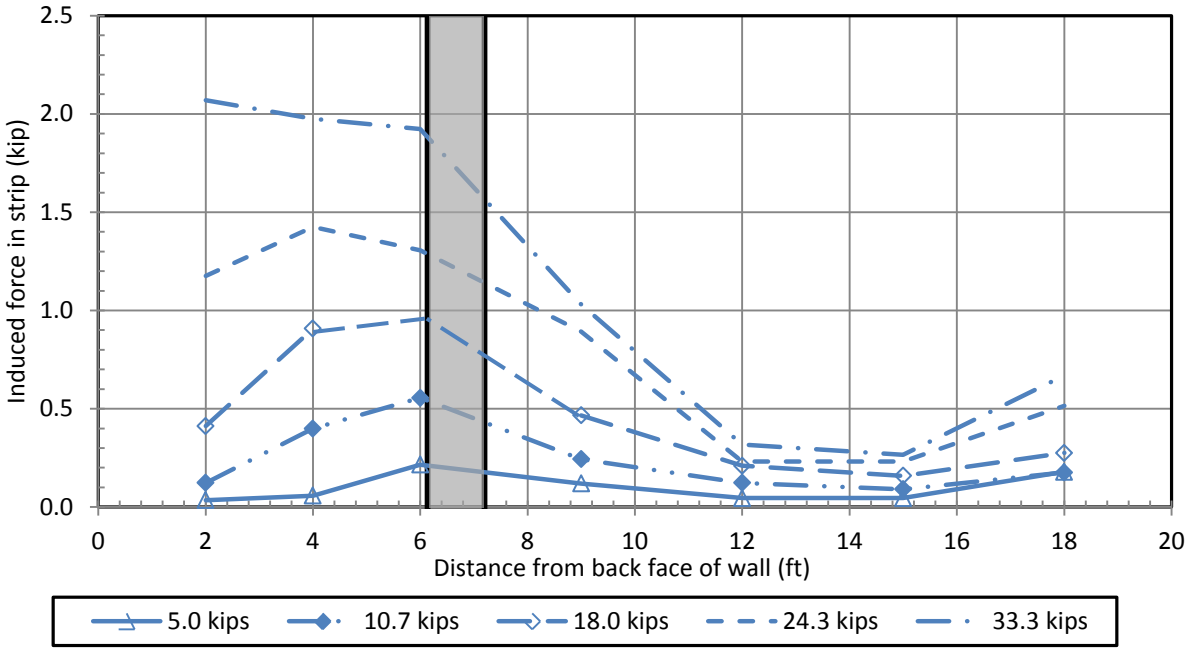

Figure 5.5: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T4 during loading of TP3 (see Table 4.1)

A comparison of the tensile forces in the strip for the test piles indicates that TP 2, located 2.8 pile diameters from the wall, produced the highest tensile force in the strip followed by TP 3, located 6.7 pile diameters from the wall. It is observed that the strips around pile TP1 experienced less strain than the straps around piles TP2 and TP3. Interpretation of this trend is complicated by the fact that the peak load applied to the piles also decreased significantly as the spacing between the wall and the pile decreased.

One last trend is that the further the reinforcement is from the pile the less induced load it experiences. While this is not true in all cases the trend is generally true. During analysis of the strain gauge data it was observed that there were several gauges that malfunctioned. The data from those gauges was omitted from these plots. However, only the gauges that were obviously showing inaccurate data were omitted from the plots. It is possible that some of the data shown

in the plots is from strain gauges that were not as obviously malfunctioning. It is possible that the ambiguity in the trends is caused by the inaccuracies in the strain gauges.

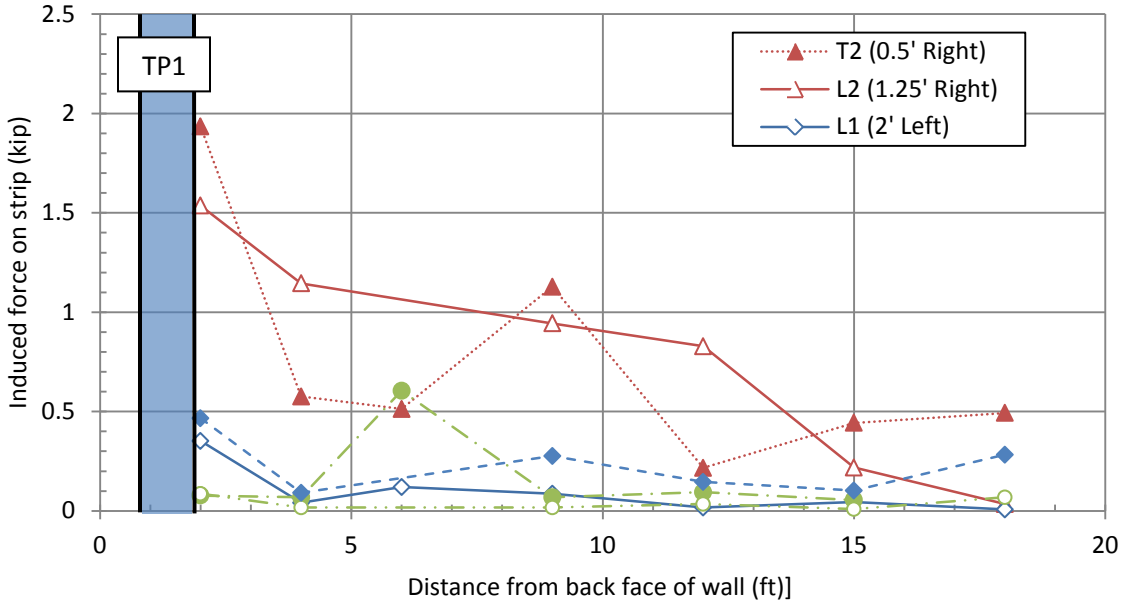

Figure 5.6: Tensile load in reinforcing strips vs. distance from back face of wall as measured by gauges with a 9.8 kip load applied to TP1 located 1.3 D from the wall (see Table 4. Error! Reference source not found.**1)**

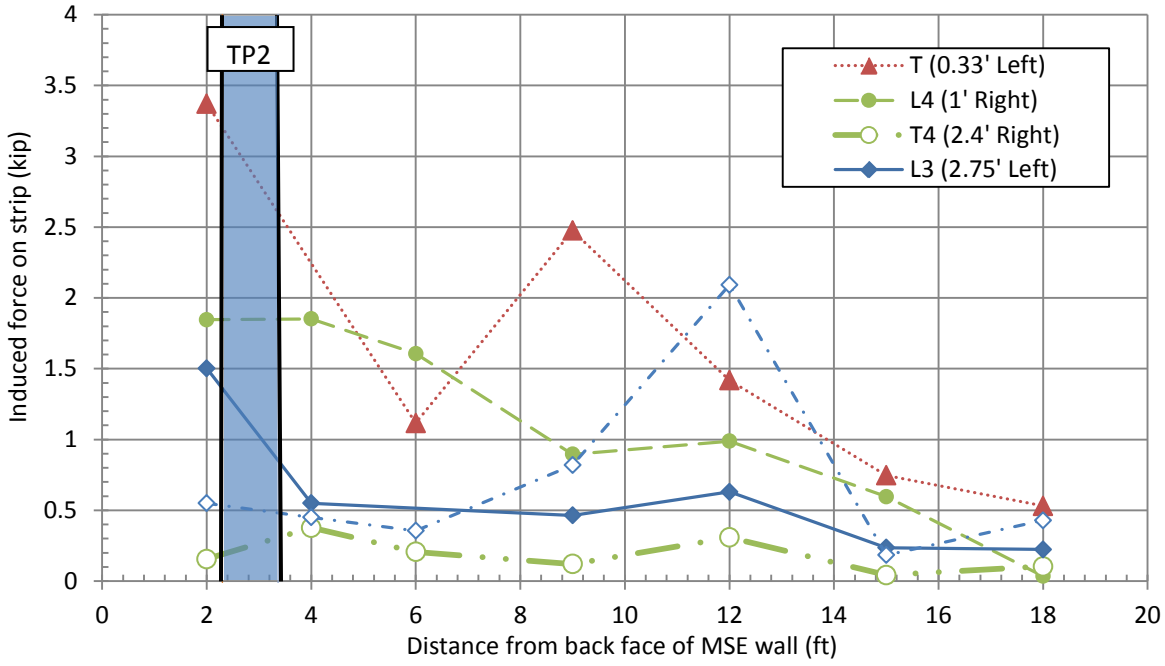

Figure 5.7: Tensile load in reinforcing strips vs. distance from back face of wall as measured by gauges with a 24 kip load applied to TP2 located 2.7D behind wall (see Table 4.1)

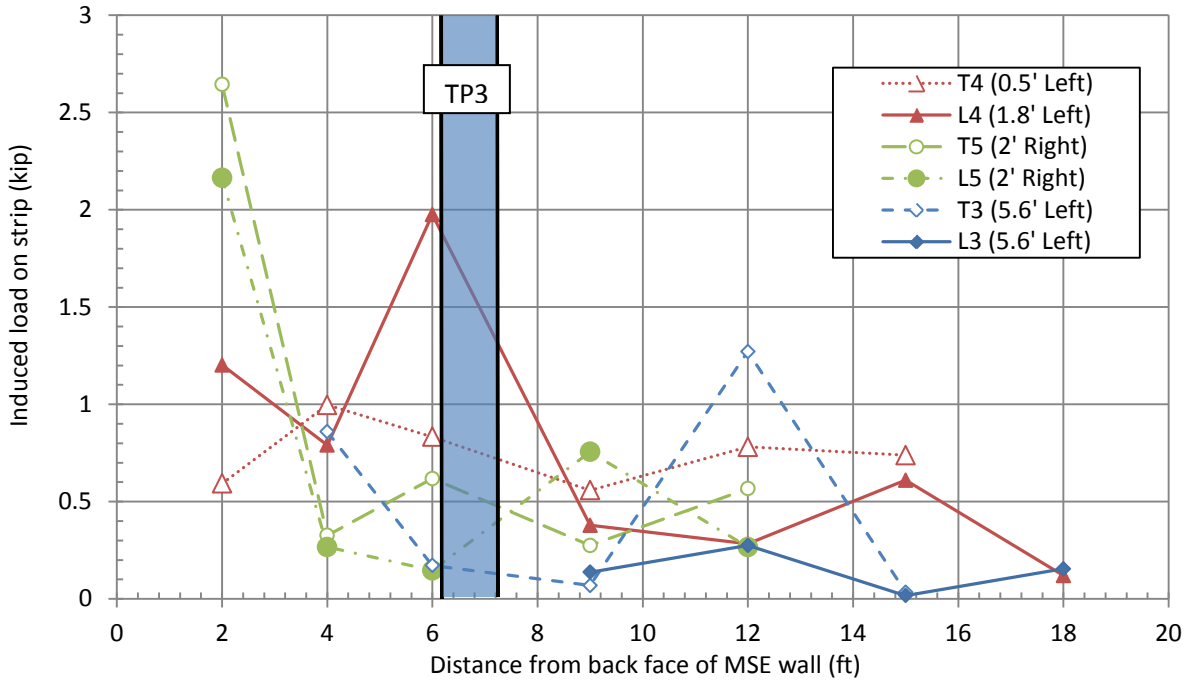

Figure 5.8: Tensile load in reinforcing strips vs. distance from back face of wall as measured by gauges with a 24 kip load applied to TP3 located 6.7D behind wall (see Table 4.1)

There is a general trend in the force distribution. Typically there is a peak in induced load at the wall and a smaller peak at the pile. Farther away from the wall than the pile, the induced load tends to decrease. This is in slight contrast to the results found by Price (2012). It was observed by those results that the induced load on the reinforcement reached its peak at the pile with the induced load decreasing close to the wall as well as at the furthest from the wall that the reinforcement was placed.

The force distribution in the strip 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 strip. Behind the pile, the strip is moving towards the wall relative to the soil. This leads to a decrease in tension in the strip behind the pile as load is transferred to the surrounding soil by skin friction. It is anticipated that the increased tension in the strip behind the pile will go to zero

when 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 strip. This leads to an increase in tension in the strip as load is transferred from the soil to the strip 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. With the increased earth pressure at the wall there is apparent that the wall is then pulling on the strip. This causes the increase in induced load at the wall. This interaction between the soil and the reinforcement is illustrated in Figure 5.9.

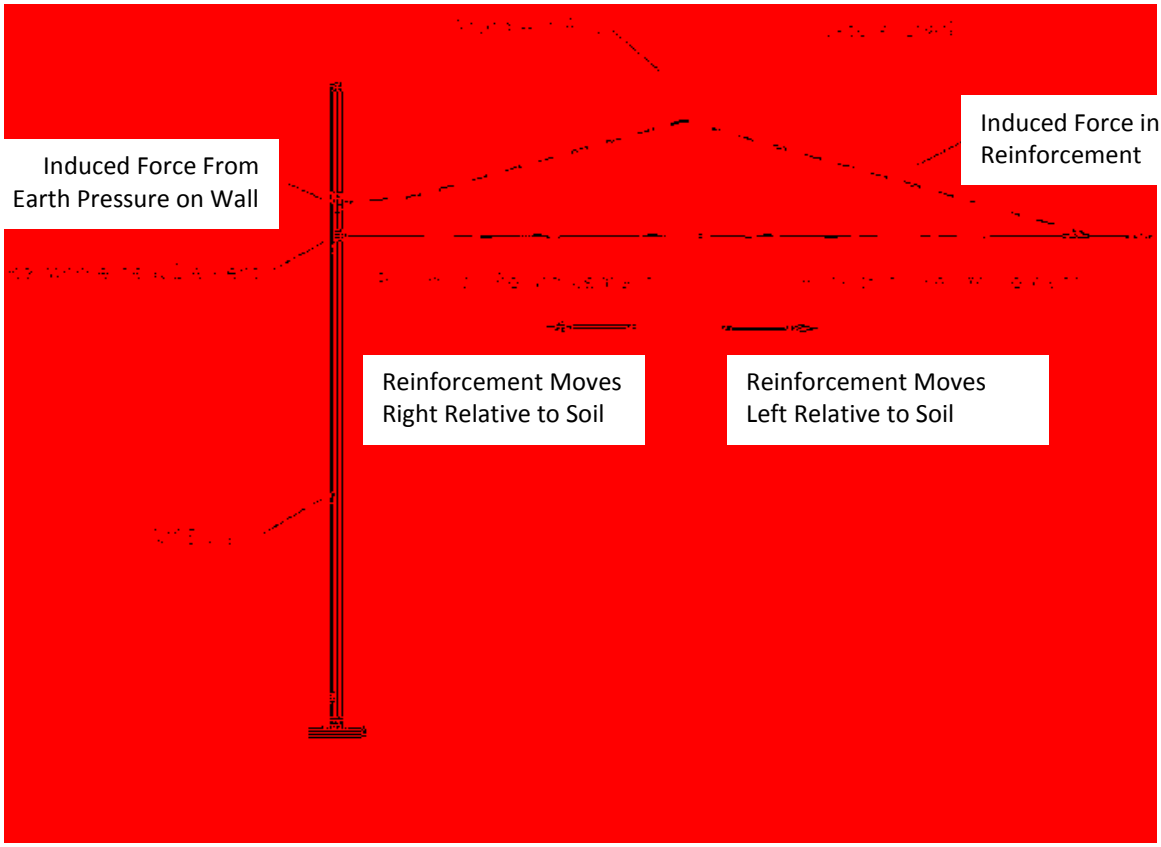

Figure 5.9: Interaction of soil and MSE wall reinforcement when pile is laterally loaded

5.1.3 Displacement of Ground and Wall Panels

As the load was applied to the piles in these tests, the piles and the ground between the piles and the wall were displaced. The displacement of the pile can be seen in Figure 5.10. Figure 5.11 shows ground surface displacement as a function of distance from the wall at several load levels for TP3. As the load increases, the ground surface displacement extends to a progressively greater distance from the face of the pile. Nevertheless, the ground displacement decreases rapidly from the face of the pile and is typically less than 0.3 in. beyond four pile diameters and less than 0.1 in. beyond six pile diameters. Plots showing the ground surface displacement at different load levels throughout the testing for TP1 and TP2 are included in the appendix.

Figure 5.10: A view of the displacement of pile TP3 during loading

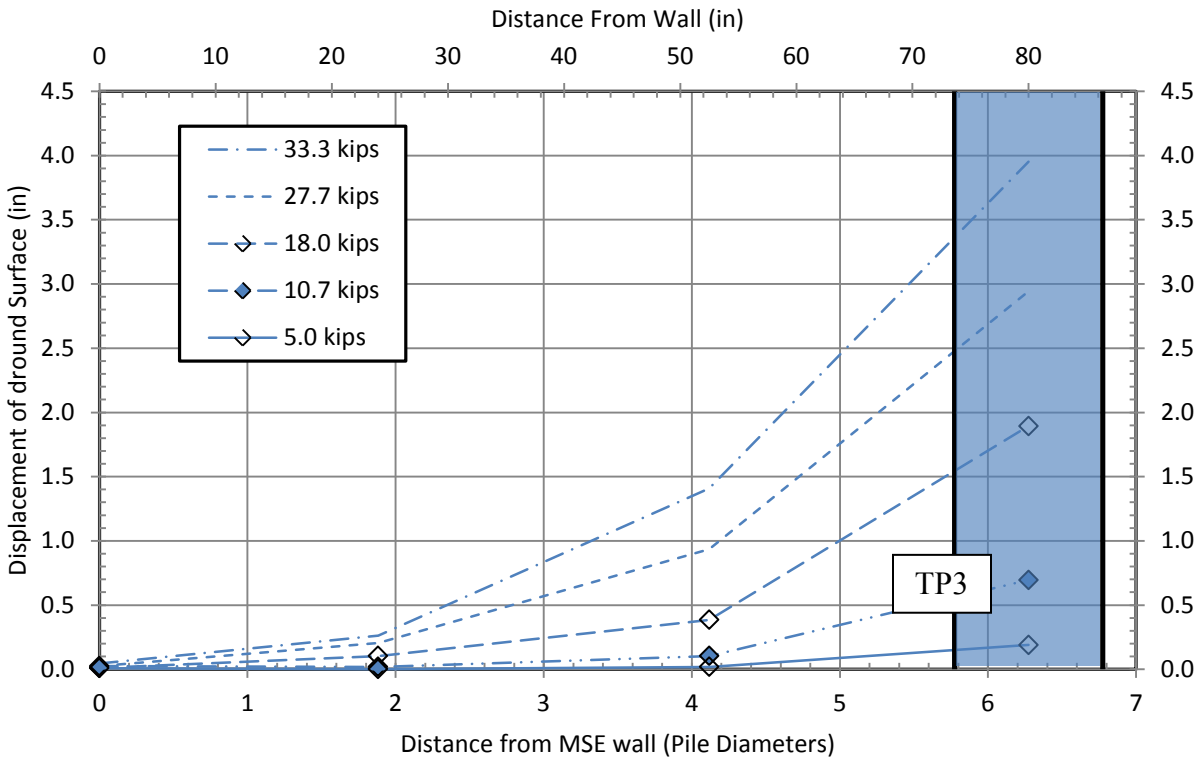

Figure 5.11: Horizontal displacement of the ground surface as a function of distance from the MSE wall different load levels for TP3

To find a correlation between the ground movement and the distance from the wall, the ground displacement values were all divided by the maximum displacement at the pile for several load increments. As can be seen in Figure 5.12 through 14 this normalization procedure produces curves which are reasonably well correlated. In general, the normalized displacements at higher load levels are very consistent from load to load whereas some variation is evident at lower load levels. Figure 5.15 provides a plot of the average normalized displacement for each pile as a function of normalized distance from the center of the pile. The average curves tend to follow the same trend until they are within about one pile diameter from the wall face. At this distance the restraint provided by the reinforced wall face tends to reduce the measured displacement relative to what occurs when the wall is far from the pile (>6D).

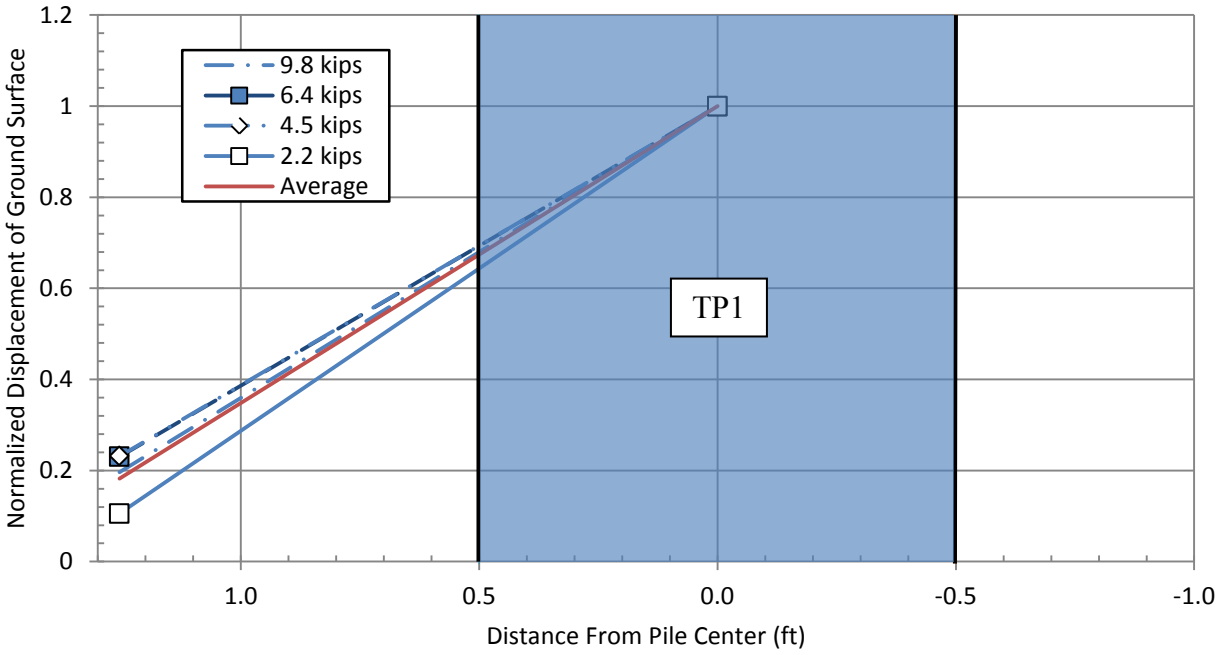

Figure 5.12: Normalized horizontal displacement of the ground surface as a function of distance from the Pile Center different load levels for TP1

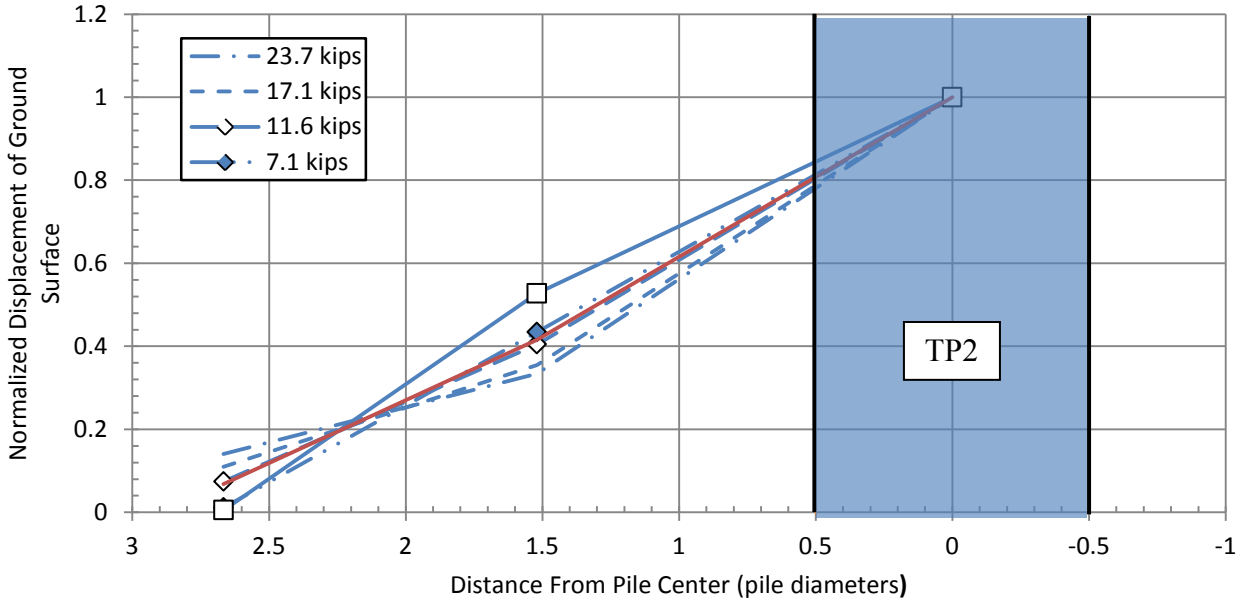

Figure 5.13: Normalized horizontal displacement of the ground surface as a function of distance from the Pile Center different load levels for TP2

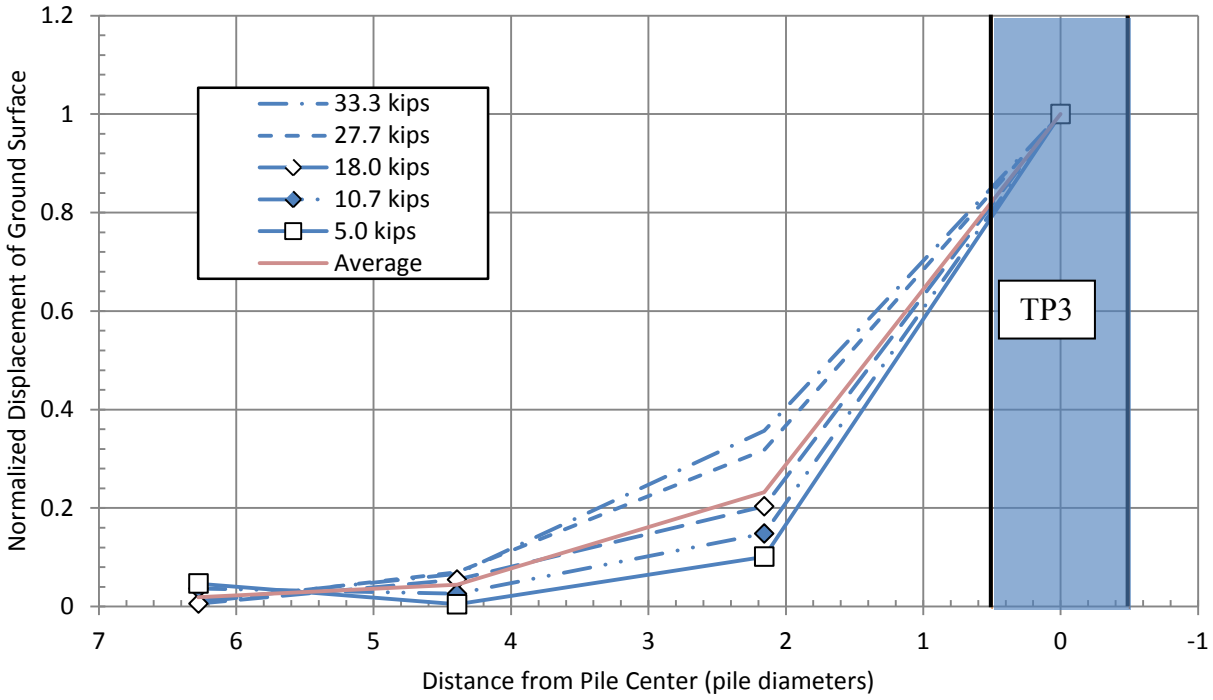

Figure 5.14: Normalized horizontal displacement of the ground surface as a function of distance from the Pile Center different load levels for TP3

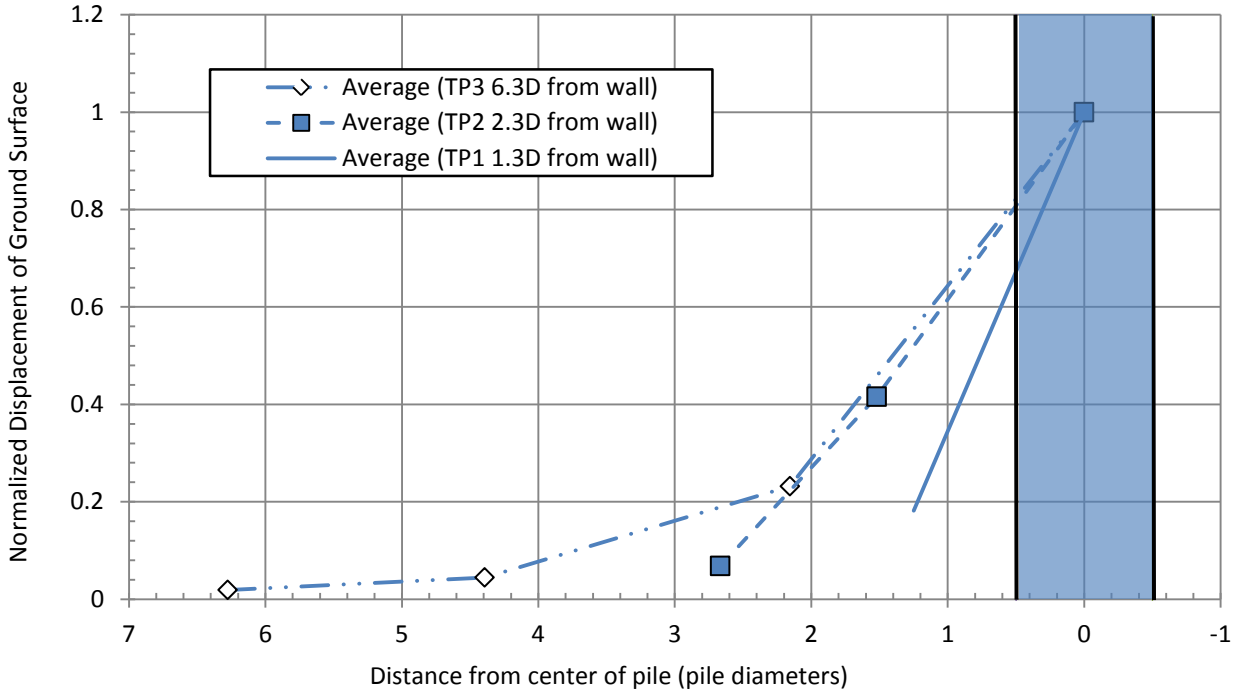

Figure 5.15: Average normalized horizontal displacement of the ground surface as a function of distance from the pile center for piles TP1, TP2 and TP3

A comparison of the displacement of the ground surface as a function of distance from the MSE wall for TP1, TP2, and TP3 at a load of approximately 9.8 kips (the maximum load applied to TP1) is shown in Figure 5.16. A similar plot is shown in Figure 5.7 for TP2, and TP3 at the maximum load (approximately 24 kips) of pile TP2. As expected, the pile that was closest to the wall produced the greatest displacement. Both figures show that the farther away from the wall the pile is located the less displacement occurs at the wall face for the same load. The test involving piles TP2 and TP4 show that the displacement increases closer to TP2. TP4 was observed to move less than TP2 due to the larger amount of densely compacted MSE select backfill surrounding it as well as the fact that it was being pushed away from the wall and towards the embankment.

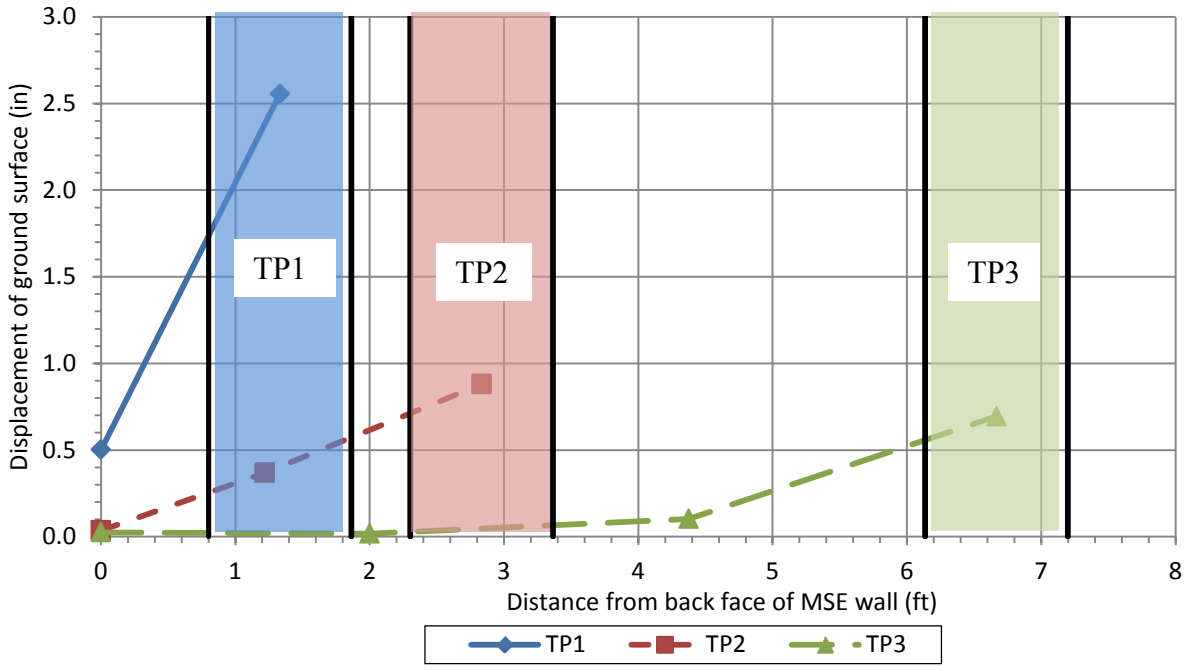

Figure 5.16: Horizontal displacement of the ground surface as a function of distance from the MSE wall at approximately 9.8 kips (maximum load for TP1)

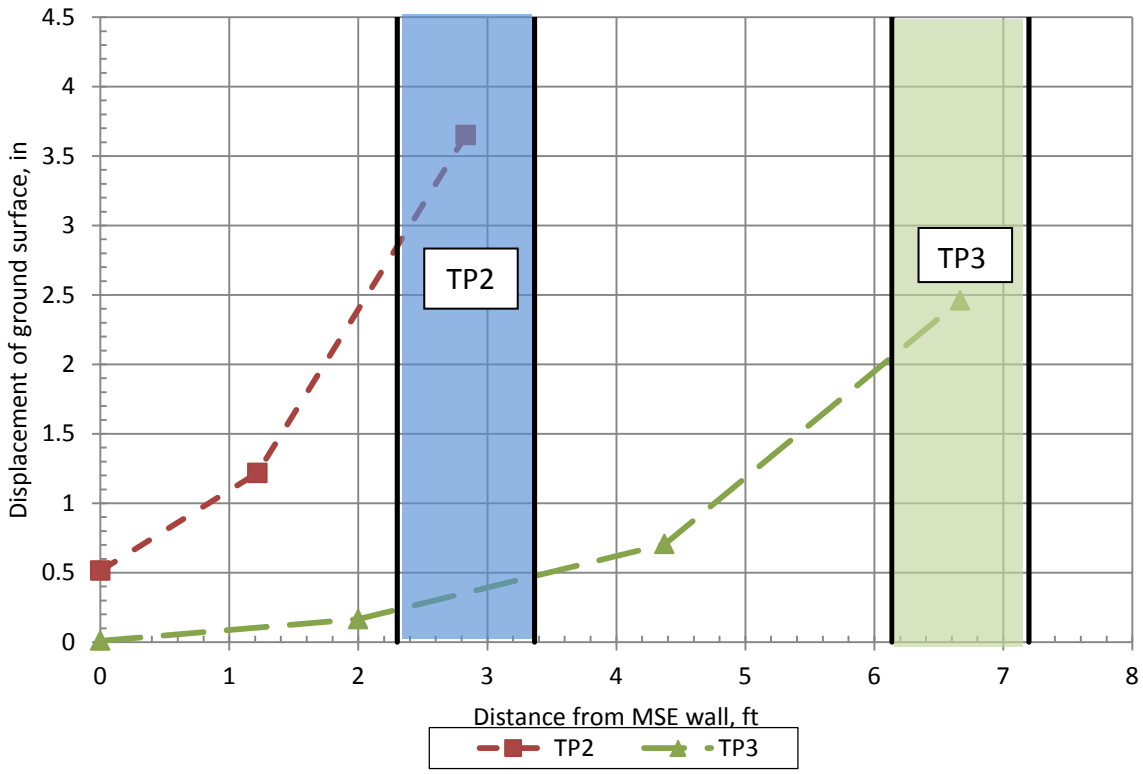

Figure 5.17: Horizontal displacement of the ground surface as a function of distance from the MSE wall at approximately 24 kips (maximum load for TP2)

A bulge in the wire mesh wall was observed during the testing as shown by the photo in Figure 5.18 taken from the top of the wall. There were LVDTs placed on the outside of the wall at the locations of the reinforcing strips with strain gauges at depths of 3 and 19 inches from the top of the fill. The bulge occurred in line with the pile and the load. The two LVDTs and the bulge are not exactly lined up because the bulge was in line with the pile and the LVDTs were in line with the strips. The bulge appeared to be several inches deep and the peak was below the lowest LVDT. Therefore, it is not possible to determine the exact deflection caused or its location. Since this wall was a two stage wall there was no concern about causing deflection at the wall as there is a gap between the wire mesh and the concrete wall panels which was to be

filled with drain rock once the wall experienced consolidation settlement owing to the backfill placement.

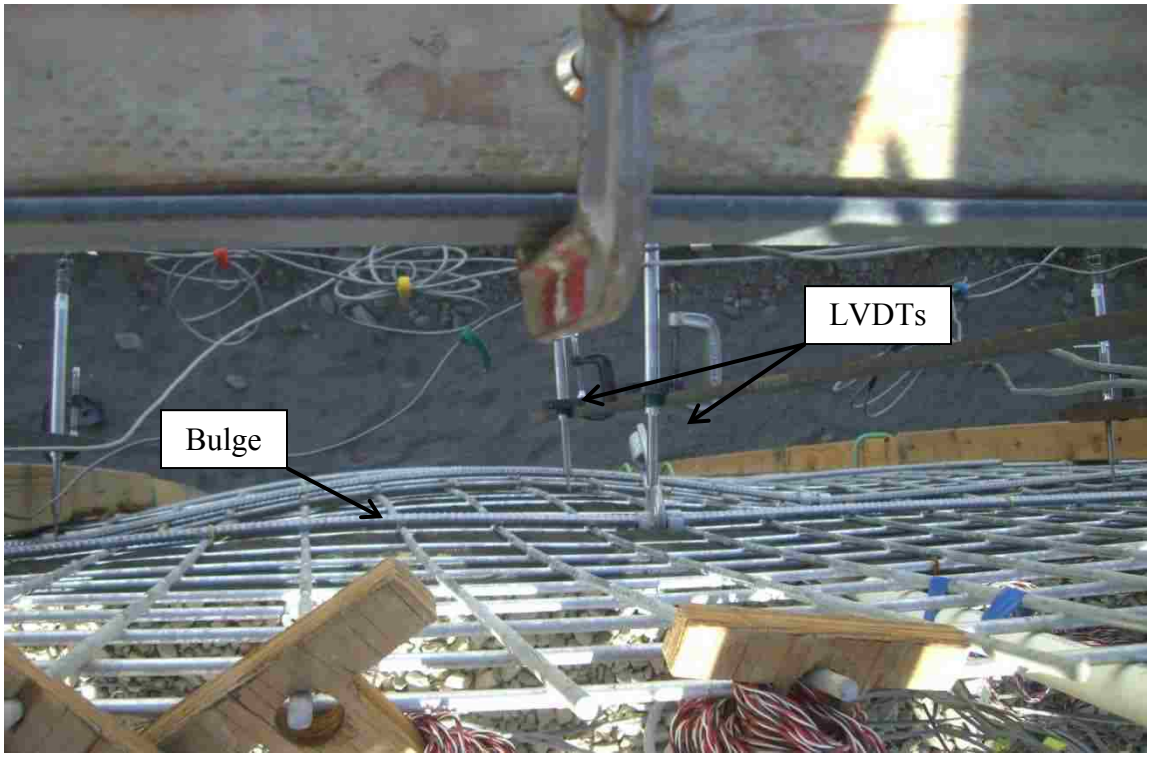

Figure 5.18: View from above of the wall displacement and LVDTs for pile TP3

In Figure 5.17 there can also be seen LVDTs off to the side of the bulge. These were set up in order measure wall displacement at the strip connections on either side of the pile which were negligible. The displacements of the wall as measured by the LVDTs closest to piles TP1, TP2, and TP3 are shown in Figure 5.19 through 5.21 respectively. In these graphs the displacements above the top wall are from the string potentiometer which was attached to the top of the wire mat facing which extended above the top of the wall and the LVDTs which were placed at the locations of the strips.

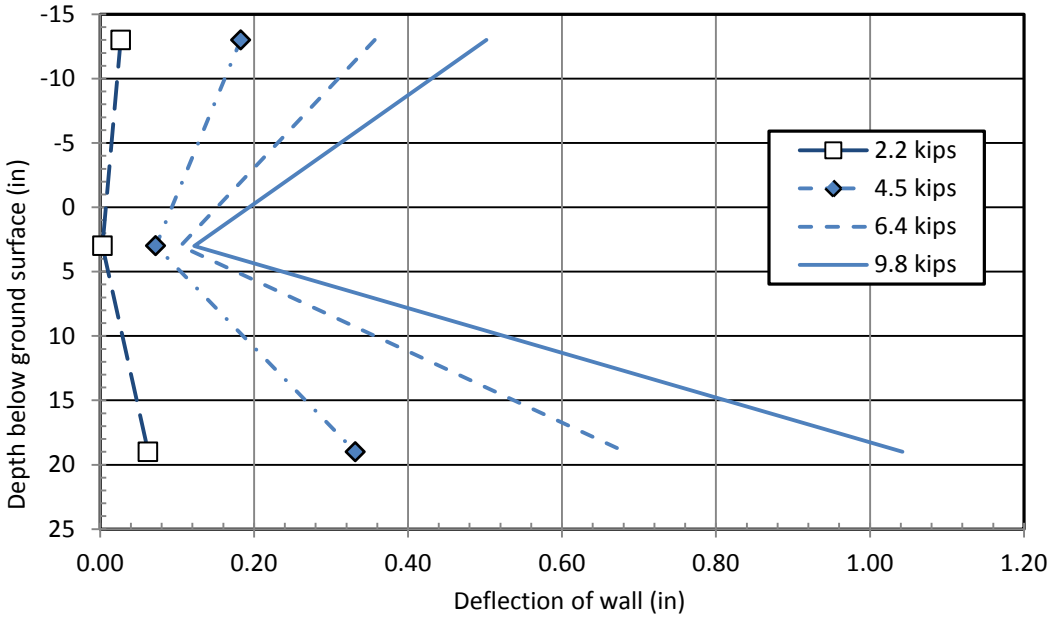

Figure 5.19: Deflection of wire mesh wall versus depth below ground surface for TP1

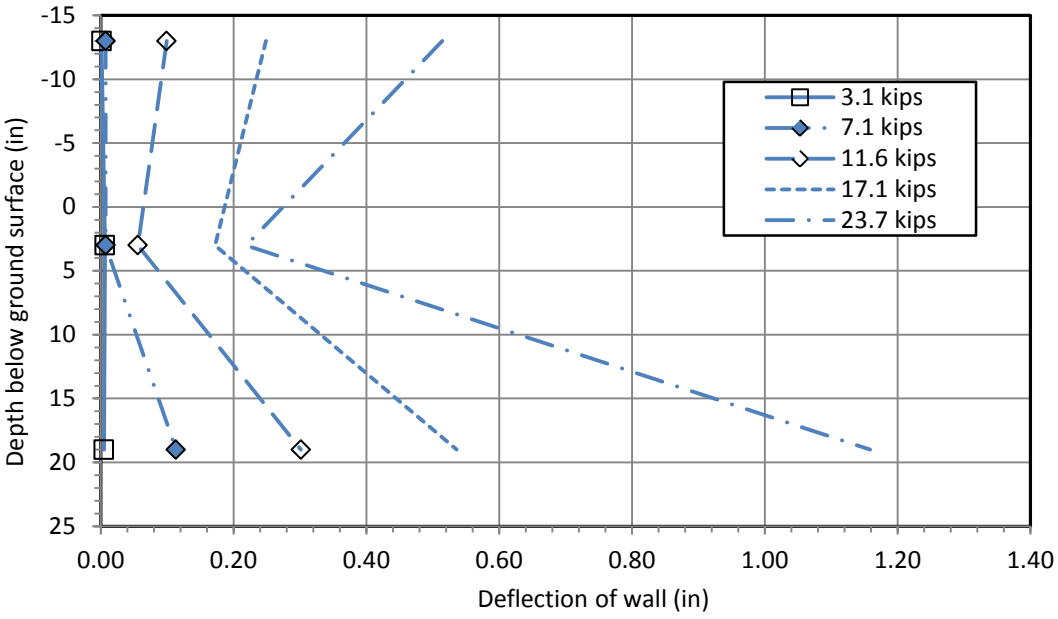

Figure 5.20: Deflection of wire mesh wall versus depth below ground surface for TP2

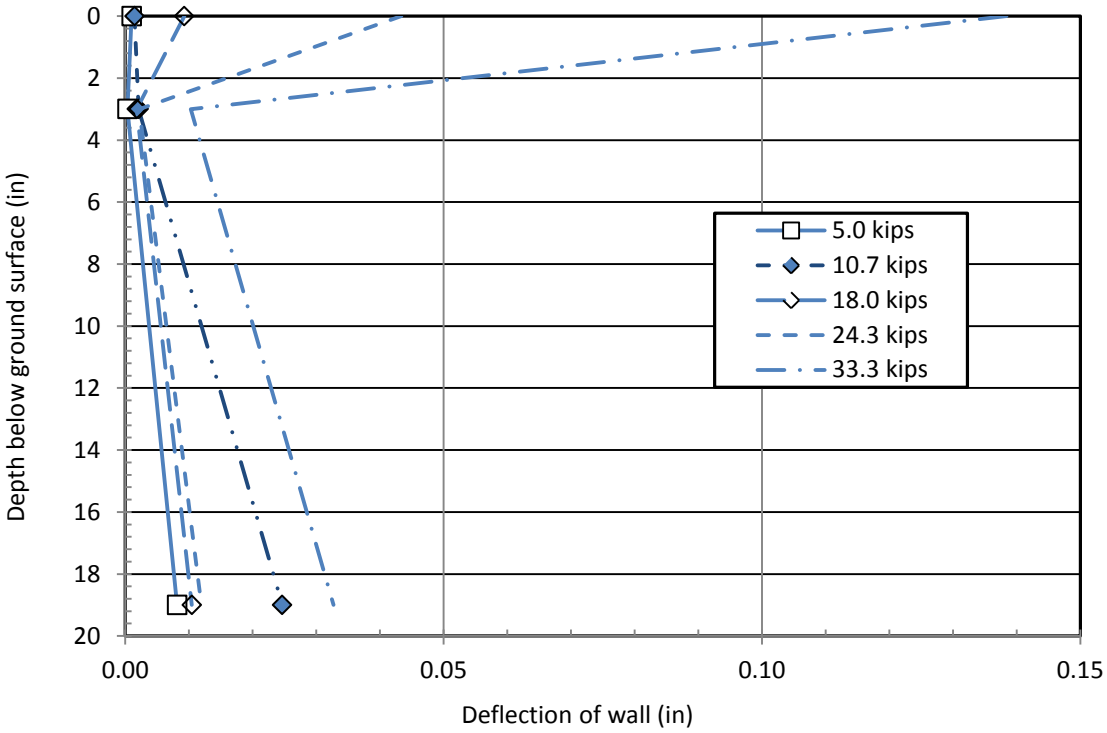

Figure 5.21: Deflection of wire mesh wall versus depth below ground surface for TP3

These graphs show that the wall was typically restrained near the ground surface and did not displace appreciably. The greater displacement occurred at the top of the wall, which was simply the wire mesh holding the soil in place and was not restrained at all, and at greater depths which agrees with the observed bulge in the wire mat facing. The bulge at depth may be attributed to the fact that the soil pressure from a laterally loaded pile generally reaches a maximum at depth and then decreases. In contrast, the reinforcement pull-out resistance increases relatively consistently with depth. Apparently there is a critical depth where the induced pressure may exceed the wall resistance allowing the wall to bulge.

Due to the difference in wall type between the tests performed by Price (2012) and the tests performed for this report it is not possible to make comparisons about the deflection of the wall. The two stage wall is designed to deflect with soil consolidation allowing the bulge seen in

Figure 5.17. The single stage wall design makes no such allowances and therefore deflection of the wall can be measured.

5.1.4 Pile Performance

The bending moment in the pile is calculated from the strain gauge data using Equation 5-2. The average value of the paired strain gauges was used when both gauges were functioning. At depths where one of the paired gauges was damaged during construction only the data from the functioning gauge was used.

$$M_i = EI(\mu\varepsilon_i - \mu\varepsilon_o)(10^{-6})(D_o/2) \qquad (5\text{-}2)$$

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.

The gauges at the Provo Center Street site experienced little damage during construction due to the added protection of the steel angles welded onto the piles. The addition of the steel angles was taken into account when calculating the moment of inertia of the piles. Figure 5.22 and 23 show the bending moment versus depth at various load levels for TP2 and TP3, respectively. In both cases, as the lateral load increases the maximum bending moment increases; however, the depth at which the maximum bending moment occurs stays relatively close to nine feet below the ground surface or 8.4 pile diameters below ground. The measured

bending moment for TP2 and TP3 at the maximum load of approximately 24 kips for pile TP2 is shown in Figure 5.24. The maximum bending moment at this load varied from 1450 to 2100 in-kips at a depth of 9 to 12 ft. below the load level. TP2 at 2.7D from the wall developed a higher maximum bending moment than TP3 at 6.7D from the wall. This is consistent with the notion that the pile-wall interaction decreases the lateral soil resistance thereby increasing the flexibility of the pile and leading to higher bending moments.

The maximum load applied to TP1 was 10 kips and the measured bending moment versus depth curve for this pile at this load is shown in Figure 5.25, along with the bending moment curves for TP2 and TP3 at approximately the same load. The maximum bending moment of approximately 640 in-kips for TP1 (1.3 pile diameters from the wall) is comparable to the bending moment of 680 in-kips for TP2 (2.7 pile diameters from the wall) which is approximately 35% higher than the maximum bending moment of about 480 in-kips for TP3 (6.7 pile diameters from the wall).

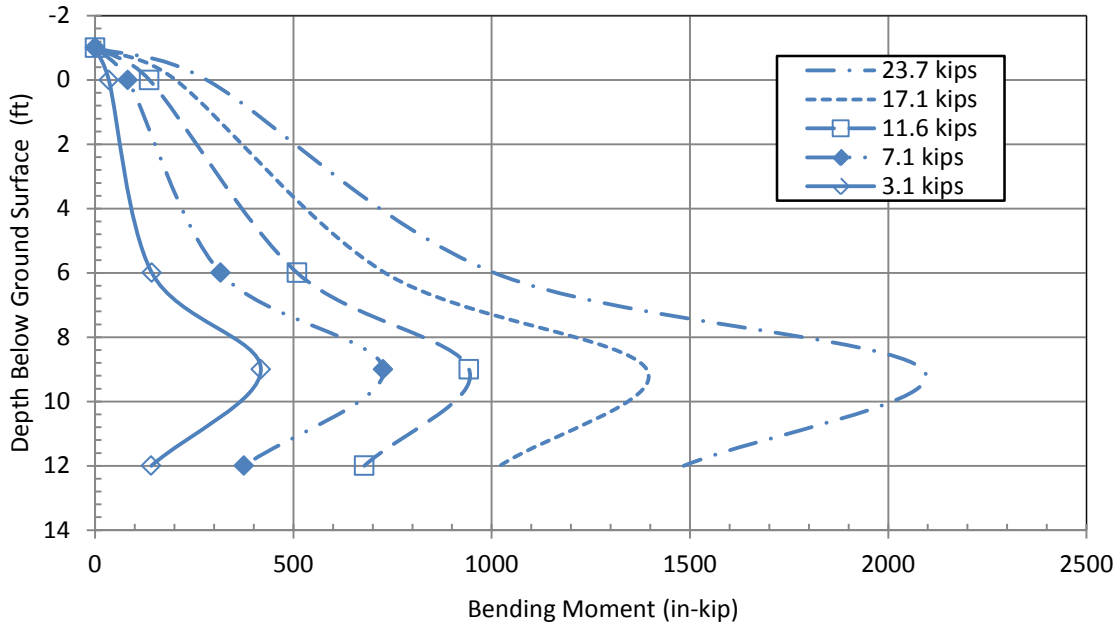

Figure 5.22: Bending moment vs. depth below ground surface for TP2 for various loads

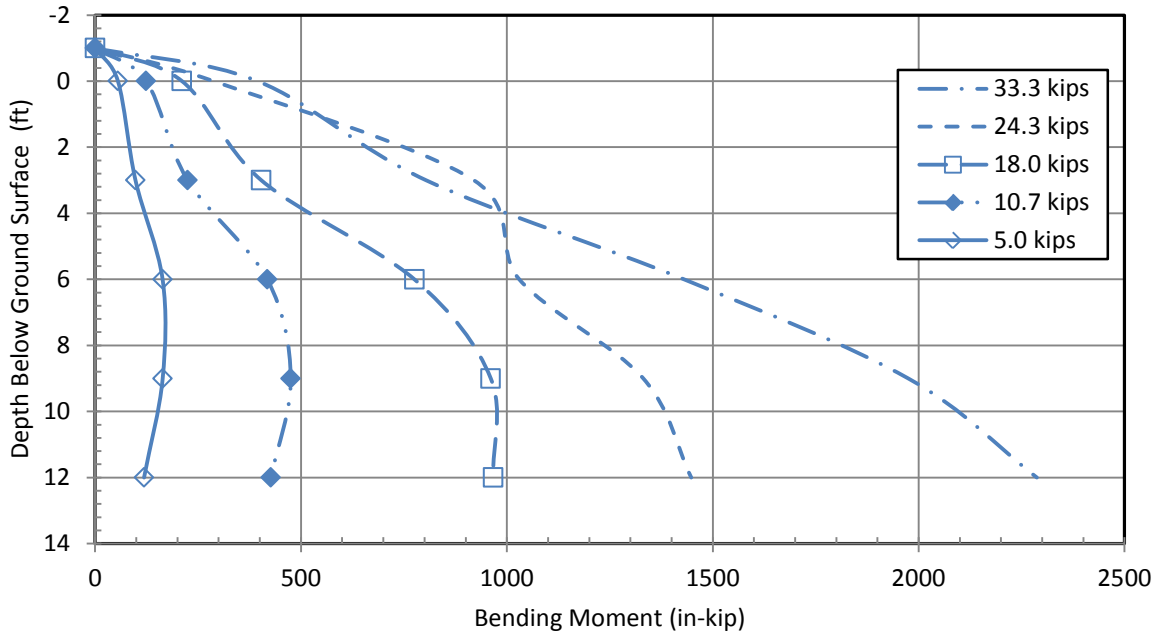

Figure 5.23: Bending moment vs. depth below ground surface for TP3 for various loads

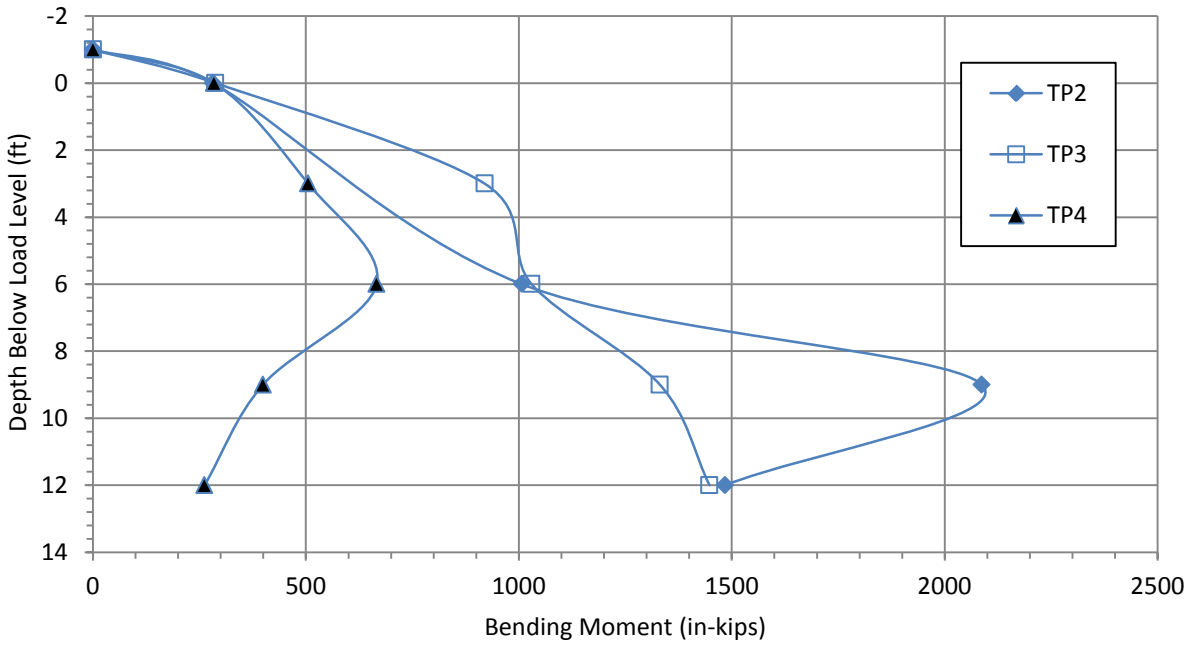

Figure 5.24: Bending moment vs. depth below load level for TP2, TP3, and TP4 at a load of 23.7 kips (maximum load for TP2 and TP4)

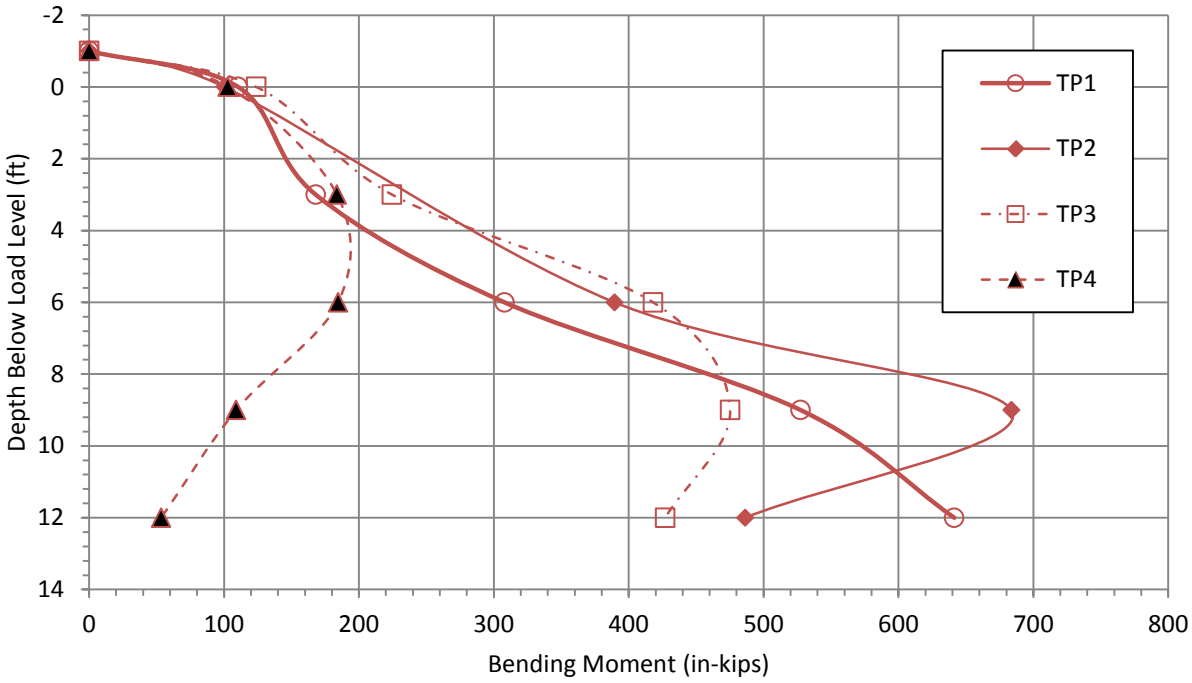

Figure 5.25: Bending moment vs. depth below ground surface for TP1, TP2, TP3, and TP4 at a load of 10 kips (maximum load for TP1)

The maximum bending moment for pile TP4 is considerably lower than that of the other piles. When comparing all the piles at a loading approximately 10 kips the maximum bending moment for TP4 is only 27% of the maximum bending moment observed. When looking at the loading of approximately 24 kips the maximum bending moment for TP4 is only 32% of the maximum bending moment observed. Also, TP4 reaches its maximum bending moment at a shallower depth than the other piles. All these observations are consistent with the fact that TP4 was loaded into the backfill soil that had been compacted to a denser state and, therefore, produced greater lateral resistance on the side of the pile. As the soil resistance increased, the pile was more restrained against bending and, as a result, lower bending moments developed.

The greater lateral soil resistance also allowed the load to be transferred to the soil at a shallower depth so that the maximum moment occurred at a shallower depth.

The bending moment vs. depth curves for the tests performed for this report agree with those done by Price. Figure 5.26 shows bending moment vs. depth curves for piles at the Pioneer Crossing site.

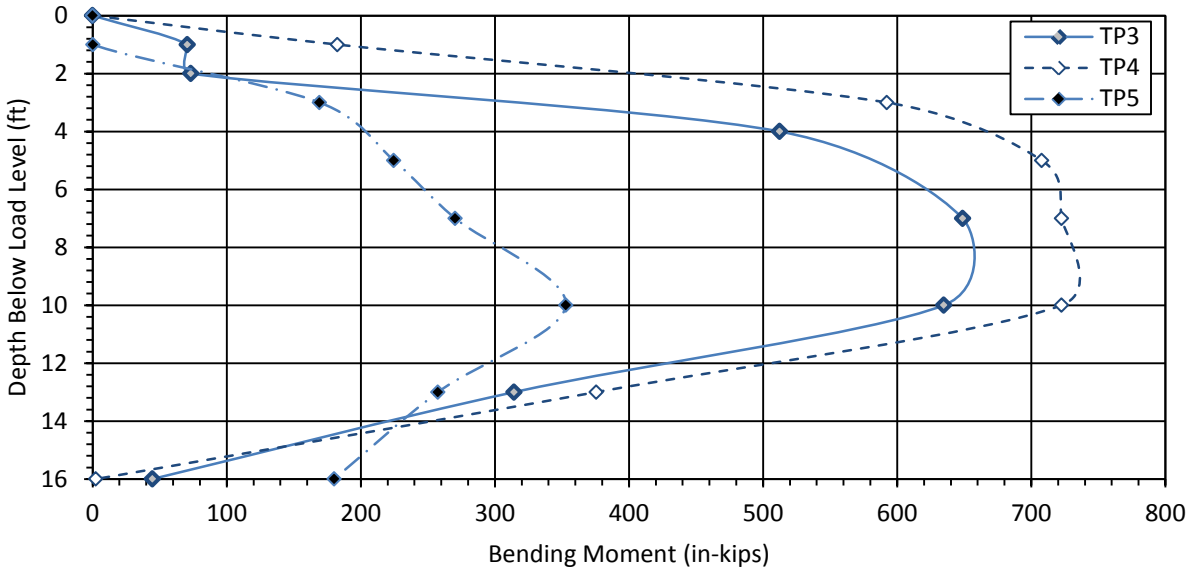

Figure 5.26: Bending moment vs. depth below ground surface for TP3, TP4, and TP5 at a load of 18 kips (maximum load for TP5)

The results are similar to those of tests performed at Provo Center Street. The peak bending moment occurs at a depth of 8-10 feet below the load level. At both test sites, Pioneer Crossing and Provo Center Street, the load was located one foot above ground level. This data helps in determining where more reinforcement might be needed.

6 LATERAL PILE LOAD ANALYSIS

The lateral pile load 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 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. Although the soil near the pile was actually gravel, the p-y curve shape was modeled within the framework of API (1982) sand p-y curve. This model requires the selection of moist unit weight, soil friction angle (ϕ), and lateral subgrade reaction modulus (k). The moist unit weight of gravel for this 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 calculated 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 as 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 were modified to find the best match to the data plotted after the one minute hold time (final load data)

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 found that the k value for dense gravels is higher than that for sand at equivalent relative densities, therefore, the curves in Figure will only provide a first approximation of the correct value. Therefore, back-calculation was used to obtain a more accurate assessment of k.

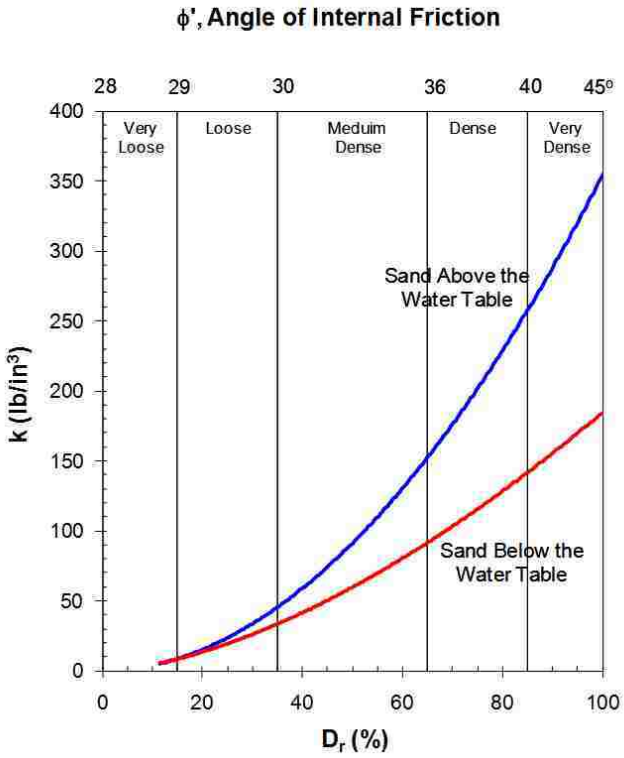

Figure 6.1: Subgrade reaction modulus, k used for API sand criteria in p-y analysis (API, 1982)

A pinned-head condition was used for the boundary conditions at the top of each pile 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 small intervals up to the maximum load. The analyses for each site are discussed in the following sections.

6.1 Provo Center Street Site

The soil profile for the LPILE analysis consists of three 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 a silty sand. The third layer is the same as the second layer but below the water table. Table 6.1 shows the material properties used in the analyses for piles TP1, TP2, and TP3, including the friction angle (ϕ) and stiffness (k) values for the reinforced fill resulting in the best agreement with the measured data for TP3. The friction angle (ϕ) and stiffness (k) for pile TP4 is seen in Table 6.2.

Table 6.1: Pile properties for the Provo Center Street site LPILE analysis for piles TP1-3.

Depth (ft)	Description	Soil Type (p-y model)	Eff. Unit Weight,γ' (pcf)	Cohesion, c (psi)	Strain Factor ε_{50}	Friction Angle,ϕ' (degrees)	p-y Modulus, k (pci)
0 to 23	Reinforced Fill	API Sand (O'Neill)	112.3	0	-	28	27
23 to 28	Foundation Soil	API Sand (O'Neill)	110.4	0	-	31	50
28-43	Foundation Soil	API Sand (O'Neill)	48.4	0	-	31	30

Table 6.2: Pile properties for the Provo Center Street site LPILE analysis for pile TP4.

Depth (ft)	Description	Soil Type (p-y model)	Eff. Unit Weight,γ' (pcf)	Cohesion, c (psi)	Strain Factor ε_{50}	Friction Angle,ϕ' (degrees)	p-y Modulus, k (pci)
0 to 23	Reinforced Fill	API Sand (O'Neill)	132.2	0	-	39	115
23 to 28	Foundation Soil	API Sand (O'Neill)	110	0	-	31	50
28-43	Foundation Soil	API Sand (O'Neill)	47.6	0	-	31	30

6.1.1 Bending Moment vs. Depth

Analyses were first performed on the pile located at a distance of 6.7 pile diameters from the wall (TP3) assuming that there was no effect from the proximity of the wall. Thus the P-multiplier was set as 1. Thereafter, the soil parameters (friction angle and stiffness) 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.

Since pile TP4 was further from the wall than the other piles and was being pushed away from the wall it is assumed that the lower density free-draining granular backfill (FDGB) that was placed next to the wall had less of an effect on the overall soil density for that pile. The soil density used for the analysis of this pile was density of the MSE select backfill previously noted in chapter 3 to be 132.2 pcf. The friction angle and stiffness for TP4 were back calculated using a P-multiplier of 1. Table 6.3 shows the pile property input for the LPILE analysis.

Table 6.3: Material properties for the Provo Center Street 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	480	200	12	12.75	0.375	279.34	14.58	29,000,000	60,000

The back-calculated friction angle obtained from the analyses of piles TP1-3 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 also low for dense sand (typically 150 pci for D_r = 80%) based on API recommendations. However, the back-calculated values are consistent with the observation that FDGB was more loosely compacted than the MSE select backfill and typically occupied a large portion of the space between the pile and MSE wall. The analysis for pile TP4 shows a friction angle of 39º and a k values of 115. These results are much closer to what is normally expected for a gravel backfill.

There was some difficulty in in obtaining the required compaction near the piles. Due to the spacing and orientation of the piles, the construction crew was unable to use the CAT CS 56 roller that was used in the compaction of the rest of the backfill in the area around the test piles. Instead, a small vibratory plate compactor was used. Despite several passes of the compactor, it is reasonable to suppose that a lower density might have been achieved. Another reason for possibly lower density in the soil is that the FDGB that was specified for the closest 30 inches from may have extended to greater distances. As noted previously, specifications for the FDGB

soil allowed this material to be placed in 2 ft lifts using only 3 passes of the plate compactor with a minimum width of 12 inches past the first stage wire facing. It is likely that the crew placing the FDGB put more than the required amount next to the wall. For example, in the photo in Figure 3.4, the FDGB extended from the wall to the face of each test pile at this elevation. As noted previously, the unit weight of the FDGB is only 90.1 pcf compared to the 138 pcf unit weight of the conventional backfill material. The density of the soil found in back calculations was about halfway between the densities of the FDGB and the rest of the backfill.

Despite the fact that stiffness and friction angle values obtained were lower than expected it likely that they are not wrong. There is a high correlation with the results from Price (2012) that backs up the values being what they are. The P-Multiplier results shown in section 6.4 show that the results from this research match very well with those done by Price.

The back-calculated load deflection curve from the LPILE analysis is shown in Figure 6.2 and Figure 6.3, along with the measured lateral load displacement curves for TP3 and TP4 respectively. In both cases, the computer load-displacement curve is in very good agreement with the measured data points. The output file for the LPILE analysis is included in Appendix F.

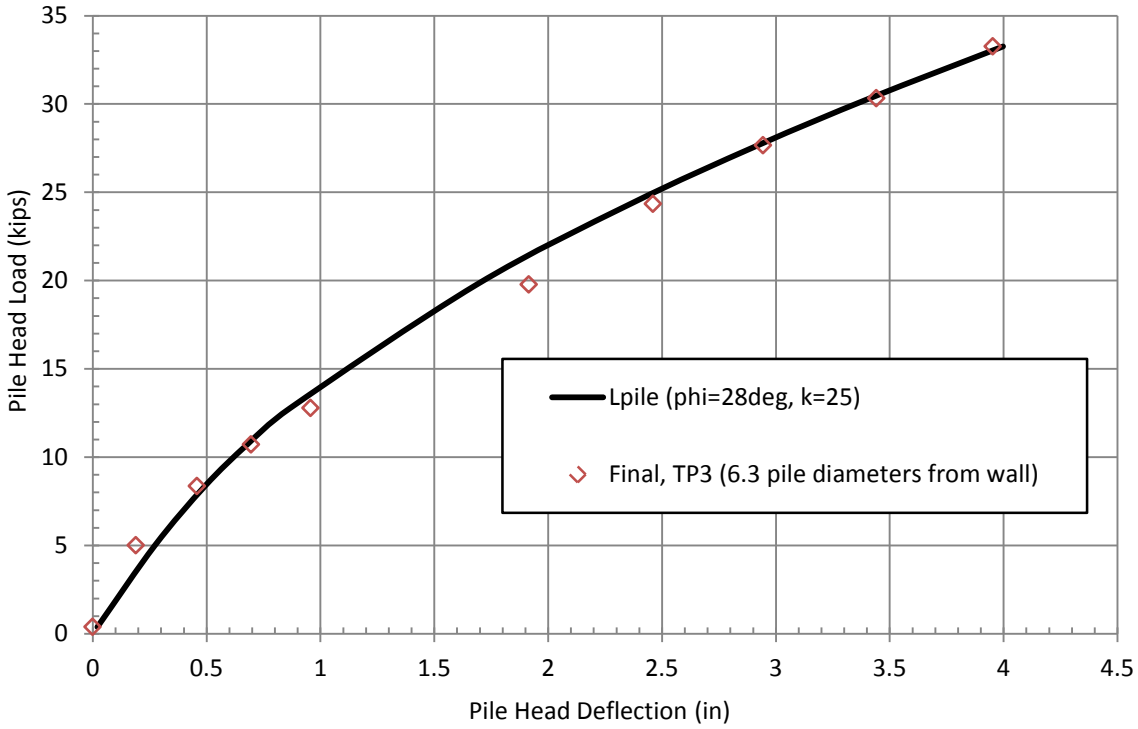

Figure 6.2: Comparison of computed and measured load-displacement curves for TP3

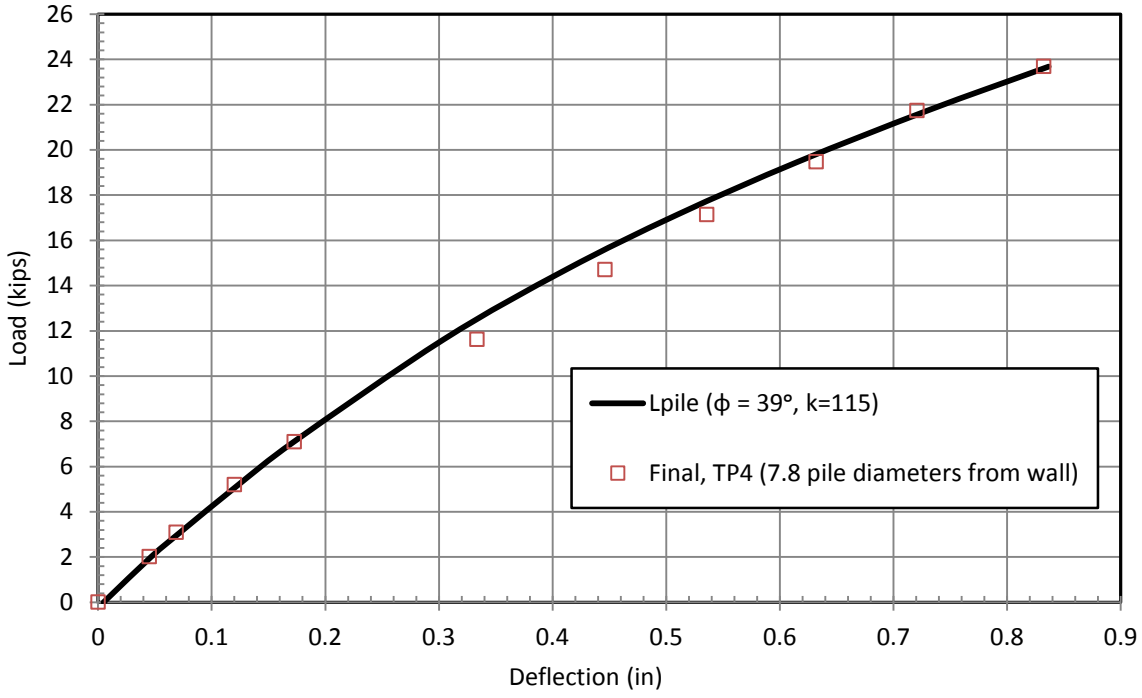

Figure 6.3: Comparison of computed and measured load-displacement curves for TP4

The P-multipliers for test piles at 1.3 and 2.7 pile diameters (piles TP1 and TP2) were found by using the same soil model developed for the pile at 6.3 pile diameters, P-multipliers were obtained by back-analysis to match the measured load-deflection curves for the piles at closer spacing. 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 TP1 (1.3 pile diameters behind wall) and TP2 (2.7 pile diameters behind wall) were found to be 0.16 and 0.51, respectively. The computed pile head load versus displacement curves using these p-multipliers are shown in Figure 6.4 relative to the measured curves. Once again, the agreement with the measured load vs. displacement is very good indicating that this simple approach is capable of accounting for the observed behavior in a reasonable fashion.

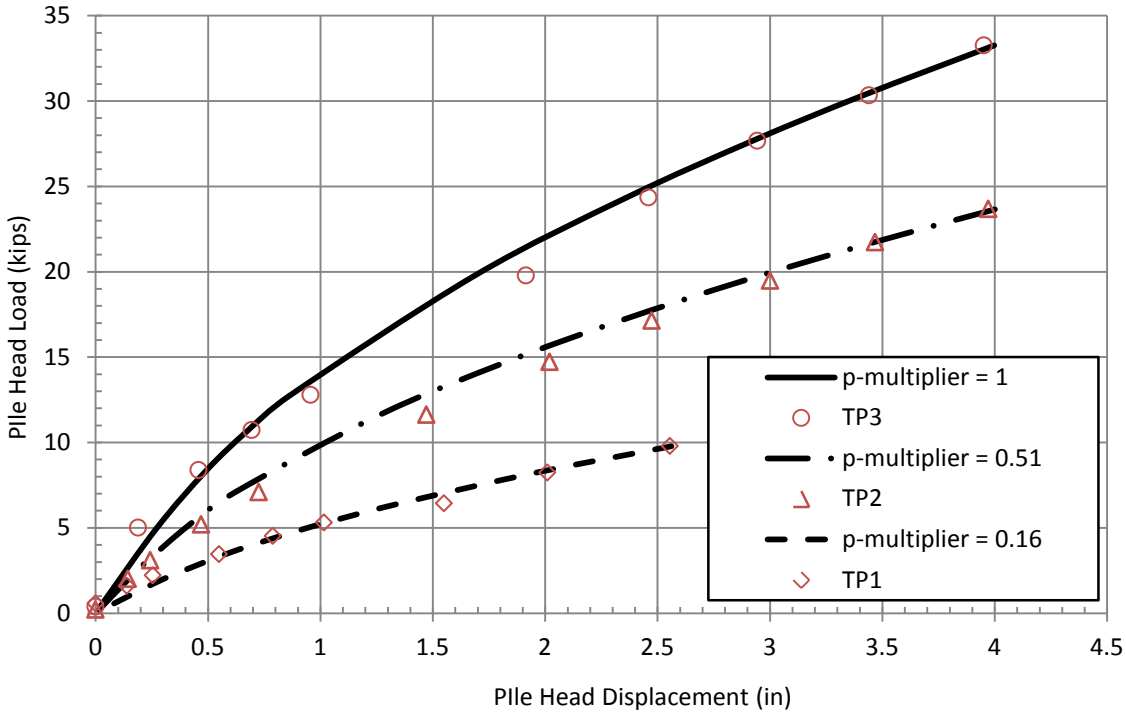

Figure 6.4: Comparison of computed and measured load-displacement curves for TP1, TP2 and TP3

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 6.5 through 7. The maximum measured bending moment is relatively close to the computed bending moment even though the shapes of the curves aren't very close. With a p-multiplier of 1 for TP3, the maximum computed bending moment is 2560 in-kips compared to the measured maximum bending moment of 2290 in-kips for a lateral load of 33.3 kips. This is a discrepancy of about 11% which is reasonable agreement. With a p-multiplier of 0.56 for TP2, the maximum computed bending moment is 2050 in-kips load compared to a maximum measured bending moment of 2090 in-kips for the same load, which is an error less than 2%. With a p-multiplier of 0.16 and a lateral load of 9.8 kips, the maximum computed bending moment is 940 in-kips compared to the maximum measured bending moment of 640 in-kips, which is a discrepancy of 32% and represents the worst agreement.

As the pile is placed closer to the wall and the p-multiplier decreases, the computed depth to the maximum moment increases gradually. For example, for the test piles the depth to the maximum moment increases from 9 ft, to 10 ft, to 11ft for the test piles at 6.7, 2.7 and 1.3 pile diameters, respectively. Unfortunately, the depth to the measured maximum bending moments were 13 ft, 10 ft, and 13 ft, respectively for the same three piles. It is unclear whether the discrepancy is a result of poor performance of the strain gauges or error in the calculations. It should be noted that at lower load levels the maximum bending moments were typically located at around 9 to10 ft. This observation suggests that there could potentially be some error in the strain gauge readings at higher load levels.

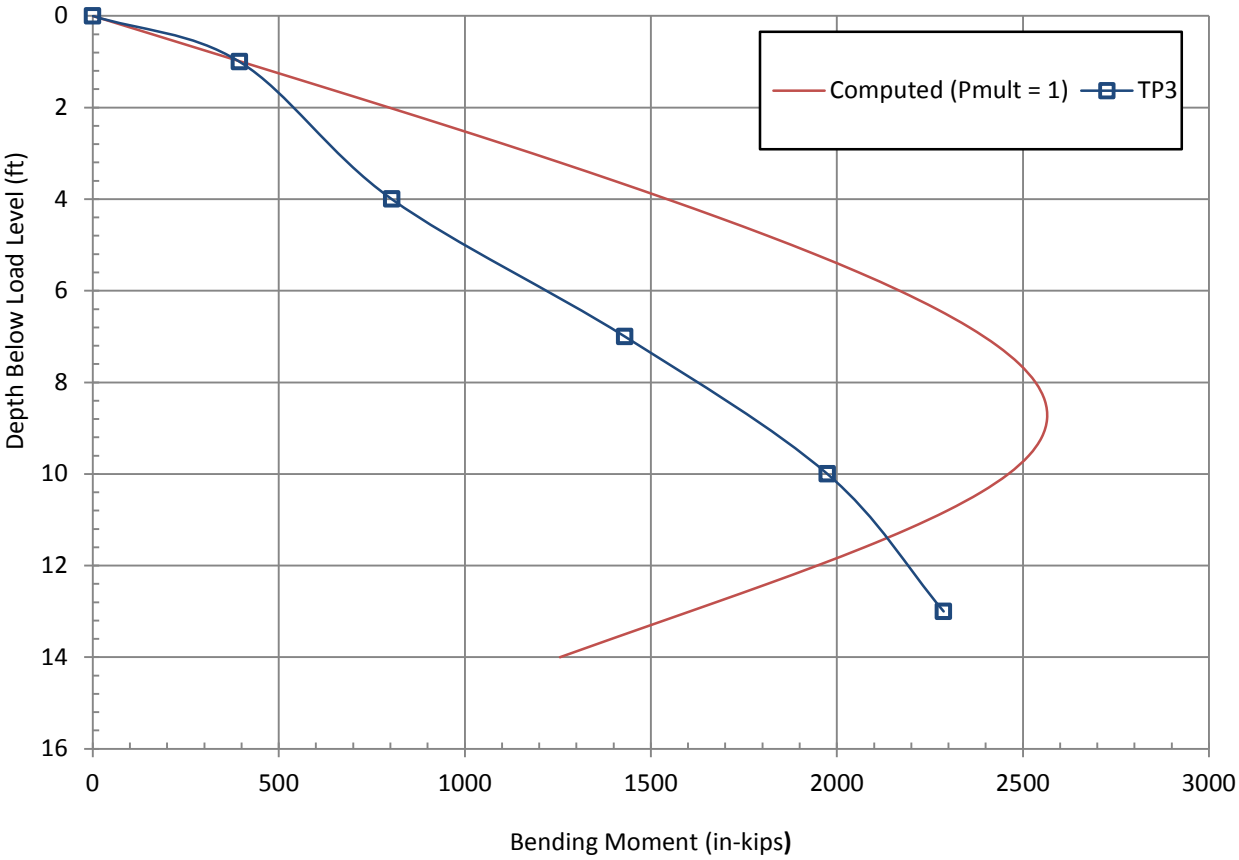

Figure 6.5: Comparison of measured and computed bending moment for TP3 with a 33.3 kip load

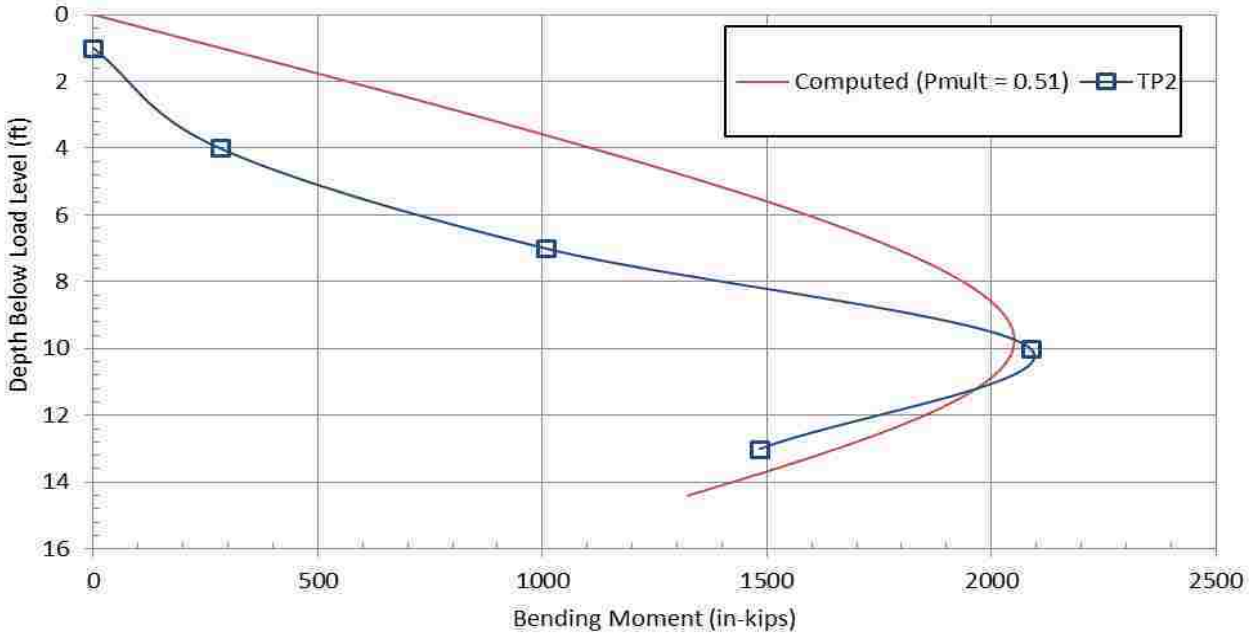

Figure 6.6: Comparison of measured and computed bending moment for TP2 with a 23.7 kip load

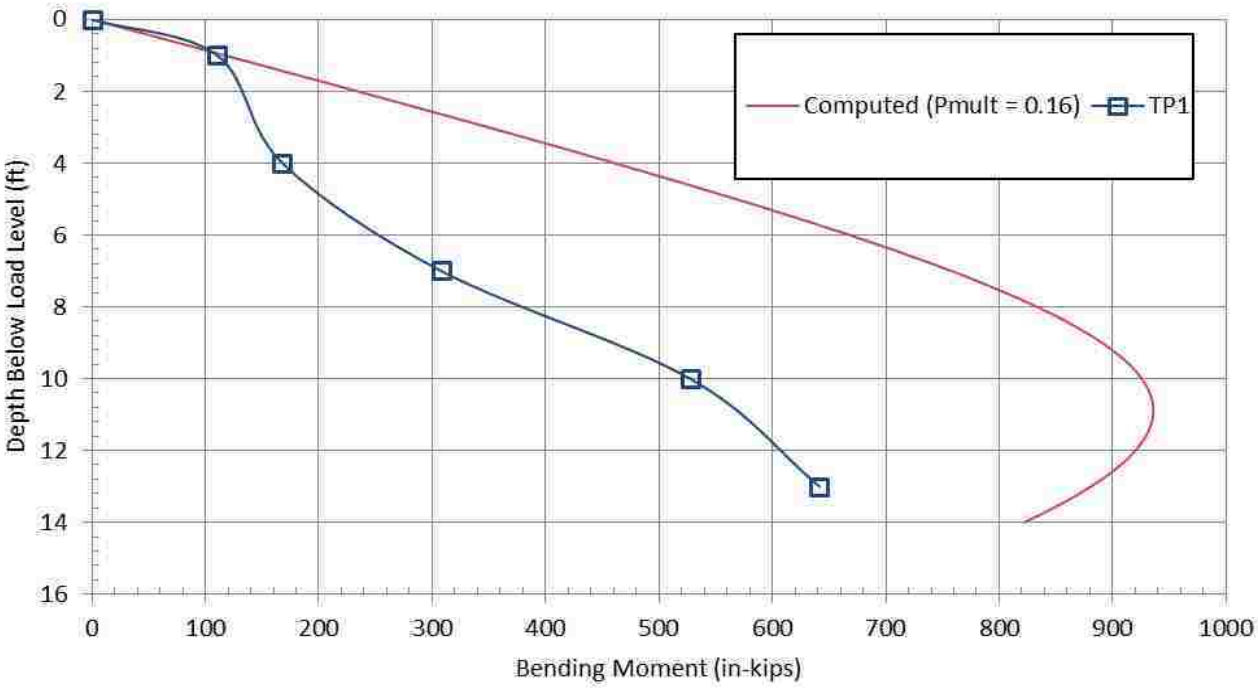

Figure 6.7: Comparison of measured and computed bending moment for TP1 with a 9.8 kip load

The piles driven especially for the tests were only driven into the ground 40 feet. The production piles were driven into the ground 145 feet. Despite the difference in depth the piles were driven there is little to no difference in pile performance. The reason for that is the moment applied to the piles drops to near zero by the depth of 45 feet that the test piles were driven into ground. This can be seen in Figure 6.8 where the bending moment versus depth for pile TP3 is shown down to the depth of 40 feet. The figure was produced in LPILE. The legend shows ten different cases. These are simply the ten different load levels applied to pile TP3.

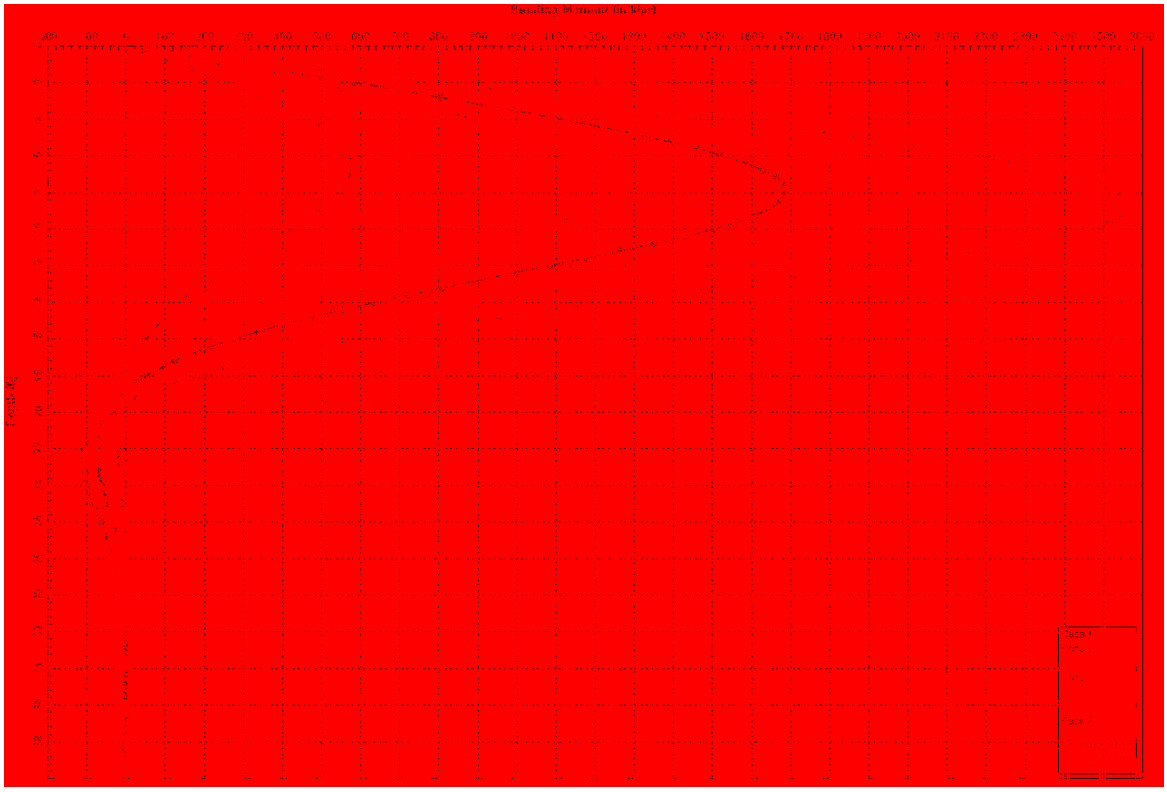

Figure 6.8: Calculated bending moment vs. depth of pile TP3

6.1.2 Displacement vs. Depth

Included in the LPILE analysis are the calculated results of displacement vs. depth. There were no shape arrays used for these tests and therefore no measured comparisons can be

made to what was calculated in LPILE. The displacement of pile TP3 can be seen in Figure 6.9 with respect to the depth is was driven.

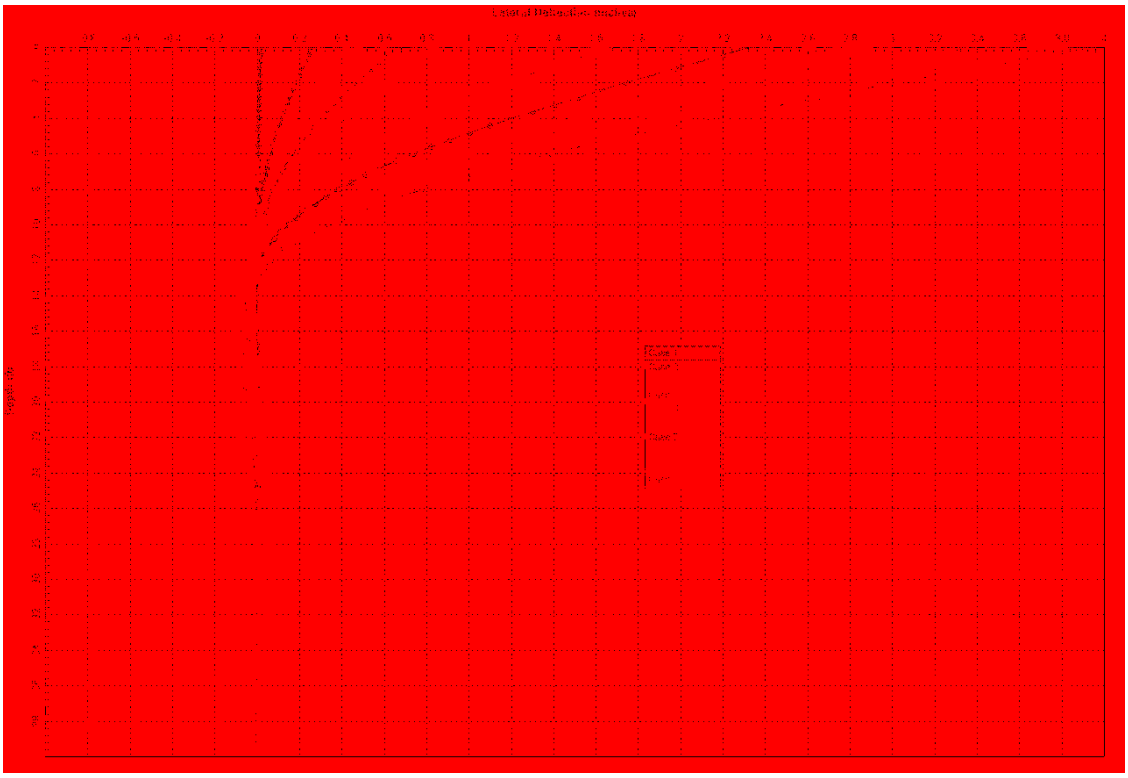

Figure 6.9: Calculated pile deflection vs. depth of pile TP3

This figure shows that the pile did not experience any significant deflection below 24 feet. As with the bending moment vs. depth it can be seen that the despite the fact that the test piles were not driven to the same depth as the production piles the piles were driven to a sufficient depth for the testing performed.

6.2 P-Multiplier Analysis

The results from the lateral load analyses discussed in Section 6.1 are summarized in Figure 6.1010. 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 (D). The curve is labeled "Typical L/H=1.2" and consists of the three Provo Center Street test piles. 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-multiplier 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 from Provo Center street suggest that with a L/H ratio of 1.2, a p-multiplier of 1 can be used when the pile is at least 4.5 pile diameters behind the wall. Combining this data with the data from Price (2009) a distance of 5.2 and 3.8 pile diameters from the wall is recommended for a L/H ratio of 1.1 and 1.6 respectively. Also, by combining the data and getting more test results one could extrapolate to find a normalized distance to obtain a P-multiplier of 1 for an L/H ratio of 0.7, which is typical of static loadings. More data than what has been obtained would be necessary for several reasons. One reason is that the type of reinforcement used differed from site to site. Also, the wall type differed from site to site. More information would be necessary to confirm the data obtain in the few tests that have been performed. However, due to correlation between Price (2012) and my data, it is reasonable to assume that future data would support the data already obtained.

For smaller normalized spacings, the p-multipliers decrease approximately linearly with normalized distance based on the limited data set available. This curve is in conjunction with data provided by other research Price (2009), as seen in Figure 6.11, is 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.

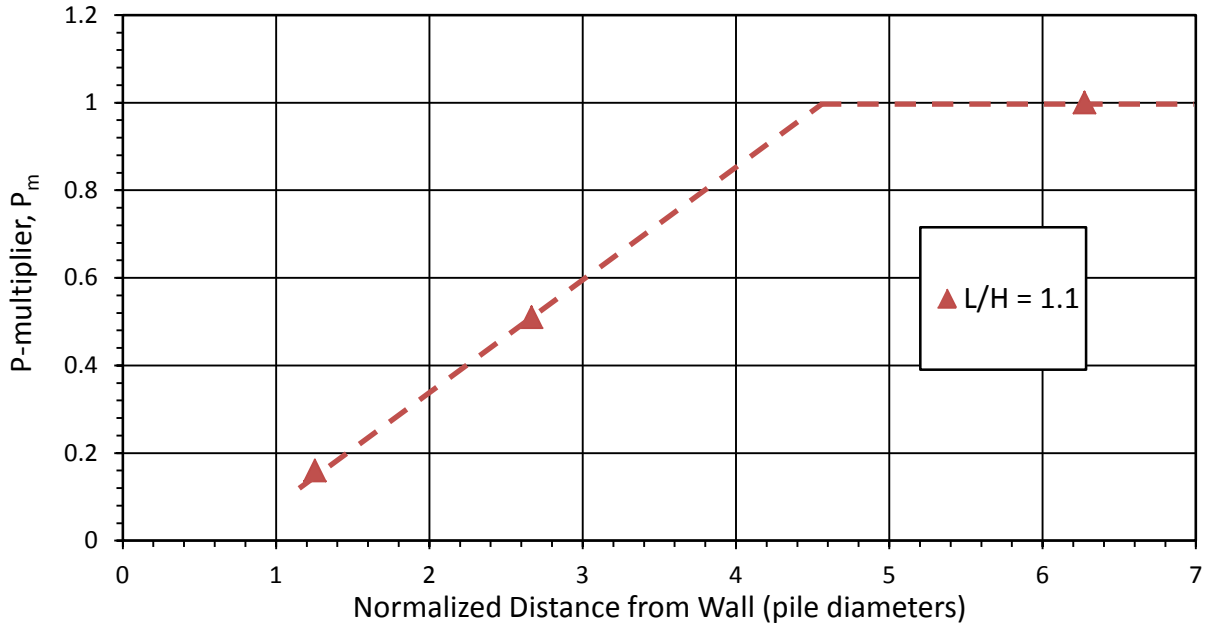

Figure 6.10: Tentative p-multiplier curve as a function of normalized distance. Note: L is the length of the MSE reinforcement and H is the wall height

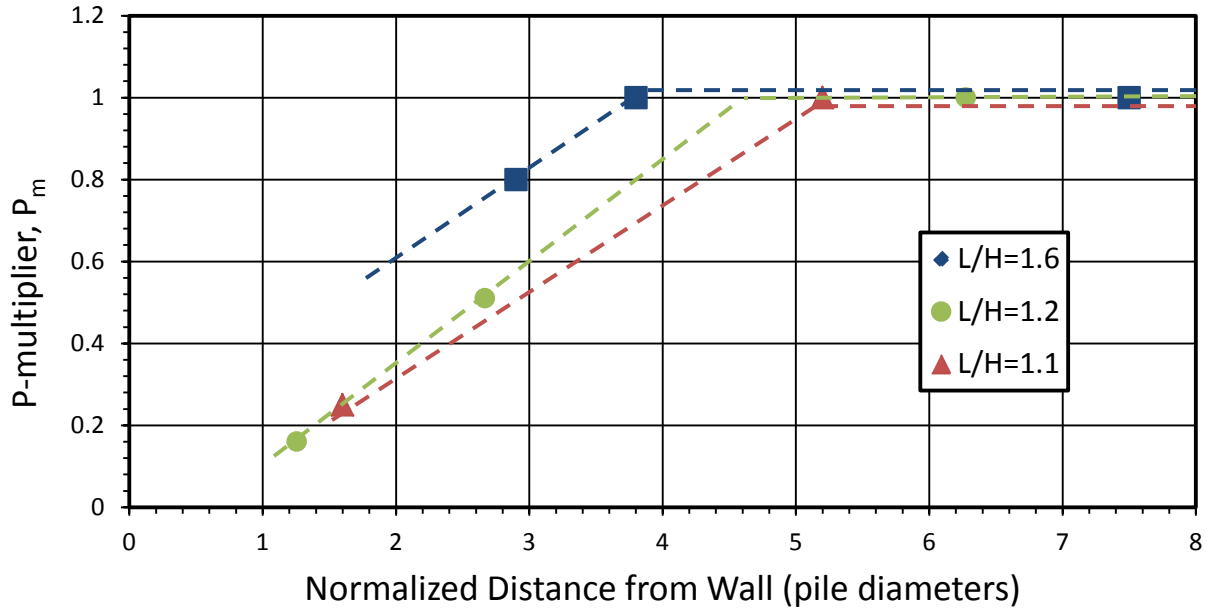

Figure 6.11: Tentative p-multiplier curves as a function of normalized distance for two reinforcement ratios including data from Price (2009). Note: L/H is the length of the MSE reinforcement and H is the wall height.

6.3 Induced Load in Reinforcement

The maximum measured load in the reinforcement at the maximum lateral load is divided by the maximum lateral load to calculate the normalized load. This normalization is meant to account for the fact that tensile force in the reinforcement increases with lateral load on the pile. The depth of the reinforcement was not strongly correlated with the normalized force. Regression analyses indicate that the normalized force decreases exponentially with transverse distance from the pile; however, there is significant scatter and the equation only account for 36% of the variation. Regression analyses also indicate that the normalized force increases with longitudinal distance from wall although this trend is less obvious.

To account for these two relationships in a simple manner, the normalized load is plotted against a normalized distance which is equal to the transverse spacing from the center of the strip 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. normalized distance data points are shown in Figure 6.12 based on 19 measurements for piles TP1 through TP3. In contrast with the results from Price (2012) for the grid reinforcements, the correlation for the data from these tests is not very good (r^2=0.33) and there is significant scatter. Figure 6.9 shows the normalized load vs. normalized distance from the tests run by Price (2012), which has a much better correlation (r^2=0.89). 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.

Due to significant scatter about the best-fit curve, a design envelope has been plotted that is capped for each graph, at a normalized induced load of 0.12 as shown in Figure 6.13. The design curve provides a conservative estimate of the additional force in the reinforcement induced by the laterally loaded pile. Upon reflection, it is not surprising that a design envelope is

required to deal with the scatter in the reinforcement force from these tests. A similar conservative design envelope approach was used in the FHWA method to deal with variation in pull-out friction from a number MSE wall tests. In addition, the compaction surrounding the piles was atypical of the compaction efforts applied to the rest of the wall due to the arrangement of the piles. As a result, scatter in the reinforcement forces is likely to be inevitable. The plot is limited to the conditions tested, i.e. for the reinforcement in the upper 3 ft. of the wall with L/H values of 1.2.

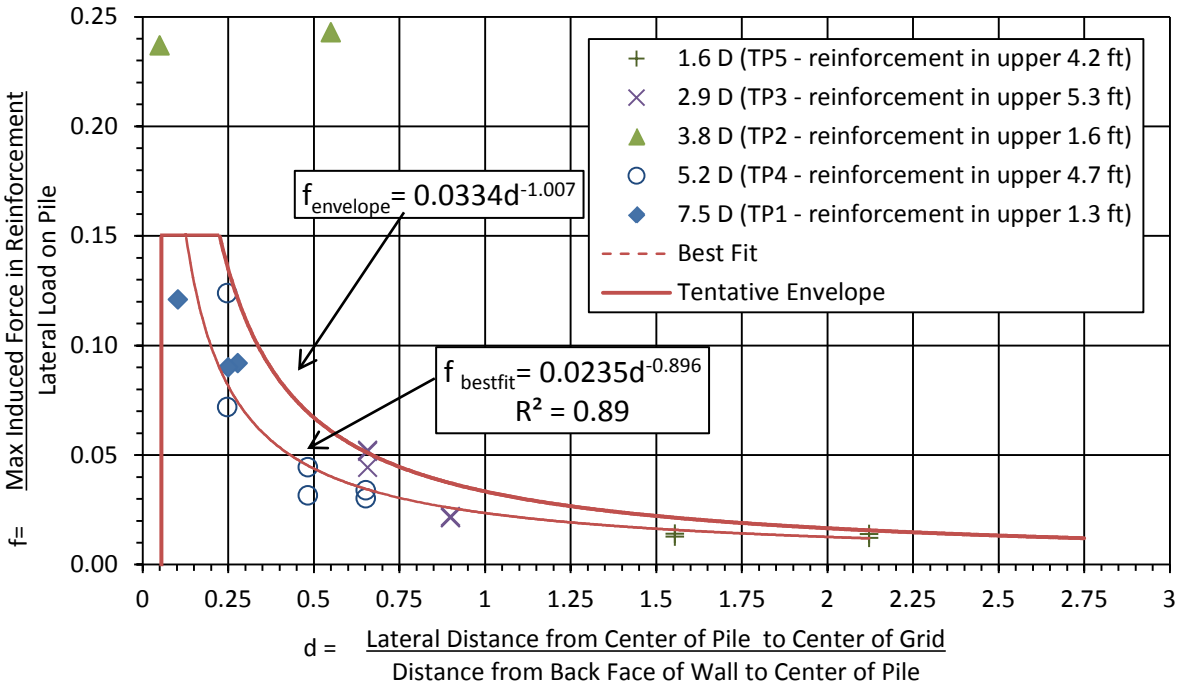

Figure 6.12: Plot of normalized induced force in strip reinforcement vs. normalized distance from pile from Price (2012)

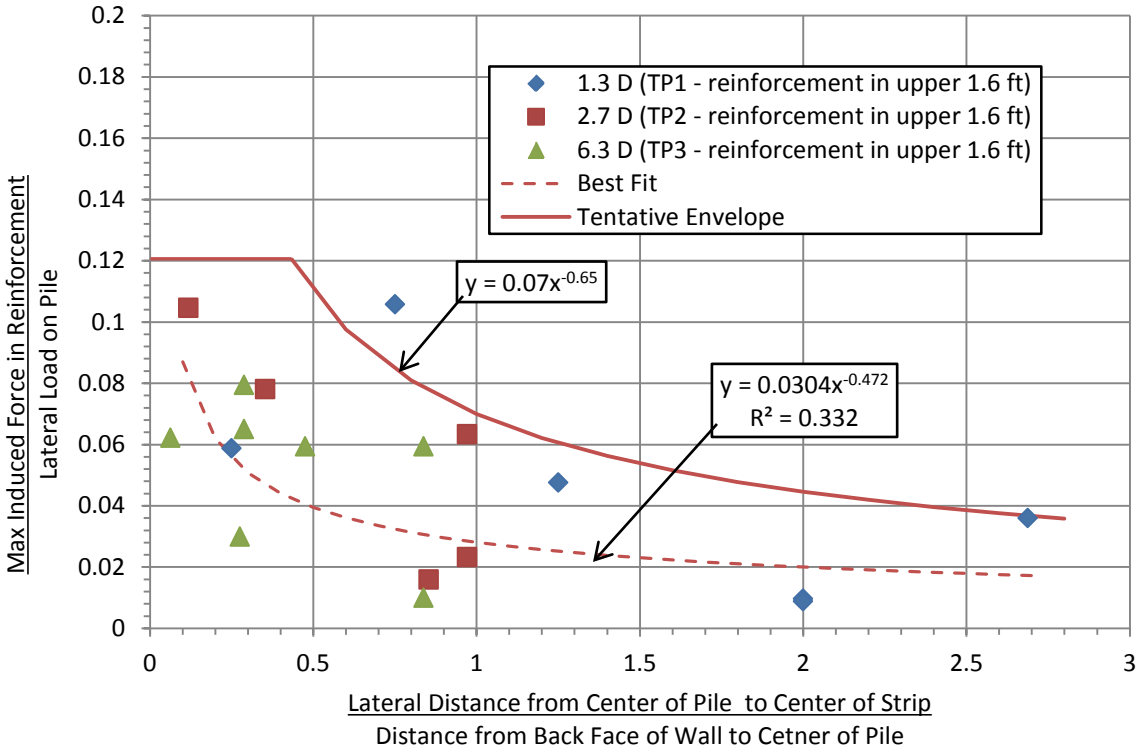

Figure 6.13: Plot of normalized induced force in strip reinforcement vs. normalized distance from pile

7 CONCLUSIONS

Several conclusions may be drawn by the data shown in this report. It is important to note that due to nature of MSE wall design that these results apply particularly to MSE walls with the configuration described in chapter 3. The wall used for this research was a two stage wall with galvanized metallic strip reinforcement. Also there was a larger than average amount of free draining granular backfill adjacent to the wall. The bridge foundation type (drilled shaft and driven pile), reinforcement type (geofabric, welded wire grids, and metallic strips), wall type (modular block, one stage, and two stage walls), as well as the soil layout play a large role in how everything reacts to lateral loads. While the research described here applies particularly to walls with this same setup it can be assumed that the results may be applied to other wall types with some engineering judgment based on the good correlation between these test results and those found by Price (2012).

7.1 Test Results

1. Test results showed a decrease in lateral pile resistance as distance from the pile to the wall decreased.
2. The calculated load-displacement curve provided a good match with the measured curve with a friction angle (ϕ) of 28º for the gravelly sand backfill with a lateral stiffness (k) of 27 pci which is dramatically lower than expected for a dense gravel. The lower values are likely a result of the loosely compacted free-

draining granular backfill between the pile and the wall which was specified for this two stage wall as well as the proximity of the piles to the wall. This is confirmed by the friction angle (ϕ) of 39º and stiffness (k) of 115 found for pile TP4 which was further from the wall and driven into the existing embankment.

3. P-multipliers of 0.51 and 0.16 for piles at 2.7 and 1.3 pile diameters, respectively, provide a good match for the load-displacement curves, the bending moment vs. depth curves, and the P-multiplier vs. normalized distance from the wall.

7.2 General Conclusions

1. The reduction in lateral pile resistance is a function of both the reinforcement ratio (L/H) and the normalized distance behind the wall (S/D).
2. Tentative curves have been developed to define a p-multiplier vs. normalized spacing behind wall for length to height ratios of 1.6, 1.2, and 1.1. These curves are shown in Figure 6.107. The data suggest that with a L/H ratio of 1.6, 1.2, and 1.1 a p-multiplier of 1 can be used when the pile is at least 5.2, 4.5 and 3.8 pile diameters behind the wall respectively.
3. The induced force in the reinforcement (a) increases rapidly as the lateral load on the pile increases, (b) decreases exponentially as the transverse spacing from the pile increases.
4. A plot showing the induced normalized load in the reinforcement as a function of normalized distance from the pile has been developed by Price. The maximum tensile force is normalized by the maximum lateral pile load and is plotted versus the transverse distance from the pile to the reinforcement normalized by the longitudinal distance between the pile and the wall. The normalized force

decreases exponentially as the normalized distance increases. The correlation was good and so a similar curve was developed for the tests discussed in this paper and is shown in Figure 6.8. Due to the difference in reinforcement between the tests the data from both sets of tests were not combined. Due to the scatter about the best-fit curve a conservative design envelope has been developed with a cap on the normalized force of 0.12 at small normalized distances.

7.3 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 6, it appears that the high L/H ratio would only be needed in no more than the upper 10 ft. of the walls tested assuming that the piles were located at least three feet from the wall. 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. wire mesh and geosynthetics). The effect on reinforcements deeper than 3 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

This appendix shows the calculations performed to find the factor of safety against pullout.

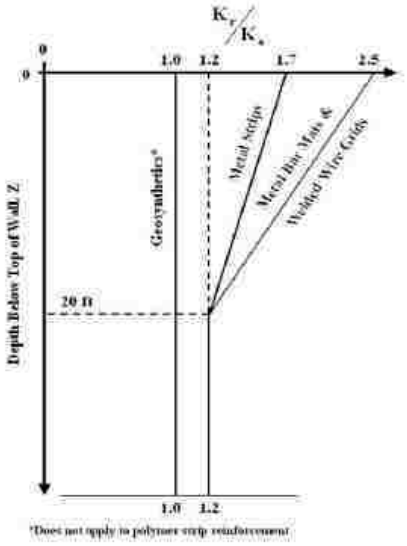
Reference sheet for pullout calculations

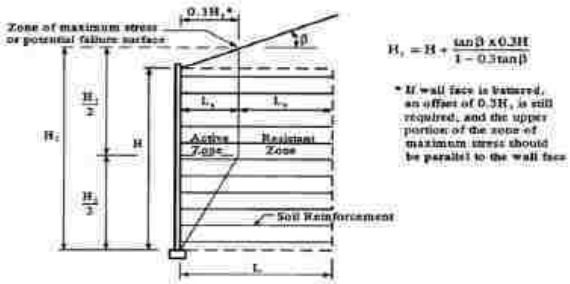
Steel Grid Properties

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





A.1 Provo Center Street Site

Description: **TP6-TP8**
Given: MSE wall with inextensible reinforcement consisting of steel straps. No live load present.
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	23	ft	
Angle of sloping backfill	β	0	º	
		0	rad	
	H_1	20.5	ft	$H+[\tan(\beta)(0.3H)]/[1-0.3\tan(\beta)]$

Soil Properties

Moist unit weight	γ_r	141.5	pcf	
Friction angle	ϕ_r'	28	º	
		0.49	rad	
ctive Earth Pressure Coefficient	K_a	0.36		$\tan^2(45-\phi_r'/2)$

Reinforcement Properties (steel grids)

Vertical spacing	S_v	2	ft	
Horizontal spacing	S_h	2.5	ft	
Length of reinforcement	L_t	28	ft	
Width of Reinforcement	b	0.17	ft	

Z (ft)		Le	
	0	21.85	L_t-0.3H_1
$H_1/2$	10.25	21.85	L_t-0.3H_1
H	20.5	28	L_t

Surcharge

Unit weight of surcharge	γ_q	135	pcf	
Height of surcharge	H_q	1	ft	
Surcharge	q	135	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.

Horizontal Pressure $\sigma_h = \sigma_v * k$ $\sigma_v = \gamma z + q$

Average Factor of Safety against pullout 2.6

Reinforcement Level	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)	F*	L_e (ft)	Pullout Capacity, PC_i=	$FS_{PO}=PC_i/T_{max}$
1	1.25	1.7	0.60	312	188	939	1.723	21.10	2045	2.2
2	2.58	1.6	0.59	501	296	1478	1.638	21.10	4018	2.7
3	4.58	1.6	0.57	784	448	2242	1.511	21.10	6575	2.9
4	6.58	1.5	0.55	1067	591	2956	1.384	21.10	8651	2.9
5	8.58	1.5	0.54	1350	724	3619	1.257	21.10	10243	2.8
6	10.58	1.4	0.52	1633	846	4230	1.130	21.10	11354	2.7
7	12.58	1.4	0.50	1916	958	4791	1.003	21.75	12350	2.6
8	14.58	1.3	0.48	2199	1060	5300	0.876	22.95	13190	2.5
9	16.58	1.3	0.46	2482	1152	5758	0.749	24.15	13494	2.3
10	18.58	1.2	0.45	2765	1233	6165	0.622	25.35	13179	2.1
11	20.58	1.2	0.43	3048	1320	6602	0.532	26.55	13076	2.0
12	22.58	1.2	0.43	3331	1443	7215	0.532	27.75	14995	2.1

APPENDIX B. LOAD-DISPLACEMENT CURVES

This appendix shows the load-displacement curves that were plotted for piles TP1, TP2, and TP3 that were not shown in the body of the report.

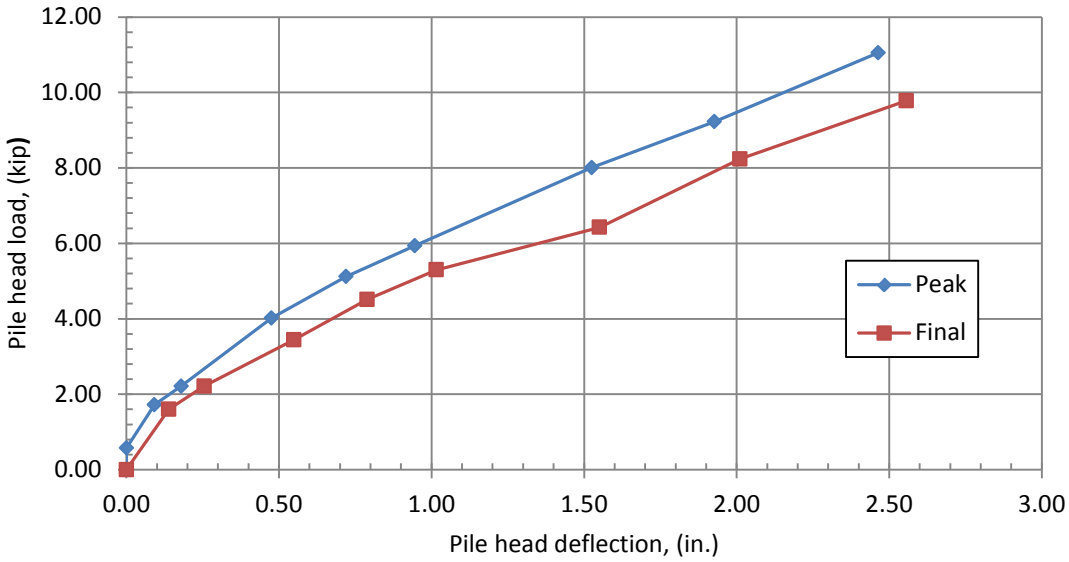


Figure B.0.1: Load-displacement curve for TP1.

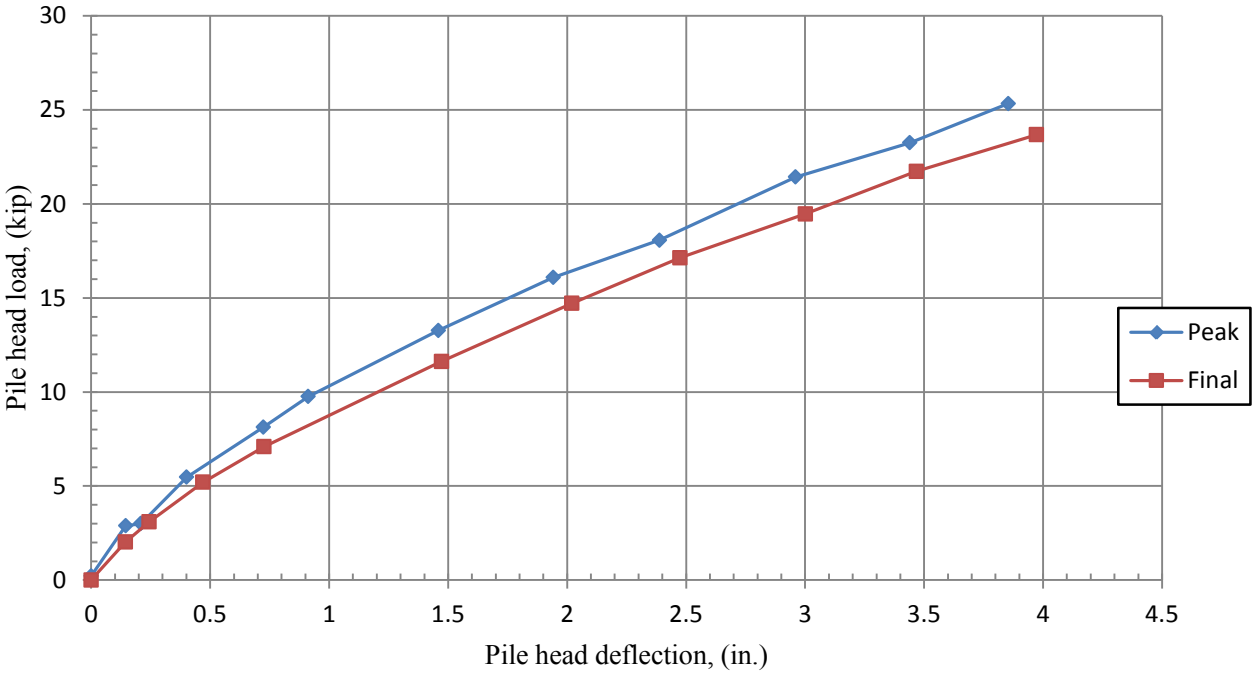


Figure B.0.2: Load-displacement curve for TP2.

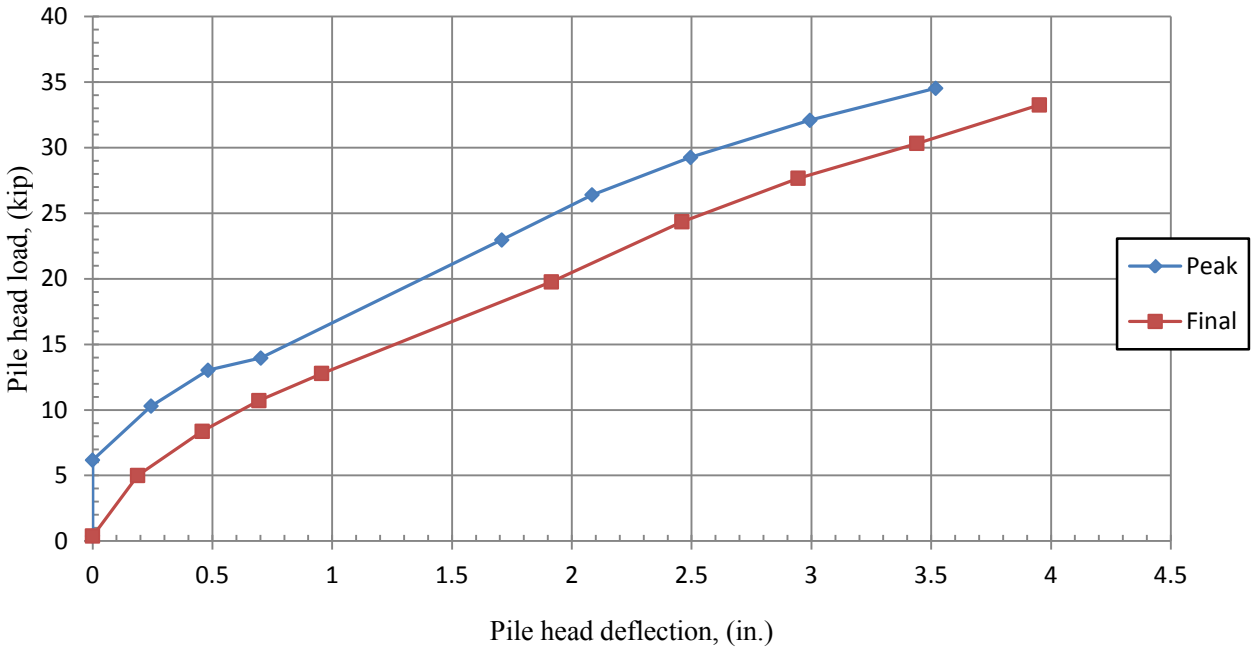


Figure B.0.3: Load-displacement curve for TP3.

APPENDIX C. INDUCED FORCE IN REINFORCEMENT CURVES

This appendix shows the induced load vs. distance from the wall curves that aren't in the body of the report for individual reinforcing strips.

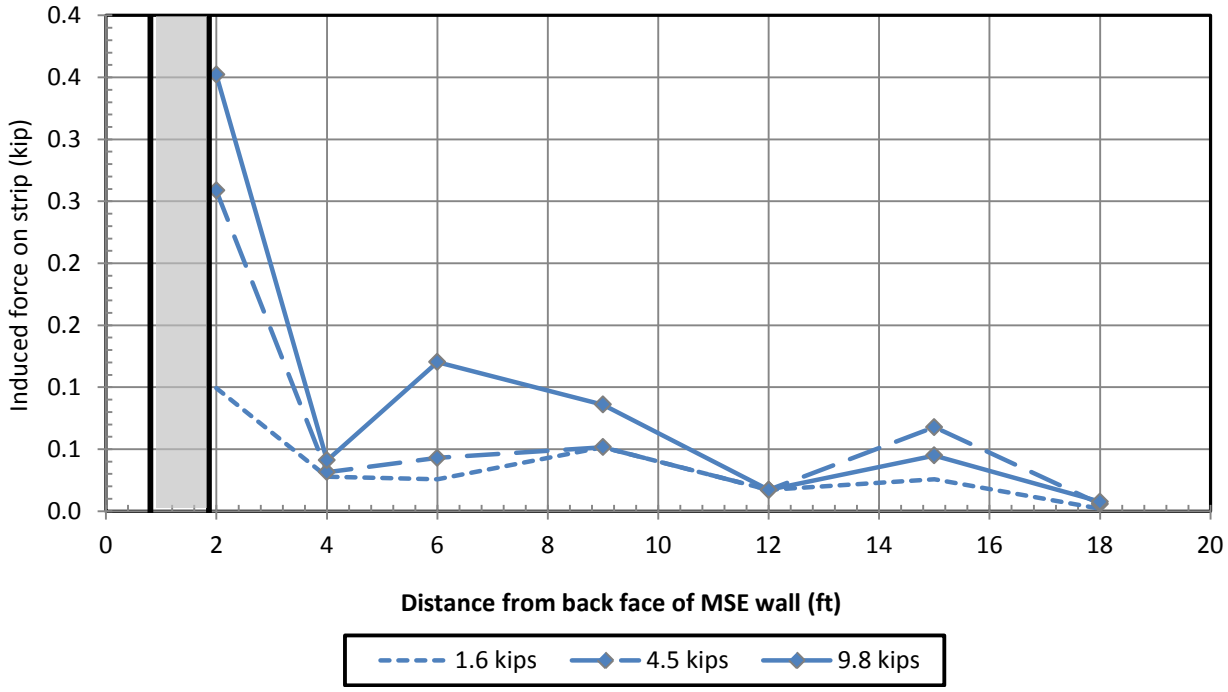


Figure C.0.1: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L1 during loading of TP1 (see Table 4.1)

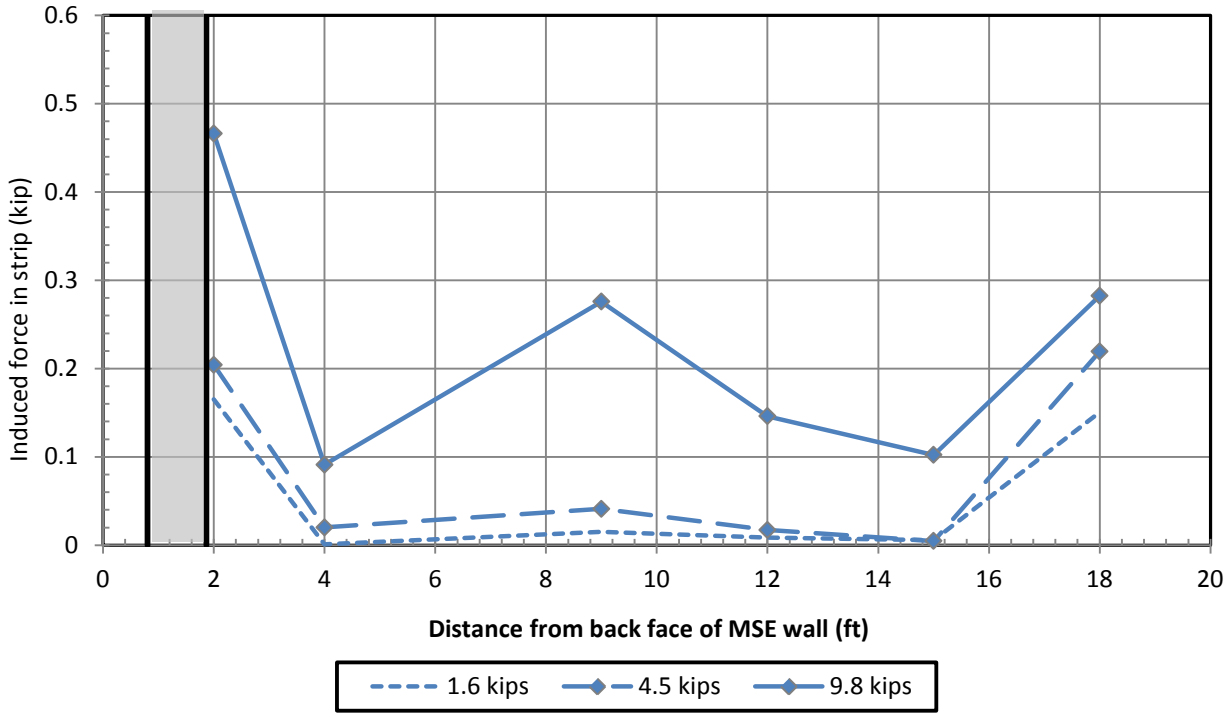


Figure C.0.2: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T1 during loading of TP1 (see Table 4.1).

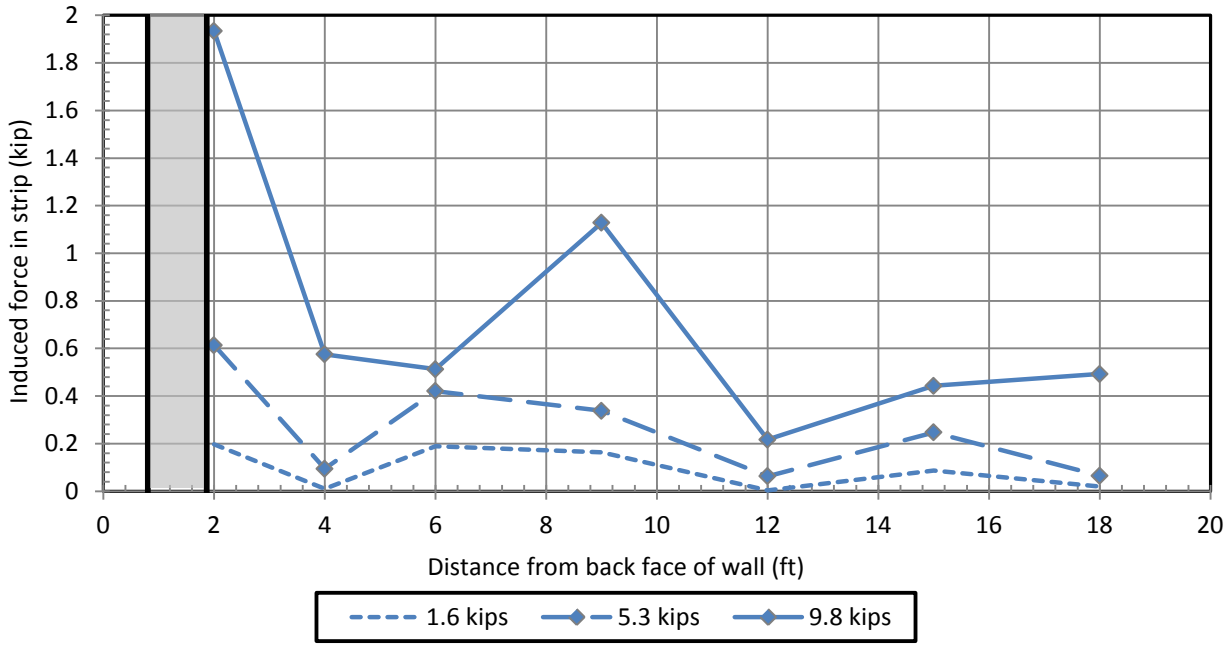


Figure C.0.3: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T2 during loading of TP1 (see Table 4.1).

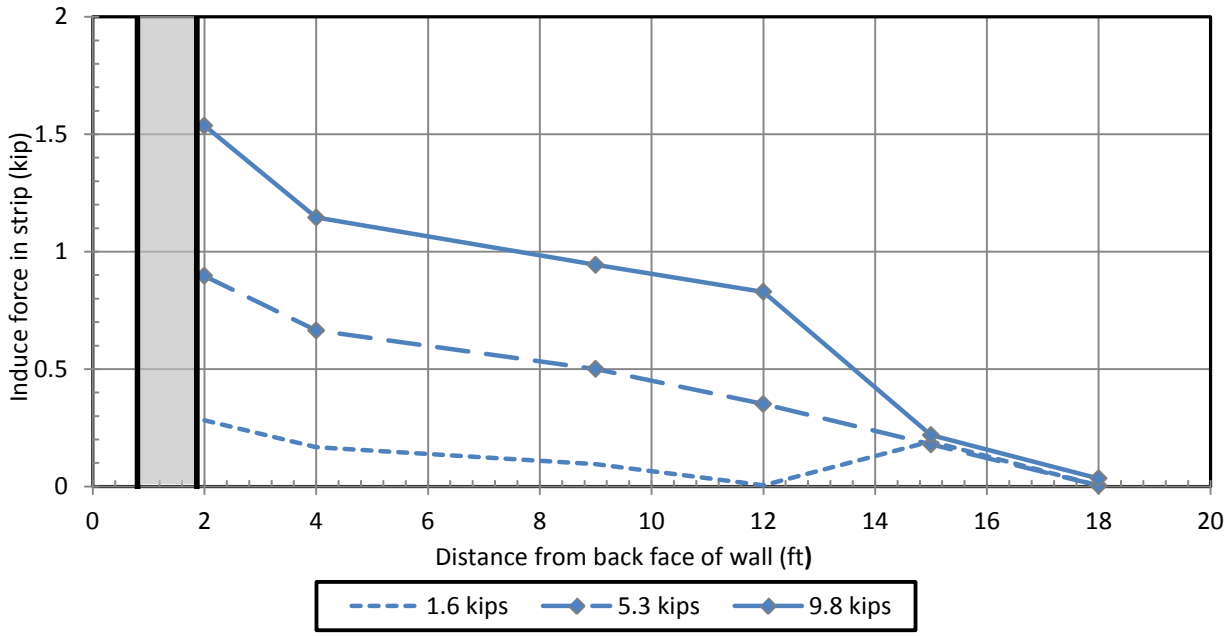


Figure C.0.4: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L2 during loading of TP1 (see Table4.1)

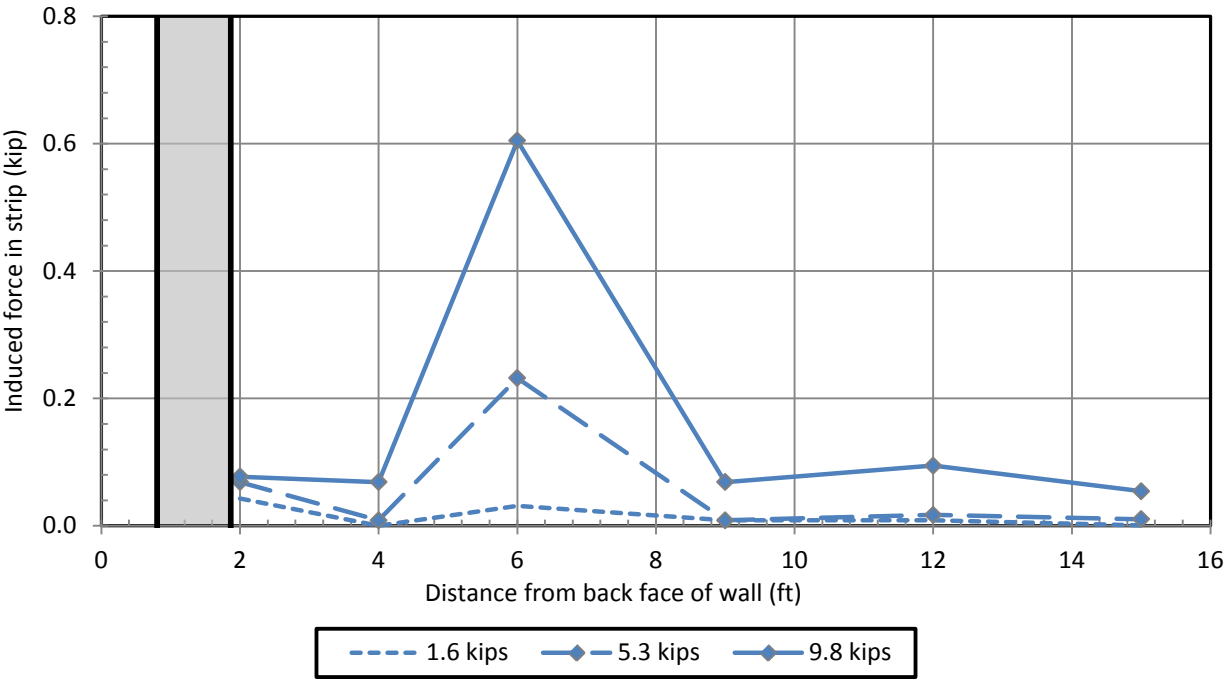


Figure C.0.5: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T3 during loading of TP1 (see Table 4.1)

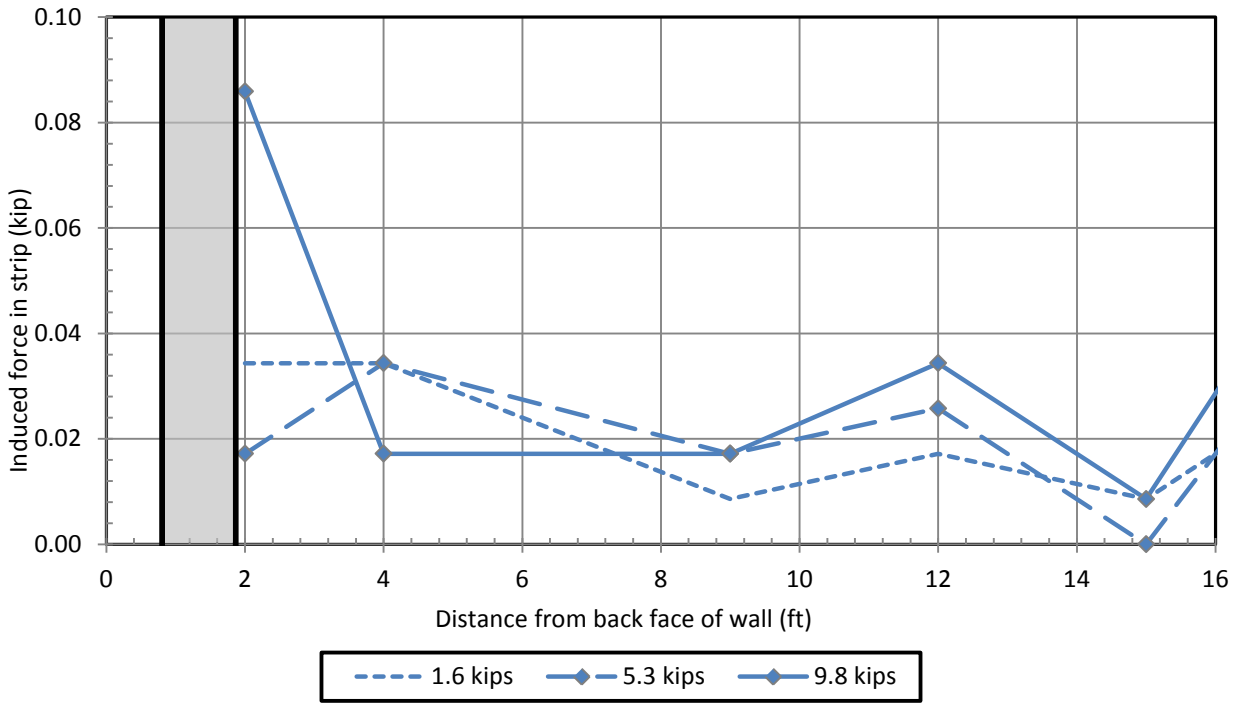


Figure C.0.6: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L3 during loading of TP1 (Table 4.1)

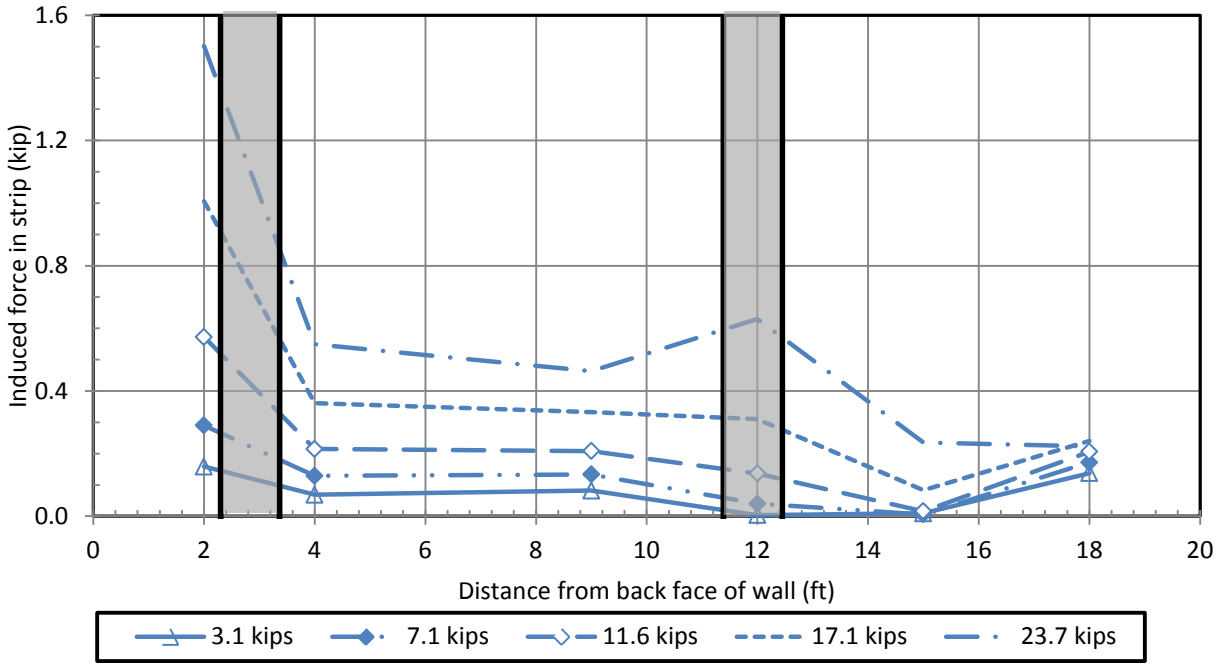


Figure C.0.7: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L3 during loading of TP2 (see Table 4.1)

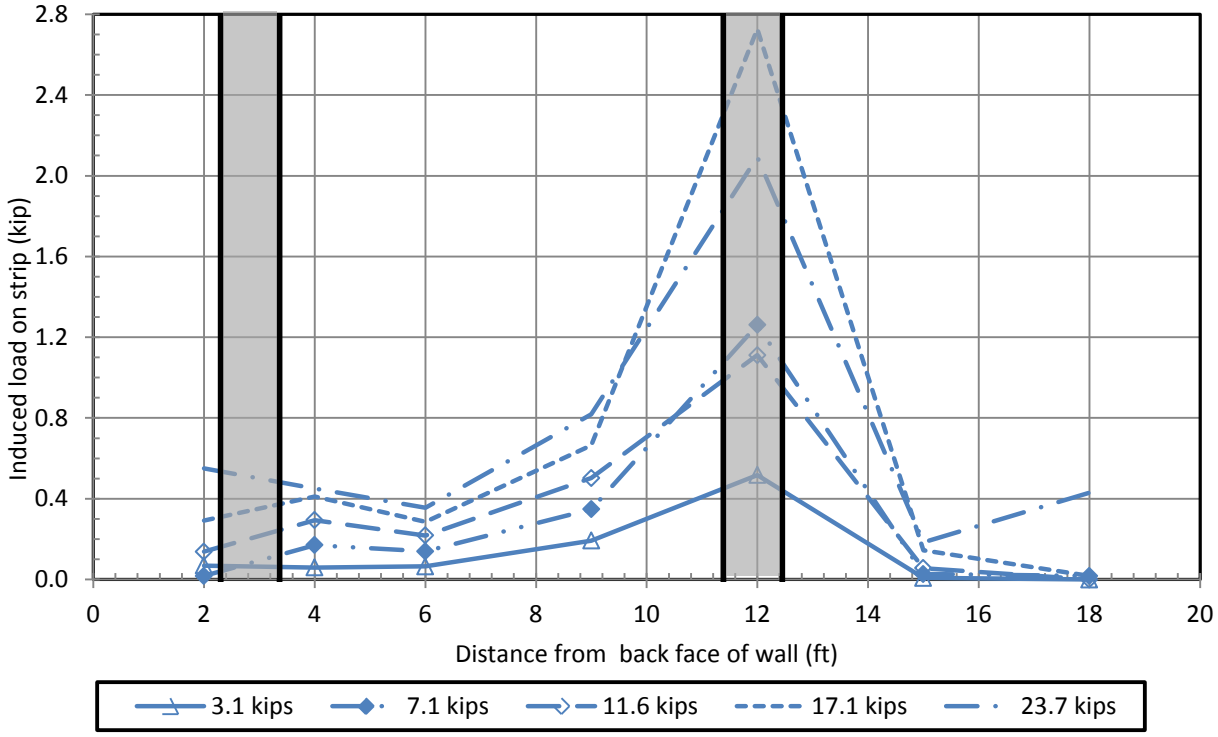


Figure C.0.8: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T3 during loading of TP2 (see Table 4.1)

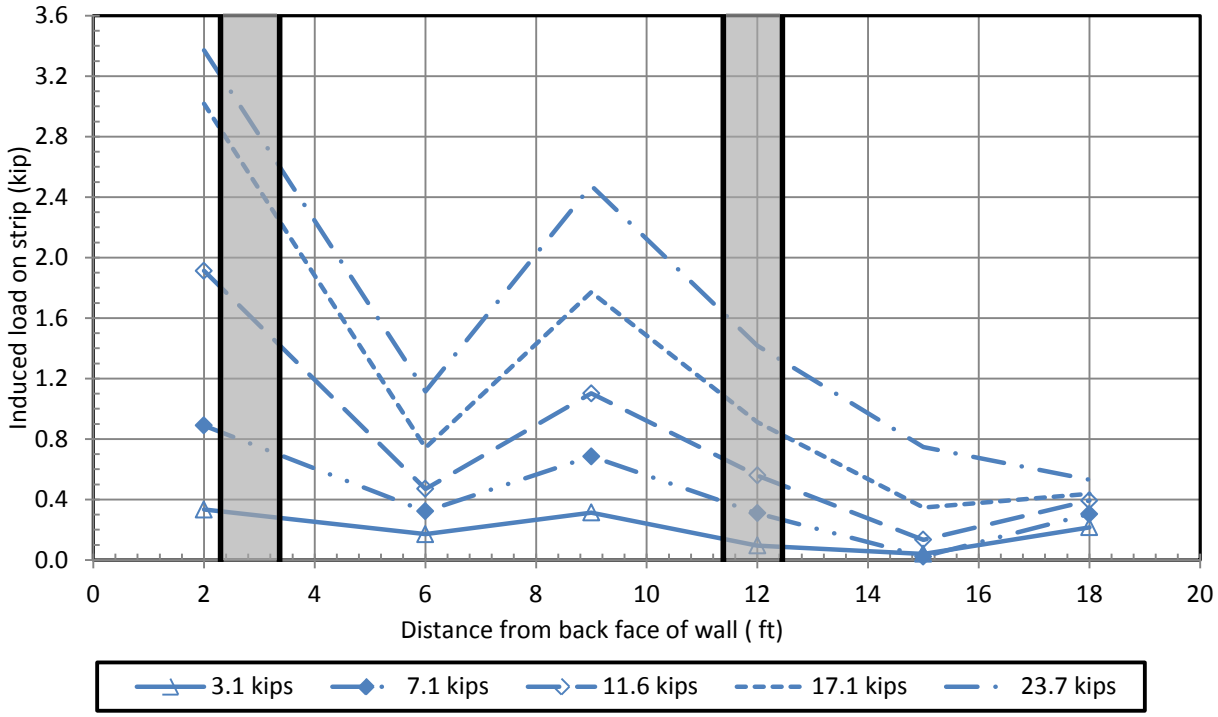


Figure C.0.9: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T during loading of TP2 (see Table .1)

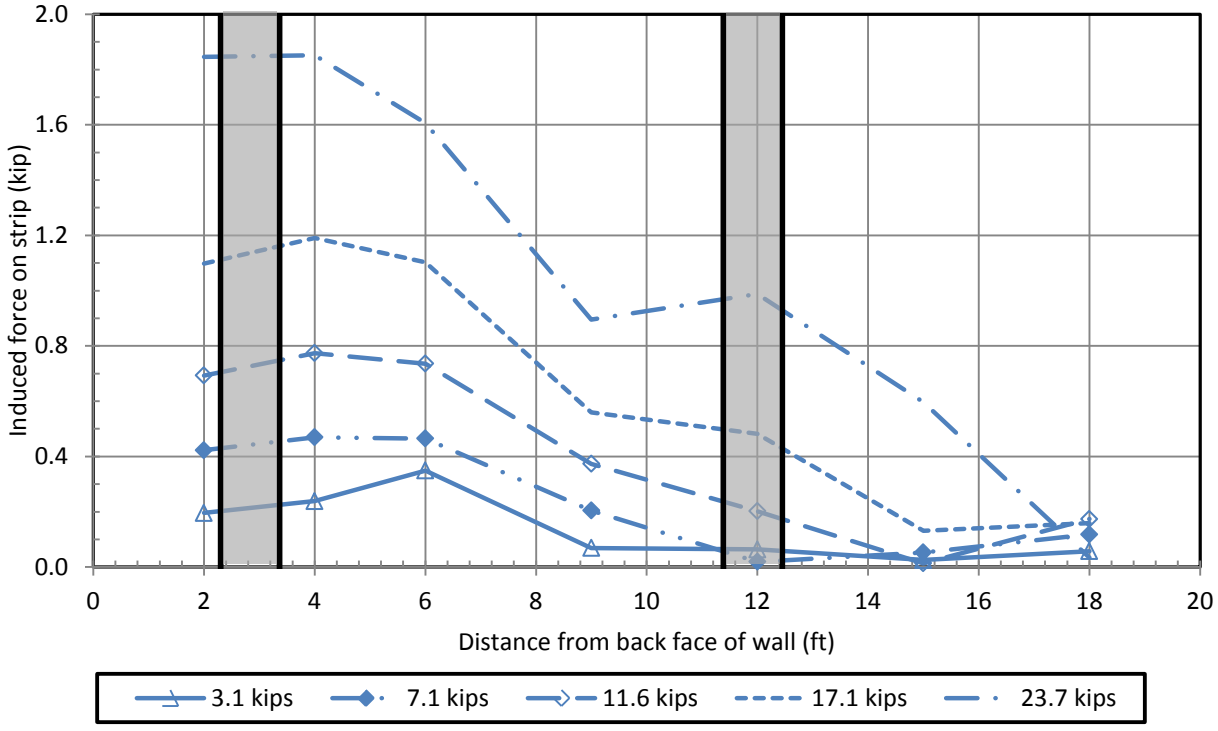


Figure C.0.10: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L4 during loading of TP2 (see Table 4.1)

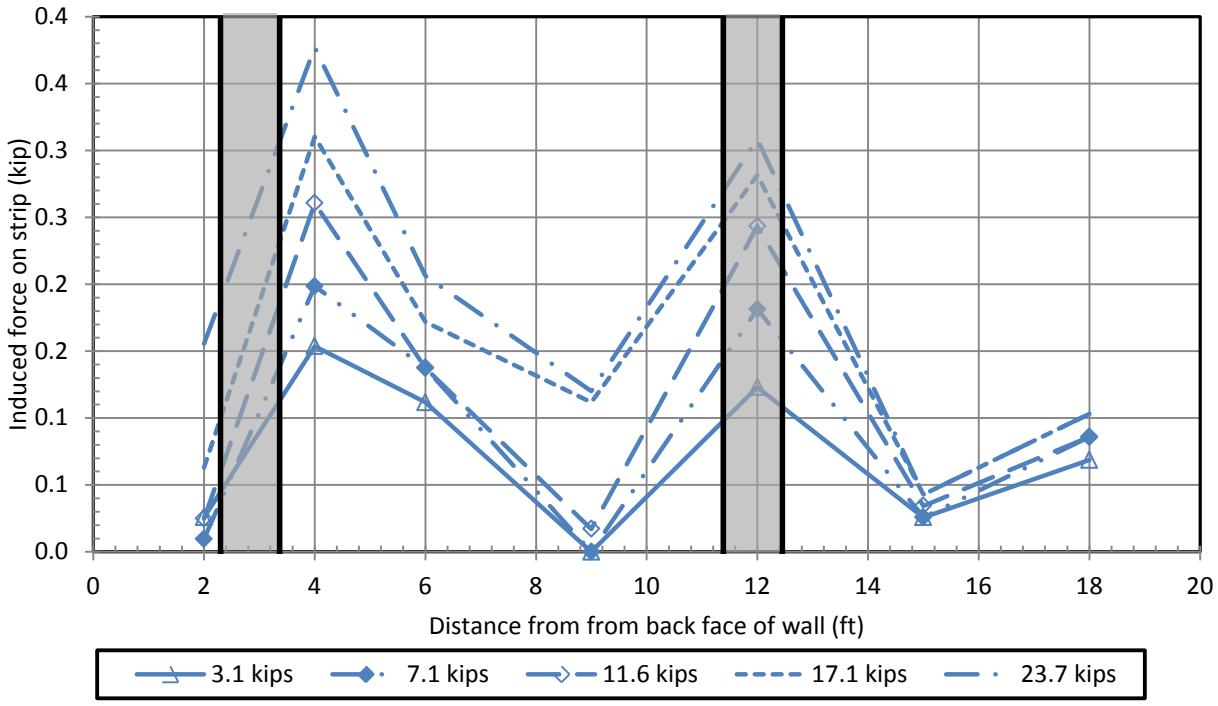


Figure C.0.11: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T4 during loading of TP2 (see Table 4.1)

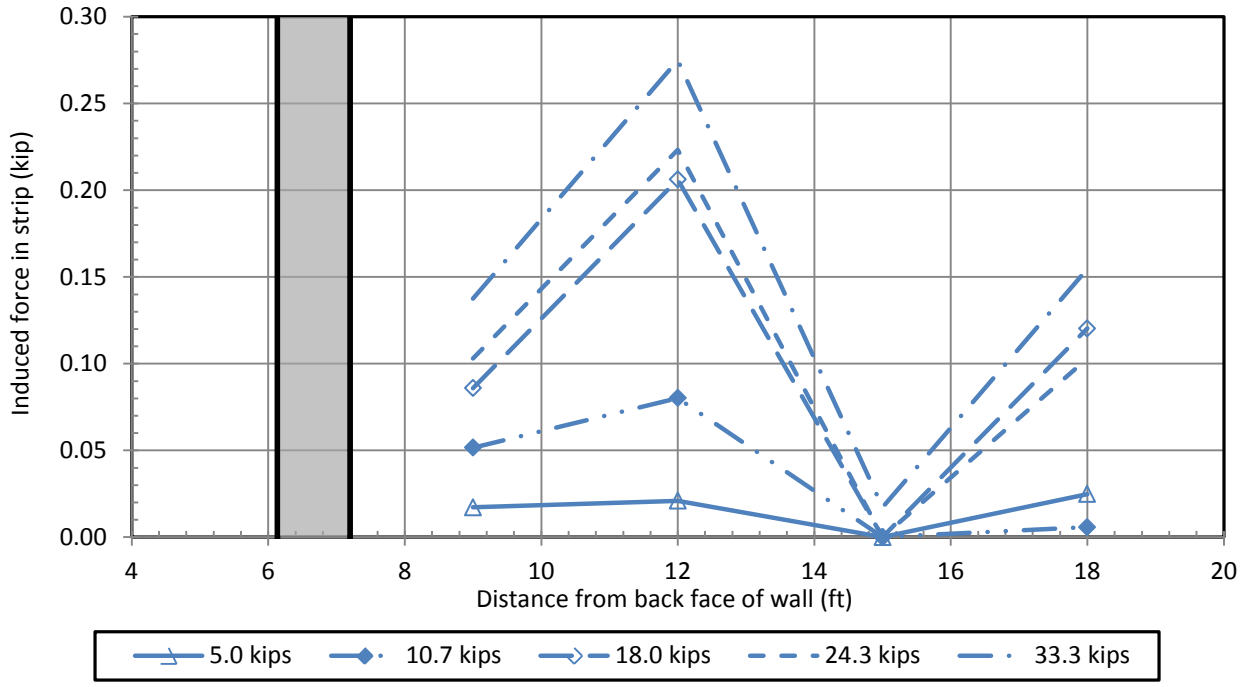


Figure C.0.12: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L3 during loading of TP3 (see Table 4.1)

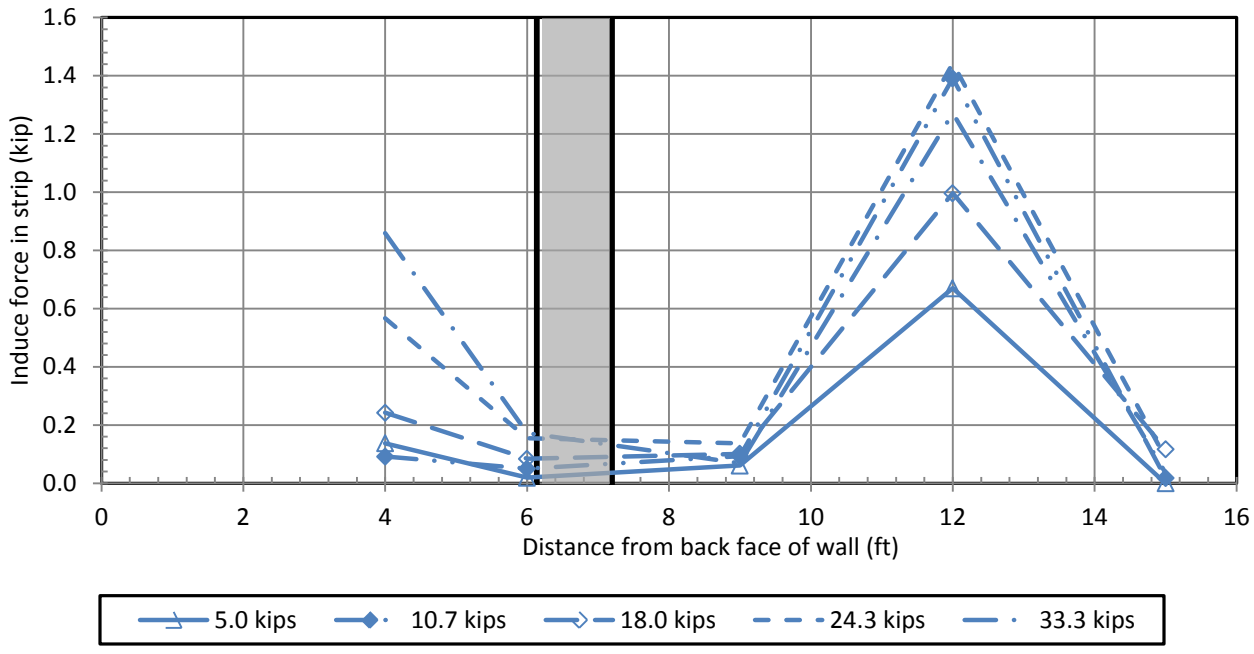


Figure C.0.13: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T3 during loading of TP3 (see Table 4.1)

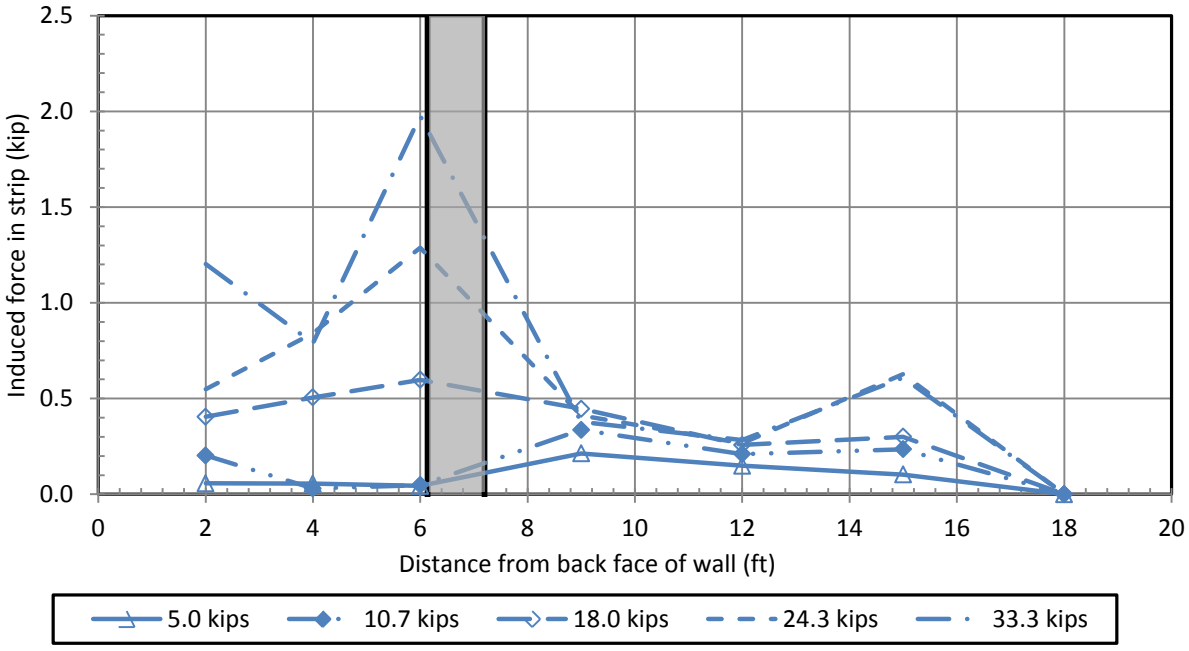


Figure C.0.14: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T during loading of TP3 (see Table 4.1)

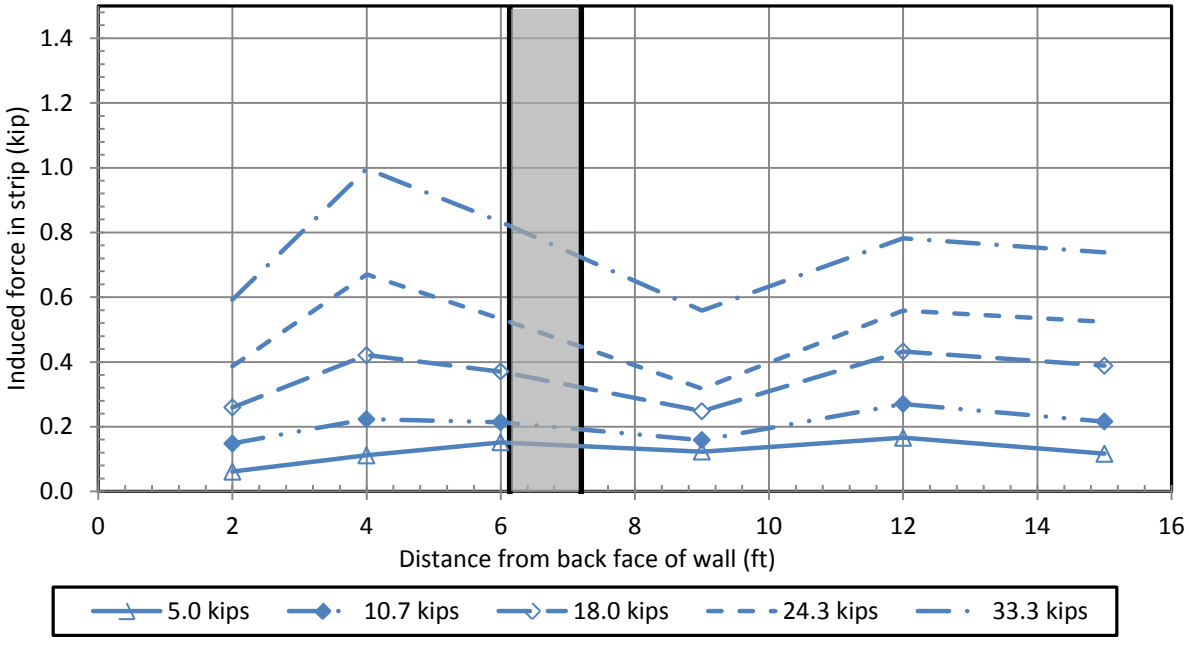


Figure C.0.15: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L4 during loading of TP3 (see Table 4.1)

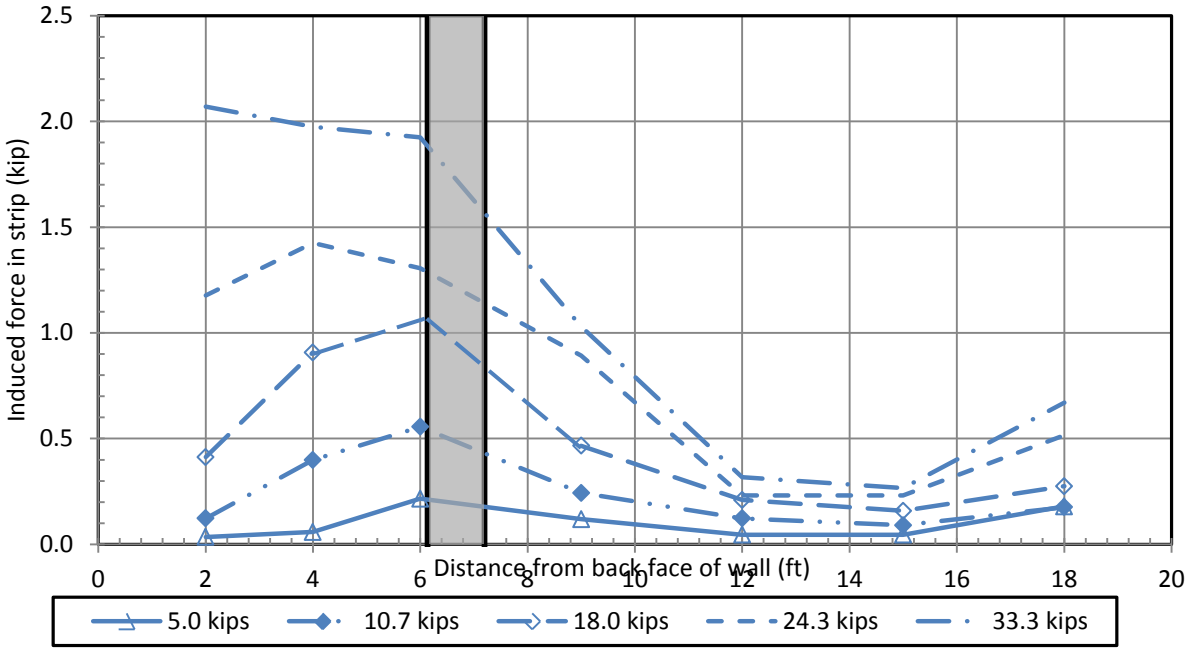


Figure C.0.16: Induced load in strip vs. distance from back face of wall as measured by gauges on strip T4 during loading of TP3 (see Table 4.1)

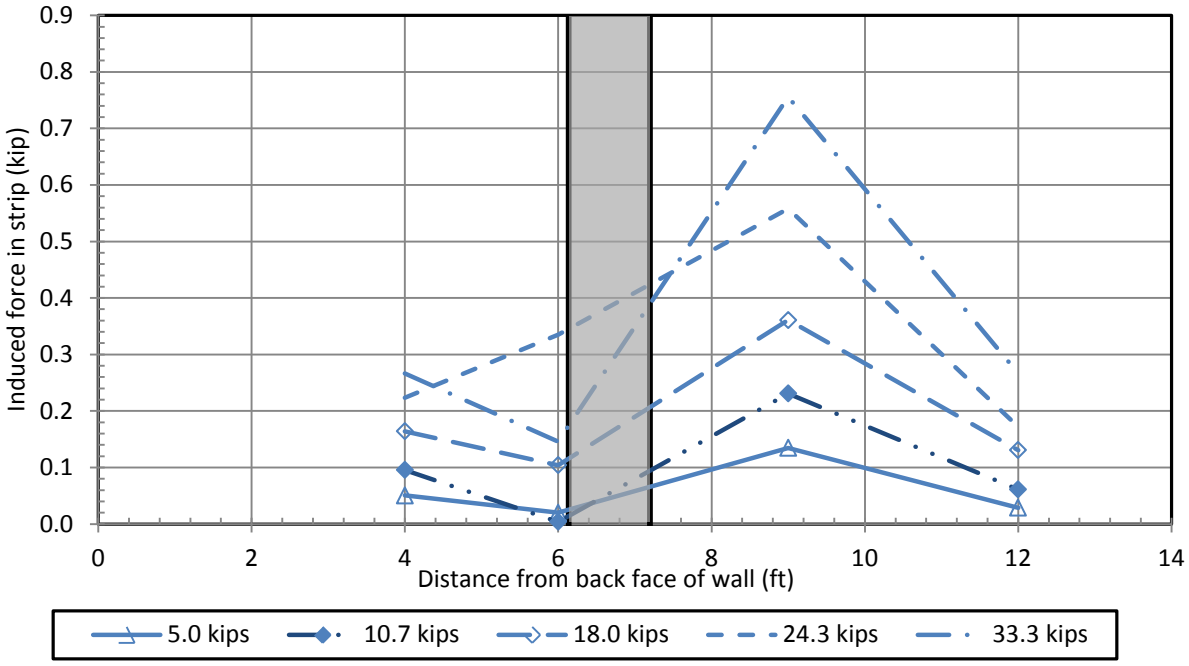


Figure C.0.17: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L5 during loading of TP3 (see Table 4.1)

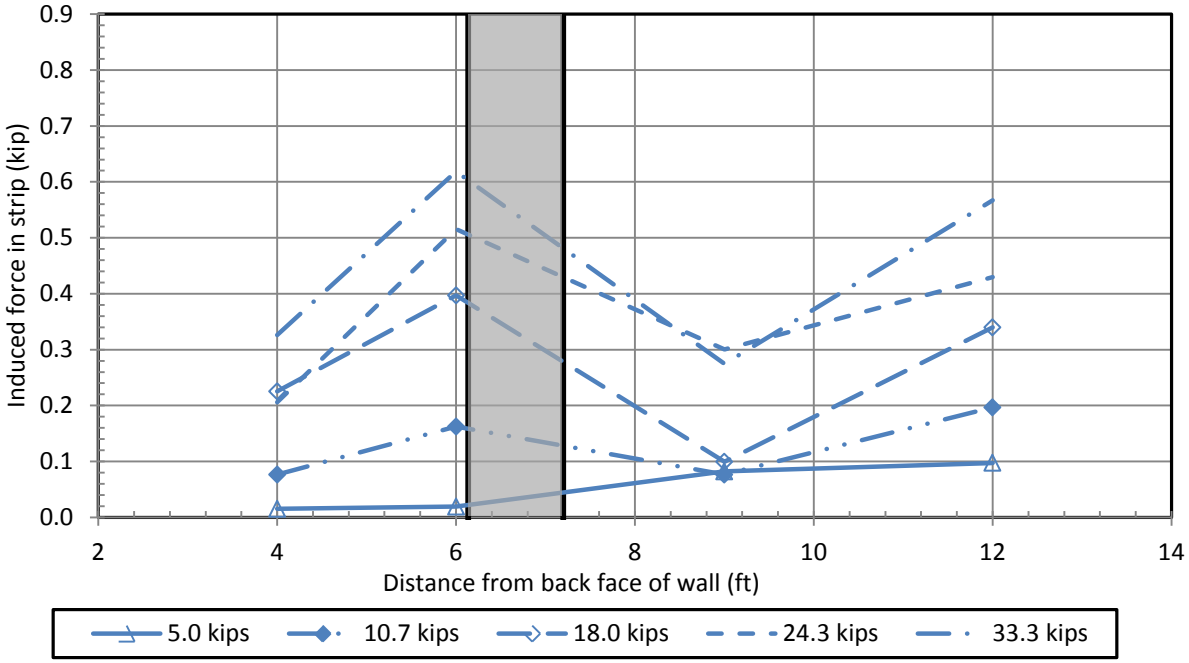


Figure C.18: Induced load in strip vs. distance from back face of wall as measured by gauges on strip L5 during loading of TP3 (see Table 4.1)

APPENDIX D. GROUND DISPLACEMENT CURVES

This appendix shows the ground displacement vs. distance from the wall curves that were not shown in the body of the report.

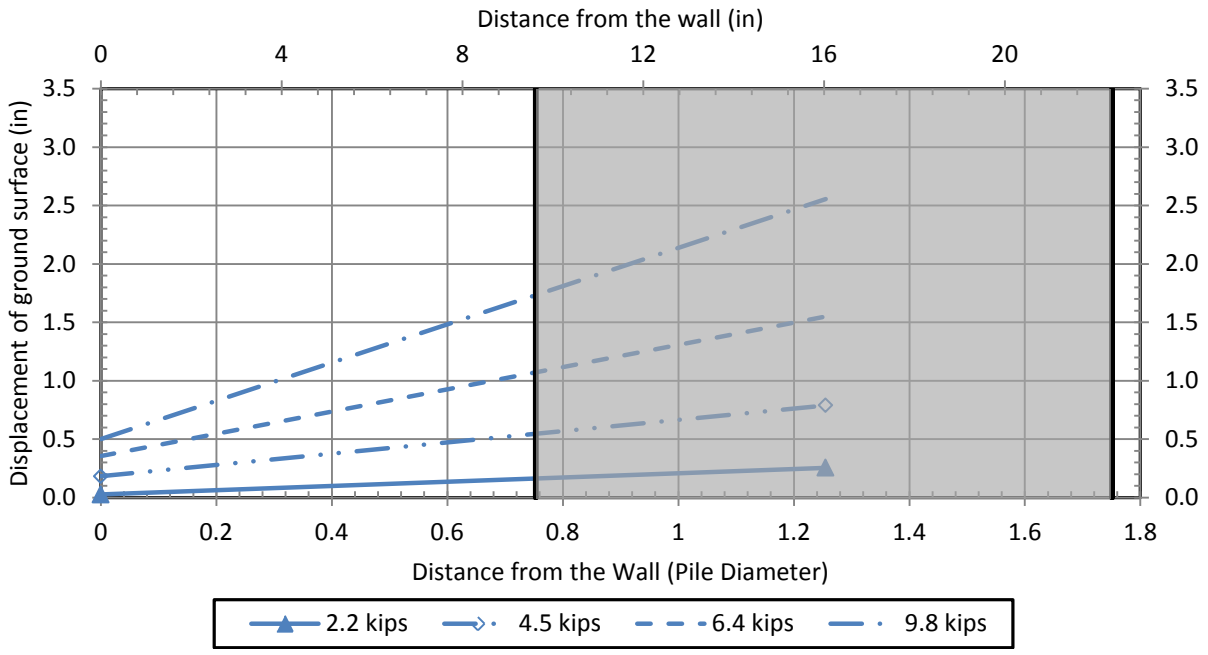


Figure D.0.1: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP1.

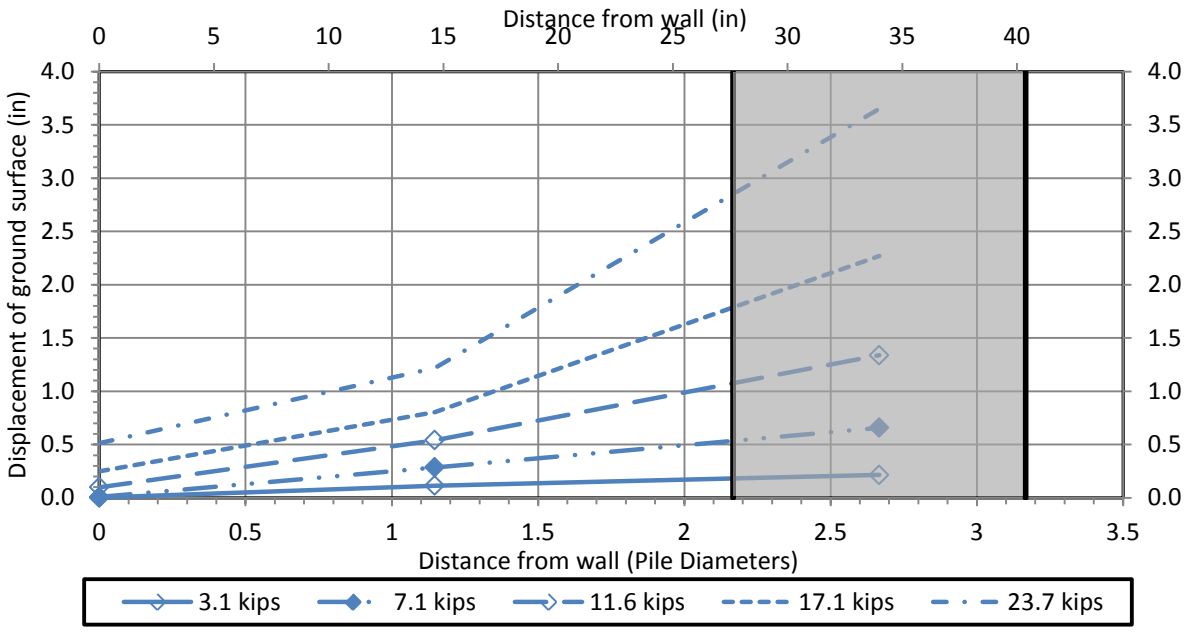


Figure D.0.2: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP2.

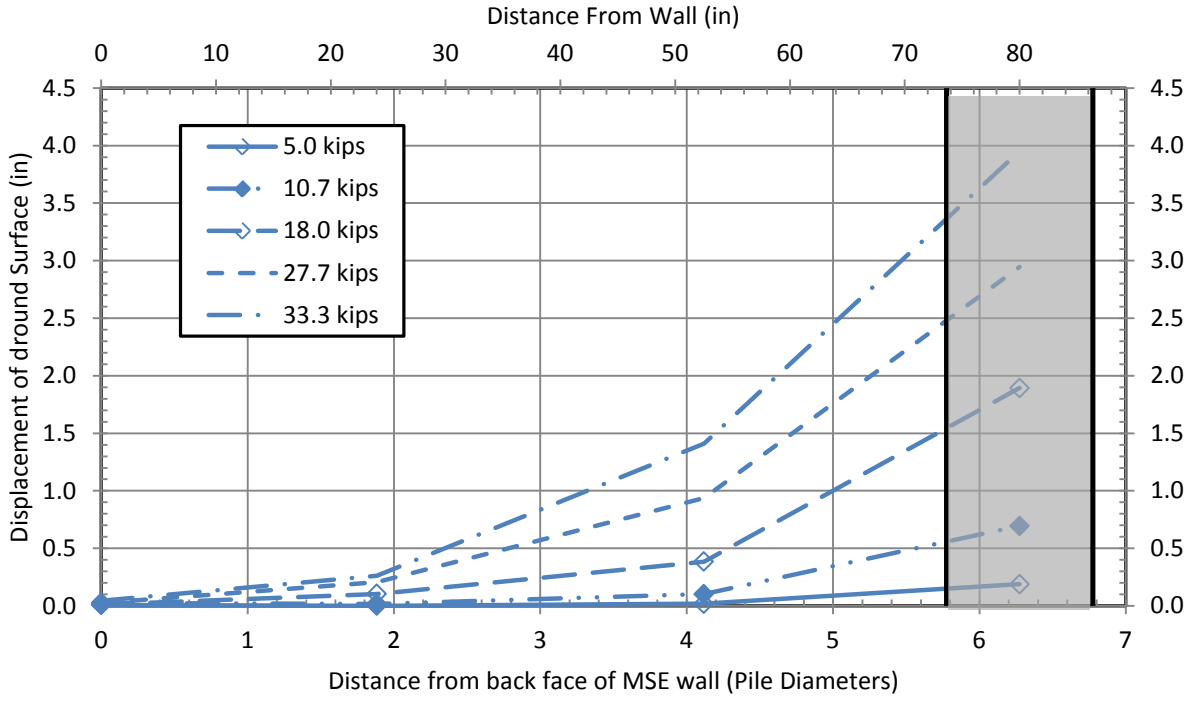


Figure D.0.3: Horizontal displacement of the ground surface vs. distance from the MSE wall for TP3.

APPENDIX E. LPILE ANALYSIS FOR TP3 (P-MULTIPLIER OF 1)

This appendix shows the readout from LPILE when for TP3 with the data input mentioned in the body of the report.

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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =         386.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S       Stress    Stiffness       p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00      0.0193        0.000    386.0000   -0.000243        0.000   8.091E+09        0.000
0.000       0.000
     4.800       0.0181   1852.8000    386.0000   -0.000242      42.3355   8.091E+09        0.000
0.000       0.000
     9.600       0.0170   3705.6000    386.0000   -0.000241      84.6710   8.091E+09        0.000
0.000       0.000
    14.400       0.0158   5558.4000    383.5419   -0.000238     127.0065   8.091E+09      -1.0242
310.5757      0.000
    19.200       0.0147   7387.6020    374.2348   -0.000234     168.8027   8.091E+09      -2.8537
932.1146      0.000
    24.000       0.0136   9151.0540    356.8329   -0.000229     209.0967   8.091E+09      -4.3970
1553.8816      0.000
    28.800       0.0125       10813.    332.6864   -0.000223     247.0758   8.091E+09      -5.6640
2175.7150      0.000
    33.600       0.0114       12345.    303.0912   -0.000216     282.0730   8.091E+09      -6.6673
2797.5221      0.000
    38.400       0.0104       13723.    269.2776   -0.000209     313.5603   8.091E+09      -7.4217
3419.2046      0.000
    43.200     0.009437       14930.    232.4000   -0.000200     341.1404   8.091E+09      -7.9440
4040.5726      0.000
    48.000     0.008498       15954.    193.5241   -0.000191     364.5384   8.091E+09      -8.2543
4662.5162      0.000
    52.800     0.007604       16788.    153.6193   -0.000181     383.5908   8.091E+09      -8.3727
5285.3108      0.000
    57.600     0.006758       17429.    113.5625   -0.000171     398.2355   8.091E+09      -8.3177
5907.9666      0.000
    62.400     0.005961       17878.     74.1347   -0.000161     408.5013   8.091E+09      -8.1106
6530.5028      0.000
    67.200     0.005216       18140.     36.0151   -0.000150     414.4973   8.091E+09      -7.7726
7152.9388      0.000
    72.000     0.004522       18224.     -0.2190   -0.000139     416.4014   8.091E+09      -7.3249
7775.2925      0.000
    76.800     0.003880       18138.    -34.0900   -0.000128     414.4493   8.091E+09      -6.7880
8397.5799      0.000
    81.600     0.003290       17896.    -65.2173   -0.000118     408.9236   8.091E+09      -6.1817
9019.8145      0.000
```

86.400	0.002750	17512.	-93.3125	-0.000107	400.1435	8.091E+09	-5.5247
9642.0076	0.000						
91.200	0.002261	17001.	-118.1742	-9.694E-05	388.4550	8.091E+09	-4.8344
10264.	0.000						
96.000	0.001820	16378.	-139.6818	-8.703E-05	374.2215	8.091E+09	-4.1271
10886.	0.000						
100.800	0.001425	15660.	-157.7880	-7.753E-05	357.8152	8.091E+09	-3.4172
11508.	0.000						
105.600	0.001075	14863.	-172.5118	-6.848E-05	339.6099	8.091E+09	-2.7178
12131.	0.000						
110.400	0.000768	14004.	-183.9306	-5.992E-05	319.9739	8.091E+09	-2.0401
12753.	0.000						
115.200	0.000500	13097.	-192.1719	-5.188E-05	299.2638	8.091E+09	-1.3938
13375.	0.000						
120.000	0.000270	12159.	-197.4056	-4.439E-05	277.8200	8.091E+09	-0.7869
13997.	0.000						
124.800	7.412E-05	11202.	-199.8360	-3.746E-05	255.9619	8.091E+09	-0.2257
14619.	0.000						
129.600	-8.972E-05	10240.	-199.6940	-3.110E-05	233.9850	8.091E+09	0.2849
15241.	0.000						
134.400	-0.000224	9285.0366	-197.2306	-2.530E-05	212.1581	8.091E+09	0.7416
15863.	0.000						
139.200	-0.000333	8346.8729	-192.7090	-2.007E-05	190.7216	8.091E+09	1.1424
16485.	0.000						
144.000	-0.000417	7435.0299	-186.3996	-1.539E-05	169.8864	8.091E+09	1.4865
17107.	0.000						
148.800	-0.000480	6557.4370	-178.5733	-1.124E-05	149.8339	8.091E+09	1.7744
17729.	0.000						
153.600	-0.000525	5720.7260	-169.4974	-7.600E-06	130.7155	8.091E+09	2.0073
18351.	0.000						
158.400	-0.000553	4930.2622	-159.4305	-4.440E-06	112.6538	8.091E+09	2.1873
18973.	0.000						
163.200	-0.000568	4190.1936	-148.6193	-1.735E-06	95.7437	8.091E+09	2.3174
19596.	0.000						
168.000	-0.000570	3503.5170	-137.2955	5.473E-07	80.0535	8.091E+09	2.4009
20218.	0.000						
172.800	-0.000562	2872.1564	-125.6734	2.438E-06	65.6272	8.091E+09	2.4417
20840.	0.000						
177.600	-0.000547	2297.0522	-113.9479	3.972E-06	52.4864	8.091E+09	2.4440
21462.	0.000						
182.400	-0.000524	1778.2566	-102.2935	5.181E-06	40.6322	8.091E+09	2.4120
22084.	0.000						
187.200	-0.000497	1315.0342	-90.8638	6.098E-06	30.0478	8.091E+09	2.3504
22706.	0.000						
192.000	-0.000466	905.9643	-79.7907	6.757E-06	20.7008	8.091E+09	2.2634
23328.	0.000						
196.800	-0.000432	549.0432	-69.1854	7.189E-06	12.5453	8.091E+09	2.1555
23950.	0.000						
201.600	-0.000397	241.7847	-59.1382	7.423E-06	5.5246	8.091E+09	2.0308
24572.	0.000						
206.400	-0.000361	-18.6833	-49.7199	7.489E-06	0.4269	8.091E+09	1.8934
25194.	0.000						
211.200	-0.000325	-235.5267	-40.9830	7.414E-06	5.3817	8.091E+09	1.7470
25816.	0.000						
216.000	-0.000290	-412.1198	-32.9625	7.222E-06	9.4167	8.091E+09	1.5949
26438.	0.000						
220.800	-0.000255	-551.9663	-25.6779	6.936E-06	12.6121	8.091E+09	1.4403
27060.	0.000						
225.600	-0.000223	-658.6280	-19.1349	6.577E-06	15.0493	8.091E+09	1.2860
27683.	0.000						
230.400	-0.000192	-735.6612	-13.3264	6.163E-06	16.8095	8.091E+09	1.1342
28305.	0.000						
235.200	-0.000164	-786.5618	-8.2350	5.712E-06	17.9725	8.091E+09	0.9872
28927.	0.000						
240.000	-0.000138	-814.7175	-3.8341	5.237E-06	18.6159	8.091E+09	0.8465
29549.	0.000						
244.800	-0.000114	-823.3688	-0.0896	4.751E-06	18.8135	8.091E+09	0.7137
30171.	0.000						
249.600	-9.191E-05	-815.5774	3.0383	4.265E-06	18.6355	8.091E+09	0.5896
30793.	0.000						
254.400	-7.260E-05	-794.2014	5.5937	3.787E-06	18.1471	8.091E+09	0.4751
31415.	0.000						
259.200	-5.555E-05	-761.8780	7.6239	3.326E-06	17.4085	8.091E+09	0.3708
32037.	0.000						
264.000	-4.067E-05	-721.0120	9.1779	2.886E-06	16.4747	8.091E+09	0.2767
32659.	0.000						
268.800	-2.785E-05	-673.7699	10.3056	2.472E-06	15.3953	8.091E+09	0.1931
33281.	0.000						
273.600	-1.694E-05	-622.0787	11.0562	2.088E-06	14.2142	8.091E+09	0.1197
33903.	0.000						

278.400	-7.809E-06	-567.6303	11.4845	1.735E-06	12.9700	8.091E+09	0.0588
36138.	0.000						
283.200	-2.906E-07	-511.8274	11.6310	1.414E-06	11.6950	8.091E+09	0.002258
37290.	0.000						
288.000	5.770E-06	-455.9724	11.5255	1.127E-06	10.4187	8.091E+09	-0.0462
38442.	0.000						
292.800	1.053E-05	-401.1821	11.2061	8.731E-07	9.1668	8.091E+09	-0.0869
39594.	0.000						
297.600	1.415E-05	-348.3935	10.7093	6.508E-07	7.9606	8.091E+09	-0.1201
40746.	0.000						
302.400	1.678E-05	-298.3727	10.0695	4.589E-07	6.8177	8.091E+09	-0.1465
41898.	0.000						
307.200	1.856E-05	-251.7266	9.3185	2.958E-07	5.7518	8.091E+09	-0.1664
43050.	0.000						
312.000	1.962E-05	-208.9153	8.4854	1.591E-07	4.7736	8.091E+09	-0.1807
44202.	0.000						
316.800	2.009E-05	-170.2666	7.5963	4.665E-08	3.8905	8.091E+09	-0.1898
45354.	0.000						
321.600	2.007E-05	-135.9905	6.6742	-4.419E-08	3.1073	8.091E+09	-0.1944
46506.	0.000						
326.400	1.966E-05	-106.1940	5.7391	-1.160E-07	2.4265	8.091E+09	-0.1952
47658.	0.000						
331.200	1.895E-05	-80.8951	4.8080	-1.715E-07	1.8484	8.091E+09	-0.1927
48810.	0.000						
336.000	1.801E-05	-60.0368	4.0796	-2.133E-07	1.3718	8.091E+09	-0.1108
29520.	0.000						
340.800	1.691E-05	-41.7310	3.5583	-2.435E-07	0.9535	8.091E+09	-0.1064
30211.	0.000						
345.600	1.568E-05	-25.8767	3.0608	-2.636E-07	0.5913	8.091E+09	-0.1009
30902.	0.000						
350.400	1.437E-05	-12.3478	2.5915	-2.749E-07	0.2821	8.091E+09	-0.0946
31593.	0.000						
355.200	1.304E-05	-0.9988	2.1539	-2.789E-07	0.0228	8.091E+09	-0.0877
32284.	0.000						
360.000	1.170E-05	8.3298	1.7506	-2.767E-07	0.1903	8.091E+09	-0.0804
32976.	0.000						
364.800	1.038E-05	15.8068	1.3830	-2.695E-07	0.3612	8.091E+09	-0.0728
33667.	0.000						
369.600	9.110E-06	21.6062	1.0517	-2.584E-07	0.4937	8.091E+09	-0.0652
34358.	0.000						
374.400	7.901E-06	25.9031	0.7567	-2.443E-07	0.5919	8.091E+09	-0.0577
35049.	0.000						
379.200	6.765E-06	28.8709	0.4974	-2.281E-07	0.6597	8.091E+09	-0.0504
35740.	0.000						
384.000	5.711E-06	30.6781	0.2725	-2.104E-07	0.7010	8.091E+09	-0.0433
36432.	0.000						
388.800	4.744E-06	31.4867	0.0804	-1.920E-07	0.7195	8.091E+09	-0.0367
37123.	0.000						
393.600	3.868E-06	31.4499	-0.0808	-1.733E-07	0.7186	8.091E+09	-0.0305
37814.	0.000						
398.400	3.081E-06	30.7111	-0.2132	-1.549E-07	0.7017	8.091E+09	-0.0247
38505.	0.000						
403.200	2.381E-06	29.4028	-0.3192	-1.371E-07	0.6718	8.091E+09	-0.0194
39196.	0.000						
408.000	1.765E-06	27.6467	-0.4011	-1.201E-07	0.6317	8.091E+09	-0.0147
39888.	0.000						
412.800	1.228E-06	25.5527	-0.4612	-1.044E-07	0.5839	8.091E+09	-0.0104
40579.	0.000						
417.600	7.631E-07	23.2195	-0.5018	-8.988E-08	0.5306	8.091E+09	-0.006561
41270.	0.000						
422.400	3.647E-07	20.7352	-0.5252	-7.685E-08	0.4738	8.091E+09	-0.003188
41961.	0.000						
427.200	2.534E-08	18.1775	-0.5334	-6.530E-08	0.4153	8.091E+09	-0.000225
42652.	0.000						
432.000	-2.622E-07	15.6145	-0.5283	-5.528E-08	0.3568	8.091E+09	0.002368
43344.	0.000						
436.800	-5.053E-07	13.1062	-0.5115	-4.676E-08	0.2995	8.091E+09	0.004636
44035.	0.000						
441.600	-7.111E-07	10.7046	-0.4844	-3.970E-08	0.2446	8.091E+09	0.006626
44726.	0.000						
446.400	-8.864E-07	8.4557	-0.4484	-3.401E-08	0.1932	8.091E+09	0.008387
45417.	0.000						
451.200	-1.038E-06	6.4000	-0.4043	-2.961E-08	0.1462	8.091E+09	0.009968
46108.	0.000						
456.000	-1.171E-06	4.5740	-0.3530	-2.635E-08	0.1045	8.091E+09	0.0114
46800.	0.000						
460.800	-1.291E-06	3.0110	-0.2950	-2.410E-08	0.0688	8.091E+09	0.0128
47491.	0.000						
465.600	-1.402E-06	1.7422	-0.2306	-2.269E-08	0.0398	8.091E+09	0.0141
48182.	0.000						

```
   470.400  -1.508E-06        0.7977      -0.1599  -2.194E-08        0.0182   8.091E+09        0.0154
48873.       0.000
   475.200  -1.613E-06        0.2070      -0.0831  -2.164E-08      0.004730   8.091E+09        0.0167
49564.       0.000
   480.000  -1.716E-06         0.000         0.000  -2.158E-08         0.000   8.091E+09        0.0180
25128.       0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 1:

Pile-head deflection             =      0.0193051 inches
Computed slope at pile head      =     -0.0002428 radians
Maximum bending moment           =         18224. inch-lbs
Maximum shear force              =    386.0000000 lbs
Depth of maximum bending moment  =     72.0000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =              6
Number of zero deflection points =              3


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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        5004.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       0.2623  -7.798E-08   5004.0000   -0.003261   1.782E-09   8.091E+09         0.000
0.000       0.000
     4.800       0.2467       24019.   5004.0000   -0.003254    548.8258   8.091E+09         0.000
0.000       0.000
     9.600       0.2311       48038.   5004.0000   -0.003232   1097.6516   8.091E+09         0.000
0.000       0.000
    14.400       0.2156       72058.   4977.4514   -0.003197   1646.4774   8.091E+09     -11.0619
246.2202      0.000
    19.200       0.2004       95822.   4872.5285   -0.003147   2189.4797   8.091E+09     -32.6560
782.1539      0.000
    24.000       0.1854      118834.   4669.1338   -0.003083   2715.2901   8.091E+09     -52.0918
1348.3845      0.000
    28.800       0.1708      140646.   4379.6947   -0.003006   3213.6768   8.091E+09     -68.5078
1925.2093      0.000
    33.600       0.1566      160879.   4019.6297   -0.002917   3675.9973   8.091E+09     -81.5193
2499.0658      0.000
    38.400       0.1428      179234.   3605.8465   -0.002816   4095.4020   8.091E+09     -90.8904
3055.0739      0.000
    43.200       0.1295      195495.   3156.7220   -0.002705   4466.9572   8.091E+09     -96.2448
3566.2456      0.000
    48.000       0.1168      209539.   2682.8219   -0.002585   4787.8442   8.091E+09    -101.2136
4158.1936      0.000
    52.800       0.1047      221250.   2184.3956   -0.002457   5055.4472   8.091E+09    -106.4641
4879.6191      0.000
    57.600       0.0932      230509.   1668.2382   -0.002323   5267.0020   8.091E+09    -108.6015
5590.3132      0.000
    62.400       0.0824      237265.   1148.4637   -0.002184   5421.3833   8.091E+09    -107.9712
6287.5991      0.000
    67.200       0.0723      241534.    637.3945   -0.002042   5518.9230   8.091E+09    -104.9743
6971.2295      0.000
    72.000       0.0628      243384.    145.4105   -0.001898   5561.1989   8.091E+09    -100.0191
7642.2616      0.000
    76.800       0.0541      242930.   -319.0259   -0.001754   5550.8195   8.091E+09     -93.4961
8302.3362      0.000
    81.600       0.0460      240322.   -749.2558   -0.001611   5491.2190   8.091E+09     -85.7663
8953.2545      0.000
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86.400	0.0386	235737.	-1140.2700	-0.001470	5386.4666	8.091E+09	-77.1563
9596.7475	0.000						
91.200	0.0319	229375.	-1488.5442	-0.001332	5241.0953	8.091E+09	-67.9580
10234.	0.000						
96.000	0.0258	221447.	-1791.8750	-0.001198	5059.9473	8.091E+09	-58.4298
10867.	0.000						
100.800	0.0204	212173.	-2049.2217	-0.001069	4848.0388	8.091E+09	-48.7980
11497.	0.000						
105.600	0.0155	201775.	-2260.5575	-0.000946	4610.4406	8.091E+09	-39.2586
12124.	0.000						
110.400	0.0113	190472.	-2426.7280	-0.000830	4352.1746	8.091E+09	-29.9791
12749.	0.000						
115.200	0.007573	178478.	-2549.3184	-0.000721	4078.1260	8.091E+09	-21.1002
13373.	0.000						
120.000	0.004368	165998.	-2630.5280	-0.000619	3792.9693	8.091E+09	-12.7371
13996.	0.000						
124.800	0.001636	153225.	-2673.0528	-0.000524	3501.1070	8.091E+09	-4.9815
14619.	0.000						
129.600	-0.000661	140337.	-2679.9748	-0.000437	3206.6222	8.091E+09	2.0973
15241.	0.000						
134.400	-0.002557	127497.	-2654.6597	-0.000357	2913.2416	8.091E+09	8.4506
15863.	0.000						
139.200	-0.004091	114852.	-2600.6619	-0.000285	2624.3098	8.091E+09	14.0485
16485.	0.000						
144.000	-0.005297	102531.	-2521.6383	-0.000221	2342.7738	8.091E+09	18.8780
17107.	0.000						
148.800	-0.006212	90644.	-2421.2705	-0.000164	2071.1762	8.091E+09	22.9419
17728.	0.000						
153.600	-0.006868	79287.	-2303.1956	-0.000113	1811.6564	8.091E+09	26.2560
18350.	0.000						
158.400	-0.007298	68534.	-2170.9464	-6.938E-05	1565.9591	8.091E+09	28.8478
18972.	0.000						
163.200	-0.007534	58446.	-2027.9003	-3.171E-05	1335.4488	8.091E+09	30.7547
19594.	0.000						
168.000	-0.007603	49066.	-1877.2370	1.801E-07	1121.1293	8.091E+09	32.0217
20217.	0.000						
172.800	-0.007532	40424.	-1721.9047	2.673E-05	923.6678	8.091E+09	32.7001
20839.	0.000						
177.600	-0.007346	32536.	-1564.5957	4.837E-05	743.4212	8.091E+09	32.8454
21461.	0.000						
182.400	-0.007068	25404.	-1407.7275	6.555E-05	580.4661	8.091E+09	32.5163
22083.	0.000						
187.200	-0.006717	19021.	-1253.4332	7.873E-05	434.6294	8.091E+09	31.7730
22705.	0.000						
192.000	-0.006312	13371.	-1103.5572	8.834E-05	305.5195	8.091E+09	30.6754
23327.	0.000						
196.800	-0.005869	8427.2776	-959.6572	9.481E-05	192.5588	8.091E+09	29.2829
23949.	0.000						
201.600	-0.005402	4158.2620	-823.0118	9.854E-05	95.0141	8.091E+09	27.6527
24572.	0.000						
206.400	-0.004923	526.3647	-694.6311	9.993E-05	12.0271	8.091E+09	25.8393
25194.	0.000						
211.200	-0.004443	-2510.1960	-575.2721	9.934E-05	57.3566	8.091E+09	23.8936
25816.	0.000						
216.000	-0.003969	-4996.2479	-465.4568	9.711E-05	114.1616	8.091E+09	21.8628
26438.	0.000						
220.800	-0.003510	-6978.5812	-365.4913	9.356E-05	159.4568	8.091E+09	19.7895
27060.	0.000						
225.600	-0.003071	-8504.9649	-275.4883	8.897E-05	194.3339	8.091E+09	17.7118
27682.	0.000						
230.400	-0.002656	-9623.2692	-195.3888	8.359E-05	219.8865	8.091E+09	15.6630
28304.	0.000						
235.200	-0.002269	-10381.	-124.9849	7.766E-05	237.1933	8.091E+09	13.6719
28927.	0.000						
240.000	-0.001911	-10823.	-63.9430	7.137E-05	247.3026	8.091E+09	11.7622
29549.	0.000						
244.800	-0.001584	-10995.	-11.8252	6.490E-05	251.2196	8.091E+09	9.9535
30171.	0.000						
249.600	-0.001288	-10937.	31.8893	5.839E-05	249.8965	8.091E+09	8.2608
30793.	0.000						
254.400	-0.001023	-10688.	67.7840	5.198E-05	244.2245	8.091E+09	6.6953
31415.	0.000						
259.200	-0.000789	-10286.	96.4871	4.575E-05	235.0277	8.091E+09	5.2643
32037.	0.000						
264.000	-0.000584	-9762.1368	118.6540	3.981E-05	223.0596	8.091E+09	3.9719
32659.	0.000						
268.800	-0.000407	-9146.8419	134.9522	3.420E-05	209.0004	8.091E+09	2.8191
33281.	0.000						
273.600	-0.000255	-8466.5960	146.0482	2.897E-05	193.4572	8.091E+09	1.8043
33903.	0.000						

278.400	-0.000128	-7744.7796	152.6990	2.417E-05	176.9640	8.091E+09	0.9669
36138.	0.000						
283.200	-2.346E-05	-7000.6860	155.4569	1.979E-05	159.9619	8.091E+09	0.1822
37290.	0.000						
288.000	6.157E-05	-6252.3933	154.7108	1.586E-05	142.8638	8.091E+09	-0.4931
38442.	0.000						
292.800	0.000129	-5515.4622	150.9775	1.237E-05	126.0253	8.091E+09	-1.0624
39594.	0.000						
297.600	0.000180	-4803.0097	144.7539	9.309E-06	109.7462	8.091E+09	-1.5307
40746.	0.000						
302.400	0.000218	-4125.8249	136.5098	6.660E-06	94.2729	8.091E+09	-1.9043
41898.	0.000						
307.200	0.000244	-3492.5157	126.6817	4.401E-06	79.8021	8.091E+09	-2.1907
43050.	0.000						
312.000	0.000260	-2909.6809	115.6685	2.502E-06	66.4846	8.091E+09	-2.3981
44202.	0.000						
316.800	0.000268	-2382.0980	103.8294	9.319E-07	54.4297	8.091E+09	-2.5349
45354.	0.000						
321.600	0.000269	-1912.9190	91.4822	-3.421E-07	43.7092	8.091E+09	-2.6098
46506.	0.000						
326.400	0.000265	-1503.8688	78.9042	-1.356E-06	34.3626	8.091E+09	-2.6311
47658.	0.000						
331.200	0.000256	-1155.4382	66.3336	-2.144E-06	26.4011	8.091E+09	-2.6067
48810.	0.000						
336.000	0.000244	-867.0664	56.4701	-2.744E-06	19.8120	8.091E+09	-1.5031
29520.	0.000						
340.800	0.000230	-613.3257	49.3884	-3.183E-06	14.0142	8.091E+09	-1.4476
30211.	0.000						
345.600	0.000214	-392.9378	42.6100	-3.482E-06	8.9784	8.091E+09	-1.3767
30902.	0.000						
350.400	0.000197	-204.2695	36.2007	-3.659E-06	4.6674	8.091E+09	-1.2938
31593.	0.000						
355.200	0.000179	-45.4111	30.2106	-3.733E-06	1.0376	8.091E+09	-1.2020
32284.	0.000						
360.000	0.000161	85.7522	24.6755	-3.721E-06	1.9594	8.091E+09	-1.1042
32976.	0.000						
364.800	0.000143	191.4739	19.6183	-3.639E-06	4.3751	8.091E+09	-1.0030
33667.	0.000						
369.600	0.000126	274.0875	15.0500	-3.501E-06	6.2628	8.091E+09	-0.9005
34358.	0.000						
374.400	0.000109	335.9543	10.9720	-3.320E-06	7.6764	8.091E+09	-0.7987
35049.	0.000						
379.200	9.393E-05	379.4183	7.3765	-3.108E-06	8.6695	8.091E+09	-0.6994
35740.	0.000						
384.000	7.955E-05	406.7684	4.2488	-2.875E-06	9.2944	8.091E+09	-0.6038
36432.	0.000						
388.800	6.633E-05	420.2071	1.5685	-2.629E-06	9.6015	8.091E+09	-0.5130
37123.	0.000						
393.600	5.431E-05	421.8257	-0.6897	-2.379E-06	9.6385	8.091E+09	-0.4279
37814.	0.000						
398.400	4.349E-05	413.5864	-2.5539	-2.132E-06	9.4502	8.091E+09	-0.3489
38505.	0.000						
403.200	3.385E-05	397.3088	-4.0545	-1.891E-06	9.0783	8.091E+09	-0.2764
39196.	0.000						
408.000	2.534E-05	374.6629	-5.2232	-1.662E-06	8.5608	8.091E+09	-0.2105
39888.	0.000						
412.800	1.789E-05	347.1660	-6.0915	-1.448E-06	7.9326	8.091E+09	-0.1513
40579.	0.000						
417.600	1.144E-05	316.1843	-6.6905	-1.251E-06	7.2246	8.091E+09	-0.0983
41270.	0.000						
422.400	5.880E-06	282.9372	-7.0498	-1.074E-06	6.4650	8.091E+09	-0.0514
41961.	0.000						
427.200	1.130E-06	248.5058	-7.1973	-9.159E-07	5.6782	8.091E+09	-0.0100
42652.	0.000						
432.000	-2.913E-06	213.8431	-7.1583	-7.787E-07	4.8862	8.091E+09	0.0263
43344.	0.000						
436.800	-6.346E-06	179.7864	-6.9554	-6.620E-07	4.1080	8.091E+09	0.0582
44035.	0.000						
441.600	-9.268E-06	147.0710	-6.6084	-5.650E-07	3.3605	8.091E+09	0.0864
44726.	0.000						
446.400	-1.177E-05	116.3453	-6.1339	-4.869E-07	2.6584	8.091E+09	0.1114
45417.	0.000						
451.200	-1.394E-05	88.1856	-5.5452	-4.262E-07	2.0150	8.091E+09	0.1339
46108.	0.000						
456.000	-1.586E-05	63.1114	-4.8526	-3.813E-07	1.4421	8.091E+09	0.1547
46800.	0.000						
460.800	-1.760E-05	41.6005	-4.0635	-3.503E-07	0.9505	8.091E+09	0.1742
47491.	0.000						
465.600	-1.922E-05	24.1022	-3.1823	-3.308E-07	0.5507	8.091E+09	0.1930
48182.	0.000						

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   470.400  -2.078E-05      11.0500      -2.2114  -3.204E-07        0.2525   8.091E+09        0.2116
48873.       0.000
   475.200  -2.230E-05       2.8723      -1.1510  -3.162E-07        0.0656   8.091E+09        0.2303
49564.       0.000
   480.000  -2.381E-05        0.000         0.000  -3.154E-07         0.000   8.091E+09        0.2493
25128.       0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 2:

Pile-head deflection             =      0.2623335 inches
Computed slope at pile head      =     -0.0032610 radians
Maximum bending moment           =        243384. inch-lbs
Maximum shear force              =   5004.0000000 lbs
Depth of maximum bending moment  =     72.0000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =              7
Number of zero deflection points =              3


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 3
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =        8371.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
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- ----------
      0.00       0.4766  -7.798E-08   8371.0000   -0.005801   1.782E-09   8.091E+09         0.000
0.000      0.000
     4.800       0.4488       40181.   8371.0000   -0.005789    918.1097   8.091E+09         0.000
0.000      0.000
     9.600       0.4210       80362.   8371.0000   -0.005754   1836.2194   8.091E+09         0.000
0.000      0.000
    14.400       0.3935      120542.   8336.7847   -0.005694   2754.3290   8.091E+09     -14.2564
173.8917      0.000
    19.200       0.3664      160395.   8195.3969   -0.005611   3664.9334   8.091E+09     -44.6552
585.0587      0.000
    24.000       0.3397      199218.   7909.9688   -0.005504   4552.0290   8.091E+09     -74.2731
1049.6036      0.000
    28.800       0.3135      236330.   7490.7581   -0.005375   5400.0233   8.091E+09    -100.3980
1537.0592      0.000
    33.600       0.2881      271129.   6958.8074   -0.005224   6195.1630   8.091E+09    -121.2482
2020.3451      0.000
    38.400       0.2634      303135.   6342.8747   -0.005054   6926.4714   8.091E+09    -135.3904
2467.4839      0.000
    43.200       0.2395      332021.   5679.5156   -0.004865   7586.5033   8.091E+09    -141.0092
2825.5027      0.000
    48.000       0.2167      357658.   4979.3058   -0.004661   8172.3006   8.091E+09    -150.7448
3339.5756      0.000
    52.800       0.1948      379822.   4214.5993   -0.004442   8678.7381   8.091E+09    -167.8829
4136.6619      0.000
    57.600       0.1740      398118.   3380.8831   -0.004211   9096.7934   8.091E+09    -179.4989
4951.0537      0.000
    62.400       0.1544      412279.   2505.3637   -0.003971   9420.3512   8.091E+09    -185.3009
5761.5894      0.000
    67.200       0.1359      422170.   1615.2549   -0.003723   9646.3570   8.091E+09    -185.5778
6554.5702      0.000
    72.000       0.1186      427785.    735.5022   -0.003471   9774.6652   8.091E+09    -180.9858
7323.0606      0.000
    76.800       0.1026      429231.   -112.5103   -0.003217   9807.6930   8.091E+09    -172.3528
8065.1531      0.000
    81.600       0.0877      426705.   -911.4514   -0.002963   9749.9855   8.091E+09    -160.5393
8782.1180      0.000
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86.400	0.0741	420481.	-1648.0036	-0.002712	9607.7617	8.091E+09	-146.3574
9476.9044	0.000						
91.200	0.0617	410884.	-2312.5387	-0.002465	9388.4879	8.091E+09	-130.5322
10153.	0.000						
96.000	0.0505	398280.	-2898.6725	-0.002225	9100.4952	8.091E+09	-113.6902
10814.	0.000						
100.800	0.0403	383057.	-3402.7989	-0.001994	8752.6501	8.091E+09	-96.3624
11464.	0.000						
105.600	0.0313	365614.	-3823.6497	-0.001771	8354.0748	8.091E+09	-78.9921
12105.	0.000						
110.400	0.0233	346350.	-4161.9003	-0.001560	7913.9140	8.091E+09	-61.9456
12739.	0.000						
115.200	0.0163	325659.	-4419.8222	-0.001361	7441.1418	8.091E+09	-45.5218
13368.	0.000						
120.000	0.0103	303920.	-4600.9799	-0.001174	6944.4046	8.091E+09	-29.9605
13994.	0.000						
124.800	0.005073	281490.	-4709.9642	-0.001001	6431.8946	8.091E+09	-15.4496
14618.	0.000						
129.600	0.000671	258704.	-4752.1573	-0.000840	5911.2512	8.091E+09	-2.1309
15241.	0.000						
134.400	-0.002994	235869.	-4733.5242	-0.000694	5389.4859	8.091E+09	9.8947
15863.	0.000						
139.200	-0.005988	213262.	-4660.4263	-0.000560	4872.9297	8.091E+09	20.5628
16484.	0.000						
144.000	-0.008374	191129.	-4539.4555	-0.000440	4367.1988	8.091E+09	29.8417
17106.	0.000						
148.800	-0.0102	169684.	-4377.2872	-0.000333	3877.1782	8.091E+09	37.7284
17727.	0.000						
153.600	-0.0116	149107.	-4180.5500	-0.000239	3407.0197	8.091E+09	44.2454
18349.	0.000						
158.400	-0.0125	129550.	-3955.7134	-0.000156	2960.1543	8.091E+09	49.4366
18970.	0.000						
163.200	-0.0131	111132.	-3708.9911	-8.480E-05	2539.3148	8.091E+09	53.3644
19592.	0.000						
168.000	-0.0133	93944.	-3446.2610	-2.397E-05	2146.5692	8.091E+09	56.1065
20214.	0.000						
172.800	-0.0133	78048.	-3173.0005	2.705E-05	1783.3608	8.091E+09	57.7521
20836.	0.000						
177.600	-0.0131	63483.	-2894.2378	6.903E-05	1450.5561	8.091E+09	58.3991
21459.	0.000						
182.400	-0.0126	50264.	-2614.5145	0.000103	1148.4958	8.091E+09	58.1523
22081.	0.000						
187.200	-0.0121	38384.	-2337.8625	0.000129	877.0497	8.091E+09	57.1194
22703.	0.000						
192.000	-0.0114	27820.	-2067.7944	0.000149	635.6743	8.091E+09	55.4090
23325.	0.000						
196.800	-0.0106	18533.	-1807.3042	0.000162	423.4690	8.091E+09	53.1286
23948.	0.000						
201.600	-0.009843	10470.	-1558.8770	0.000171	239.2334	8.091E+09	50.3828
24570.	0.000						
206.400	-0.009007	3567.7781	-1324.5070	0.000175	81.5218	8.091E+09	47.2714
25192.	0.000						
211.200	-0.008161	-2245.2895	-1105.7232	0.000176	51.3037	8.091E+09	43.8885
25815.	0.000						
216.000	-0.007321	-7047.1650	-903.6192	0.000173	161.0239	8.091E+09	40.3215
26437.	0.000						
220.800	-0.006501	-10920.	-718.8882	0.000168	249.5169	8.091E+09	36.6498
27059.	0.000						
225.600	-0.005713	-13948.	-551.8613	0.000160	318.7155	8.091E+09	32.9448
27682.	0.000						
230.400	-0.004964	-16218.	-402.5469	0.000151	370.5703	8.091E+09	29.2695
28304.	0.000						
235.200	-0.004261	-17813.	-270.6718	0.000141	407.0161	8.091E+09	25.6784
28926.	0.000						
240.000	-0.003609	-18816.	-155.7221	0.000130	429.9435	8.091E+09	22.2173
29548.	0.000						
244.800	-0.003011	-19308.	-56.9829	0.000119	441.1745	8.091E+09	18.9240
30171.	0.000						
249.600	-0.002467	-19363.	26.4226	0.000107	442.4430	8.091E+09	15.8283
30793.	0.000						
254.400	-0.001979	-19054.	95.4965	9.607E-05	435.3786	8.091E+09	12.9525
31415.	0.000						
259.200	-0.001545	-18447.	151.3322	8.494E-05	421.4954	8.091E+09	10.3124
32037.	0.000						
264.000	-0.001164	-17601.	195.0828	7.425E-05	402.1832	8.091E+09	7.9171
32659.	0.000						
268.800	-0.000832	-16574.	227.9330	6.411E-05	378.7030	8.091E+09	5.7705
33281.	0.000						
273.600	-0.000548	-15413.	251.0732	5.463E-05	352.1850	8.091E+09	3.8713
33903.	0.000						

278.400	-0.000308	-14164.	265.9266	4.585E-05	323.6289	8.091E+09	2.3176
36138.	0.000						
283.200	-0.000108	-12860.	273.5008	3.784E-05	293.8527	8.091E+09	0.8383
37290.	0.000						
288.000	5.540E-05	-11538.	274.4478	3.060E-05	263.6352	8.091E+09	-0.4437
38442.	0.000						
292.800	0.000186	-10226.	269.7036	2.414E-05	233.6512	8.091E+09	-1.5331
39594.	0.000						
297.600	0.000287	-8948.7606	260.1734	1.846E-05	204.4744	8.091E+09	-2.4379
40746.	0.000						
302.400	0.000363	-7728.0125	246.7173	1.351E-05	176.5809	8.091E+09	-3.1689
41898.	0.000						
307.200	0.000417	-6580.2750	230.1386	9.266E-06	150.3557	8.091E+09	-3.7389
43050.	0.000						
312.000	0.000452	-5518.6821	211.1758	5.677E-06	126.0989	8.091E+09	-4.1622
44202.	0.000						
316.800	0.000471	-4552.9874	190.4969	2.689E-06	104.0333	8.091E+09	-4.4539
45354.	0.000						
321.600	0.000478	-3689.9117	168.6970	2.442E-07	84.3125	8.091E+09	-4.6293
46506.	0.000						
326.400	0.000474	-2933.4960	146.2982	-1.720E-06	67.0288	8.091E+09	-4.7035
47658.	0.000						
331.200	0.000461	-2285.4486	123.7521	-3.269E-06	52.2213	8.091E+09	-4.6907
48810.	0.000						
336.000	0.000442	-1745.4757	105.9654	-4.464E-06	39.8832	8.091E+09	-2.7204
29520.	0.000						
340.800	0.000418	-1268.1806	93.1159	-5.358E-06	28.9772	8.091E+09	-2.6336
30211.	0.000						
345.600	0.000391	-851.5633	80.7554	-5.987E-06	19.4578	8.091E+09	-2.5166
30902.	0.000						
350.400	0.000361	-492.9292	69.0135	-6.386E-06	11.2632	8.091E+09	-2.3758
31593.	0.000						
355.200	0.000330	-189.0334	57.9911	-6.588E-06	4.3193	8.091E+09	-2.2169
32284.	0.000						
360.000	0.000298	63.7851	47.7619	-6.625E-06	1.4575	8.091E+09	-2.0453
32976.	0.000						
364.800	0.000266	269.4807	38.3755	-6.526E-06	6.1575	8.091E+09	-1.8657
33667.	0.000						
369.600	0.000235	432.1900	29.8597	-6.318E-06	9.8753	8.091E+09	-1.6825
34358.	0.000						
374.400	0.000205	556.1335	22.2229	-6.025E-06	12.7074	8.091E+09	-1.4994
35049.	0.000						
379.200	0.000177	645.5299	15.4573	-5.669E-06	14.7500	8.091E+09	-1.3196
35740.	0.000						
384.000	0.000151	704.5236	9.5410	-5.268E-06	16.0980	8.091E+09	-1.1455
36432.	0.000						
388.800	0.000127	737.1238	4.4410	-4.840E-06	16.8429	8.091E+09	-0.9795
37123.	0.000						
393.600	0.000104	747.1569	0.1152	-4.400E-06	17.0721	8.091E+09	-0.8229
37814.	0.000						
398.400	8.440E-05	738.2296	-3.4849	-3.960E-06	16.8681	8.091E+09	-0.6771
38505.	0.000						
403.200	6.645E-05	713.7022	-6.4122	-3.529E-06	16.3077	8.091E+09	-0.5426
39196.	0.000						
408.000	5.053E-05	676.6728	-8.7221	-3.116E-06	15.4616	8.091E+09	-0.4199
39888.	0.000						
412.800	3.653E-05	629.9696	-10.4710	-2.729E-06	14.3945	8.091E+09	-0.3088
40579.	0.000						
417.600	2.433E-05	576.1509	-11.7143	-2.371E-06	13.1647	8.091E+09	-0.2092
41270.	0.000						
422.400	1.377E-05	517.5127	-12.5052	-2.047E-06	11.8249	8.091E+09	-0.1204
41961.	0.000						
427.200	4.681E-06	456.1014	-12.8938	-1.758E-06	10.4217	8.091E+09	-0.0416
42652.	0.000						
432.000	-3.108E-06	393.7319	-12.9263	-1.506E-06	8.9966	8.091E+09	0.0281
43344.	0.000						
436.800	-9.776E-06	332.0090	-12.6437	-1.291E-06	7.5862	8.091E+09	0.0897
44035.	0.000						
441.600	-1.550E-05	272.3523	-12.0819	-1.111E-06	6.2231	8.091E+09	0.1444
44726.	0.000						
446.400	-2.044E-05	216.0228	-11.2711	-9.664E-07	4.9360	8.091E+09	0.1934
45417.	0.000						
451.200	-2.478E-05	164.1501	-10.2356	-8.537E-07	3.7507	8.091E+09	0.2380
46108.	0.000						
456.000	-2.864E-05	117.7608	-8.9943	-7.700E-07	2.6908	8.091E+09	0.2792
46800.	0.000						
460.800	-3.217E-05	77.8049	-7.5603	-7.120E-07	1.7778	8.091E+09	0.3183
47491.	0.000						
465.600	-3.547E-05	45.1820	-5.9418	-6.756E-07	1.0324	8.091E+09	0.3561
48182.	0.000						

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   470.400  -3.865E-05      20.7635      -4.1426  -6.560E-07        0.4744   8.091E+09        0.3936
48873.       0.000
   475.200  -4.177E-05       5.4127      -2.1629  -6.482E-07        0.1237   8.091E+09        0.4313
49564.       0.000
   480.000  -4.488E-05        0.000         0.000  -6.466E-07         0.000   8.091E+09        0.4699
25128.       0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 3:

Pile-head deflection             =      0.4766037 inches
Computed slope at pile head      =     -0.0058012 radians
Maximum bending moment           =        429231. inch-lbs
Maximum shear force              =   8371.0000000 lbs
Depth of maximum bending moment  =     76.8000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =              9
Number of zero deflection points =              3


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 4
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       10715.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear        Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S        Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       0.6580  -5.458E-07       10715.   -0.007854   1.247E-08   8.091E+09         0.000
0.000      0.000
     4.800       0.6203       51432.       10715.   -0.007838   1175.1935   8.091E+09         0.000
0.000      0.000
     9.600       0.5827      102864.       10715.   -0.007793   2350.3871   8.091E+09         0.000
0.000      0.000
    14.400       0.5455      154296.       10679.   -0.007716   3525.5806   8.091E+09     -15.0146
132.1237      0.000
    19.200       0.5087      205382.       10527.   -0.007610   4692.8698   8.091E+09     -48.2980
455.7724      0.000
    24.000       0.4724      255355.       10214.   -0.007473   5834.7323   8.091E+09     -82.1568
834.7505      0.000
    28.800        0.4369      303436.   9745.8097   -0.007307   6933.3433   8.091E+09    -112.8907
1240.2371      0.000
    33.600       0.4023      348915.   9144.6564   -0.007114   7972.5228   8.091E+09    -137.5899
1641.7628      0.000
    38.400       0.3686      391224.   8445.5912   -0.006894   8939.2679   8.091E+09    -153.6873
2001.2435      0.000
    43.200       0.3361      429993.   7697.0383   -0.006651   9825.1041   8.091E+09    -158.2097
2259.5670      0.000
    48.000       0.3048      465116.   6907.3452   -0.006385       10628.   8.091E+09    -170.8291
2690.4500      0.000
    52.800       0.2748      496303.   6021.4789   -0.006100       11340.   8.091E+09    -198.2819
3463.5926      0.000
    57.600       0.2462      522922.   5016.0338   -0.005798       11948.   8.091E+09    -220.6536
4301.6818      0.000
    62.400       0.2191      544457.   3919.5977   -0.005481       12441.   8.091E+09    -236.1948
5173.7848      0.000
    67.200       0.1936      560550.   2766.9740   -0.005153       12808.   8.091E+09    -244.0651
6051.2937      0.000
    72.000       0.1697      571020.   1594.8321   -0.004818       13048.   8.091E+09    -244.3273
6912.4939      0.000
    76.800       0.1473      575861.    437.9052   -0.004477       13158.   8.091E+09    -237.7255
7744.1178      0.000
    81.600       0.1267      575224.   -673.5756   -0.004136       13144.   8.091E+09    -225.3915
8540.4708      0.000
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86.400	0.1076	569394.	-1715.1304	-0.003796	13010.	8.091E+09	-208.5897
9301.3793	0.000						
91.200	0.0902	558759.	-2668.2554	-0.003462	12767.	8.091E+09	-188.5457
10030.	0.000						
96.000	0.0744	543779.	-3520.0176	-0.003135	12425.	8.091E+09	-166.3552
10731.	0.000						
100.800	0.0601	524967.	-4262.3526	-0.002818	11995.	8.091E+09	-142.9510
11410.	0.000						
105.600	0.0474	502861.	-4891.2818	-0.002513	11490.	8.091E+09	-119.1028
12071.	0.000						
110.400	0.0360	478010.	-5406.1685	-0.002222	10922.	8.091E+09	-95.4333
12719.	0.000						
115.200	0.0260	450961.	-5809.0604	-0.001946	10304.	8.091E+09	-72.4383
13358.	0.000						
120.000	0.0173	422243.	-6104.1290	-0.001687	9648.0339	8.091E+09	-50.5069
13990.	0.000						
124.800	0.009832	392362.	-6297.1985	-0.001446	8965.2540	8.091E+09	-29.9387
14617.	0.000						
129.600	0.003451	361790.	-6395.3494	-0.001222	8266.7129	8.091E+09	-10.9575
15241.	0.000						
134.400	-0.001899	330966.	-6406.5827	-0.001016	7562.4032	8.091E+09	6.2770
15863.	0.000						
139.200	-0.006307	300287.	-6339.5323	-0.000829	6861.3980	8.091E+09	21.6607
16484.	0.000						
144.000	-0.009860	270107.	-6203.2170	-0.000660	6171.7961	8.091E+09	35.1374
17105.	0.000						
148.800	-0.0126	240736.	-6006.8250	-0.000509	5500.6923	8.091E+09	46.6926
17726.	0.000						
153.600	-0.0147	212441.	-5759.5269	-0.000374	4854.1700	8.091E+09	56.3483
18347.	0.000						
158.400	-0.0162	185445.	-5470.3138	-0.000256	4237.3123	8.091E+09	64.1572
18968.	0.000						
163.200	-0.0172	159926.	-5147.8600	-0.000154	3654.2302	8.091E+09	70.1986
19590.	0.000						
168.000	-0.0177	136025.	-4800.4074	-6.584E-05	3108.1043	8.091E+09	74.5734
20212.	0.000						
172.800	-0.0178	113842.	-4435.6717	8.273E-06	2601.2376	8.091E+09	77.3998
20834.	0.000						
177.600	-0.0176	93443.	-4060.7711	6.976E-05	2135.1182	8.091E+09	78.8087
21456.	0.000						
182.400	-0.0172	74859.	-3682.1692	0.000120	1710.4878	8.091E+09	78.9421
22078.	0.000						
187.200	-0.0165	58094.	-3305.6367	0.000159	1327.4166	8.091E+09	77.9465
22701.	0.000						
192.000	-0.0156	43125.	-2936.2352	0.000189	985.3804	8.091E+09	75.9708
23323.	0.000						
196.800	-0.0147	29906.	-2578.3136	0.000211	683.3392	8.091E+09	73.1632
23946.	0.000						
201.600	-0.0136	18373.	-2235.5177	0.000225	419.8149	8.091E+09	69.6684
24568.	0.000						
206.400	-0.0125	8445.1684	-1910.8124	0.000233	192.9676	8.091E+09	65.6255
25191.	0.000						
211.200	-0.0114	29.2748	-1606.5124	0.000236	0.6689	8.091E+09	61.1661
25813.	0.000						
216.000	-0.0102	-6977.3508	-1324.3227	0.000234	159.4287	8.091E+09	56.4129
26436.	0.000						
220.800	-0.009132	-12684.	-1065.3840	0.000228	289.8277	8.091E+09	51.4782
27059.	0.000						
225.600	-0.008057	-17205.	-830.3237	0.000219	393.1259	8.091E+09	46.4636
27681.	0.000						
230.400	-0.007031	-20655.	-619.3097	0.000208	471.9632	8.091E+09	41.4589
28303.	0.000						
235.200	-0.006064	-23150.	-432.1060	0.000195	528.9744	8.091E+09	36.5426
28926.	0.000						
240.000	-0.005163	-24804.	-268.1287	0.000180	566.7478	8.091E+09	31.7813
29548.	0.000						
244.800	-0.004332	-25724.	-126.5013	0.000165	587.7898	8.091E+09	27.2302
30170.	0.000						
249.600	-0.003575	-26018.	-6.1083	0.000150	594.4964	8.091E+09	22.9336
30793.	0.000						
254.400	-0.002892	-25783.	94.3536	0.000135	589.1297	8.091E+09	18.9256
31415.	0.000						
259.200	-0.002282	-25112.	176.3280	0.000120	573.7995	8.091E+09	15.2304
32037.	0.000						
264.000	-0.001744	-24090.	241.3541	0.000105	550.4513	8.091E+09	11.8638
32659.	0.000						
268.800	-0.001274	-22795.	291.0268	9.109E-05	520.8573	8.091E+09	8.8332
33281.	0.000						
273.600	-0.000869	-21296.	326.9610	7.801E-05	486.6131	8.091E+09	6.1394
33903.	0.000						

278.400	-0.000525	-19656.	351.1832	6.586E-05	449.1369	8.091E+09	3.9532
36138.	0.000						
283.200	-0.000237	-17925.	365.0887	5.471E-05	409.5794	8.091E+09	1.8407
37290.	0.000						
288.000	1.690E-07	-16151.	369.5031	4.461E-05	369.0529	8.091E+09	-0.001354
38442.	0.000						
292.800	0.000191	-14378.	365.7131	3.555E-05	328.5271	8.091E+09	-1.5778
39594.	0.000						
297.600	0.000341	-12641.	354.9699	2.754E-05	288.8320	8.091E+09	-2.8985
40746.	0.000						
302.400	0.000456	-10970.	338.4687	2.053E-05	250.6627	8.091E+09	-3.9770
41898.	0.000						
307.200	0.000539	-9391.3462	317.3313	1.449E-05	214.5872	8.091E+09	-4.8302
43050.	0.000						
312.000	0.000595	-7923.7999	292.5942	9.356E-06	181.0546	8.091E+09	-5.4769
44202.	0.000						
316.800	0.000628	-6582.4416	265.1999	5.053E-06	150.4053	8.091E+09	-5.9374
45354.	0.000						
321.600	0.000643	-5377.8810	235.9923	1.506E-06	122.8817	8.091E+09	-6.2324
46506.	0.000						
326.400	0.000643	-4316.9152	205.7165	-1.370E-06	98.6392	8.091E+09	-6.3825
47658.	0.000						
331.200	0.000630	-3403.0026	175.0207	-3.660E-06	77.7568	8.091E+09	-6.4074
48810.	0.000						
336.000	0.000608	-2636.7169	150.6734	-5.452E-06	60.2476	8.091E+09	-3.7373
29520.	0.000						
340.800	0.000578	-1956.5380	132.9764	-6.814E-06	44.7058	8.091E+09	-3.6365
30211.	0.000						
345.600	0.000542	-1360.1431	115.8702	-7.798E-06	31.0785	8.091E+09	-3.4911
30902.	0.000						
350.400	0.000503	-844.1843	99.5471	-8.452E-06	19.2892	8.091E+09	-3.3101
31593.	0.000						
355.200	0.000461	-404.4908	84.1590	-8.822E-06	9.2424	8.091E+09	-3.1016
32284.	0.000						
360.000	0.000418	-36.2582	69.8196	-8.953E-06	0.8285	8.091E+09	-2.8731
32976.	0.000						
364.800	0.000375	265.7775	56.6083	-8.885E-06	6.0729	8.091E+09	-2.6316
33667.	0.000						
369.600	0.000333	507.1816	44.5732	-8.656E-06	11.5888	8.091E+09	-2.3830
34358.	0.000						
374.400	0.000292	693.6804	33.7350	-8.299E-06	15.8502	8.091E+09	-2.1329
35049.	0.000						
379.200	0.000253	831.0375	24.0904	-7.847E-06	18.9888	8.091E+09	-1.8857
35740.	0.000						
384.000	0.000217	924.9485	15.6162	-7.326E-06	21.1346	8.091E+09	-1.6452
36432.	0.000						
388.800	0.000183	980.9530	8.2724	-6.761E-06	22.4142	8.091E+09	-1.4147
37123.	0.000						
393.600	0.000152	1004.3634	2.0059	-6.172E-06	22.9492	8.091E+09	-1.1964
37814.	0.000						
398.400	0.000124	1000.2097	-3.2463	-5.577E-06	22.8543	8.091E+09	-0.9920
38505.	0.000						
403.200	9.832E-05	973.1991	-7.5541	-4.992E-06	22.2371	8.091E+09	-0.8029
39196.	0.000						
408.000	7.574E-05	927.6904	-10.9916	-4.428E-06	21.1972	8.091E+09	-0.6294
39888.	0.000						
412.800	5.581E-05	867.6798	-13.6346	-3.896E-06	19.8260	8.091E+09	-0.4718
40579.	0.000						
417.600	3.835E-05	796.7987	-15.5582	-3.402E-06	18.2064	8.091E+09	-0.3297
41270.	0.000						
422.400	2.315E-05	718.3214	-16.8352	-2.952E-06	16.4133	8.091E+09	-0.2024
41961.	0.000						
427.200	1.000E-05	635.1812	-17.5342	-2.551E-06	14.5135	8.091E+09	-0.0889
42652.	0.000						
432.000	-1.338E-06	549.9932	-17.7185	-2.199E-06	12.5670	8.091E+09	0.0121
43344.	0.000						
436.800	-1.111E-05	465.0836	-17.4448	-1.898E-06	10.6269	8.091E+09	0.1019
44035.	0.000						
441.600	-1.956E-05	382.5228	-16.7627	-1.647E-06	8.7404	8.091E+09	0.1823
44726.	0.000						
446.400	-2.692E-05	304.1616	-15.7139	-1.443E-06	6.9499	8.091E+09	0.2547
45417.	0.000						
451.200	-3.342E-05	231.6696	-14.3321	-1.284E-06	5.2935	8.091E+09	0.3210
46108.	0.000						
456.000	-3.925E-05	166.5735	-12.6432	-1.166E-06	3.8061	8.091E+09	0.3827
46800.	0.000						
460.800	-4.461E-05	110.2947	-10.6654	-1.084E-06	2.5202	8.091E+09	0.4414
47491.	0.000						
465.600	-4.966E-05	64.1854	-8.4098	-1.032E-06	1.4666	8.091E+09	0.4985
48182.	0.000						

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   470.400  -5.452E-05      29.5607      -5.8812  -1.004E-06       0.6754   8.091E+09       0.5551
48873.       0.000
   475.200  -5.930E-05       7.7263      -3.0792  -9.934E-07       0.1765   8.091E+09       0.6123
49564.       0.000
   480.000  -6.406E-05        0.000         0.000  -9.911E-07        0.000   8.091E+09       0.6707
25128.       0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 4:

Pile-head deflection             =      0.6579801 inches
Computed slope at pile head      =     -0.0078537 radians
Maximum bending moment           =        575861. inch-lbs
Maximum shear force              =         10715. lbs
Depth of maximum bending moment  =     76.8000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             11
Number of zero deflection points =              3


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 5
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       12777.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       0.8436   3.899E-08       12777.   -0.009879   8.909E-10   8.091E+09         0.000
0.000       0.000
     4.800       0.7962       61330.       12777.   -0.009861   1401.3484   8.091E+09         0.000
0.000       0.000
     9.600       0.7489      122659.       12777.   -0.009806   2802.6968   8.091E+09         0.000
0.000       0.000
    14.400       0.7020      183989.       12740.   -0.009715   4204.0452   8.091E+09     -15.2342
104.1582       0.000
    19.200       0.6557      244967.       12585.   -0.009588   5597.3735   8.091E+09     -49.5942
363.0642       0.000
    24.000       0.6100      304803.       12261.   -0.009425   6964.5929   8.091E+09     -85.3644
671.7194       0.000
    28.800       0.5652      362673.       11772.   -0.009227   8286.8721   8.091E+09    -118.4144
1005.6532       0.000
    33.600       0.5214      417813.       11139.   -0.008996   9546.8118   8.091E+09    -145.1092
1335.8217       0.000
    38.400       0.4788      469611.       10402.   -0.008732       10730.   8.091E+09    -162.0551
1624.4912       0.000
    43.200       0.4376      517675.   9615.9806   -0.008440       11829.   8.091E+09    -165.5486
1815.9343       0.000
    48.000       0.3978      561924.   8787.1956   -0.008119       12840.   8.091E+09    -179.7786
2169.1841       0.000
    52.800       0.3596      602032.   7840.6573   -0.007774       13756.   8.091E+09    -214.6124
2864.3318       0.000
    57.600       0.3232      637195.   6733.8051   -0.007406       14560.   8.091E+09    -246.5760
3662.1816       0.000
    62.400       0.2885      666676.   5487.2535   -0.007020       15233.   8.091E+09    -272.8205
4538.4662       0.000
    67.200       0.2558      689872.   4134.0517   -0.006617       15763.   8.091E+09    -291.0136
5460.8396       0.000
    72.000       0.2250      706363.   2716.0218   -0.006203       16140.   8.091E+09    -299.8322
6395.9643       0.000
    76.800       0.1962      715946.   1278.5516   -0.005781       16359.   8.091E+09    -299.1137
7316.0252       0.000
    81.600       0.1695      718637.   -134.5353   -0.005356       16420.   8.091E+09    -289.6725
8202.3339       0.000
```

86.400	0.1448	714655.	-1484.7981	-0.004931	16329.	8.091E+09	-272.9370	9045.6416	0.000
91.200	0.1222	704383.	-2741.2470	-0.004510	16095.	8.091E+09	-250.5833	9844.2664	0.000
96.000	0.1015	688339.	-3880.8807	-0.004097	15728.	8.091E+09	-224.2641	10601.	0.000
100.800	0.0829	667127.	-4888.2080	-0.003694	15243.	8.091E+09	-195.4556	11323.	0.000
105.600	0.0661	641412.	-5754.2570	-0.003306	14656.	8.091E+09	-165.3981	12016.	0.000
110.400	0.0511	611886.	-6475.4351	-0.002935	13981.	8.091E+09	-135.0927	12686.	0.000
115.200	0.0379	579248.	-7052.4405	-0.002581	13235.	8.091E+09	-105.3261	13339.	0.000
120.000	0.0263	544183.	-7489.3134	-0.002248	12434.	8.091E+09	-76.7042	13980.	0.000
124.800	0.0163	507350.	-7792.6469	-0.001936	11593.	8.091E+09	-49.6847	14613.	0.000
129.600	0.007750	469373.	-7970.9423	-0.001646	10725.	8.091E+09	-24.6050	15240.	0.000
134.400	0.000516	430829.	-8034.0840	-0.001379	9844.2160	8.091E+09	-1.7041	15863.	0.000
139.200	-0.005492	392246.	-7992.9099	-0.001135	8962.6098	8.091E+09	18.8600	16484.	0.000
144.000	-0.0104	354097.	-7858.8535	-0.000914	8090.9325	8.091E+09	36.9969	17105.	0.000
148.800	-0.0143	316801.	-7643.6442	-0.000715	7238.7323	8.091E+09	52.6737	17725.	0.000
153.600	-0.0172	280718.	-7359.0523	-0.000538	6414.2622	8.091E+09	65.9063	18345.	0.000
158.400	-0.0194	246154.	-7016.6723	-0.000381	5624.4886	8.091E+09	76.7521	18966.	0.000
163.200	-0.0209	213358.	-6627.7391	-0.000245	4875.1212	8.091E+09	85.3034	19587.	0.000
168.000	-0.0218	182528.	-6202.9743	-0.000128	4170.6619	8.091E+09	91.6819	20209.	0.000
172.800	-0.0221	153810.	-5752.4601	-2.776E-05	3514.4687	8.091E+09	96.0323	20831.	0.000
177.600	-0.0220	127304.	-5285.5438	5.562E-05	2908.8319	8.091E+09	98.5162	21453.	0.000
182.400	-0.0216	103068.	-4810.7562	0.000124	2355.0591	8.091E+09	99.3120	22075.	0.000
187.200	-0.0209	81121.	-4335.7555	0.000179	1853.5693	8.091E+09	98.6049	22697.	0.000
192.000	-0.0199	61445.	-3867.3020	0.000221	1403.9902	8.091E+09	96.5840	23320.	0.000
196.800	-0.0187	43995.	-3411.2478	0.000252	1005.2579	8.091E+09	93.4386	23943.	0.000
201.600	-0.0175	28697.	-2972.5447	0.000274	655.7165	8.091E+09	89.3544	24566.	0.000
206.400	-0.0161	15458.	-2555.2673	0.000287	353.2158	8.091E+09	84.5112	25189.	0.000
211.200	-0.0147	4166.6729	-2162.6494	0.000293	95.2062	8.091E+09	79.0796	25811.	0.000
216.000	-0.0133	-5303.0474	-1797.1314	0.000292	121.1718	8.091E+09	73.2196	26434.	0.000
220.800	-0.0119	-13086.	-1460.4163	0.000287	299.0032	8.091E+09	67.0784	27057.	0.000
225.600	-0.0105	-19323.	-1153.5324	0.000277	441.5212	8.091E+09	60.7899	27680.	0.000
230.400	-0.009238	-24160.	-876.9012	0.000264	552.0362	8.091E+09	54.4732	28303.	0.000
235.200	-0.008004	-27741.	-630.4068	0.000249	633.8737	8.091E+09	48.2328	28925.	0.000
240.000	-0.006849	-30212.	-413.4679	0.000232	690.3189	8.091E+09	42.1584	29548.	0.000
244.800	-0.005779	-31711.	-225.1079	0.000213	724.5699	8.091E+09	36.3250	30170.	0.000
249.600	-0.004800	-32373.	-64.0237	0.000194	739.6974	8.091E+09	30.7934	30792.	0.000
254.400	-0.003913	-32325.	71.3475	0.000175	738.6138	8.091E+09	25.6113	31415.	0.000
259.200	-0.003118	-31688.	182.7669	0.000156	724.0470	8.091E+09	20.8135	32037.	0.000
264.000	-0.002414	-30571.	272.1359	0.000138	698.5230	8.091E+09	16.4236	32659.	0.000
268.800	-0.001796	-29075.	341.4434	0.000120	664.3527	8.091E+09	12.4546	33281.	0.000
273.600	-0.001262	-27293.	392.7190	0.000103	623.6257	8.091E+09	8.9103	33903.	0.000

278.400	-0.000804	-25305.	428.6395	8.771E-05	578.2079	8.091E+09	6.0566
36138.	0.000						
283.200	-0.000419	-23178.	450.9967	7.333E-05	529.6015	8.091E+09	3.2589
37290.	0.000						
288.000	-0.000101	-20976.	460.7498	6.023E-05	479.2796	8.091E+09	0.8049
38442.	0.000						
292.800	0.000159	-18755.	459.5387	4.845E-05	428.5339	8.091E+09	-1.3095
39594.	0.000						
297.600	0.000365	-16564.	448.9680	3.797E-05	378.4775	8.091E+09	-3.0950
40746.	0.000						
302.400	0.000523	-14445.	430.5780	2.877E-05	330.0506	8.091E+09	-4.5675
41898.	0.000						
307.200	0.000641	-12430.	405.8223	2.080E-05	284.0282	8.091E+09	-5.7473
43050.	0.000						
312.000	0.000723	-10549.	376.0504	1.399E-05	241.0315	8.091E+09	-6.6576
44202.	0.000						
316.800	0.000775	-8820.3251	342.4956	8.240E-06	201.5397	8.091E+09	-7.3235
45354.	0.000						
321.600	0.000802	-7260.7129	306.2687	3.470E-06	165.9034	8.091E+09	-7.7711
46506.	0.000						
326.400	0.000808	-5880.1459	268.3551	-4.281E-07	134.3582	8.091E+09	-8.0263
47658.	0.000						
331.200	0.000798	-4684.5042	229.6178	-3.562E-06	107.0384	8.091E+09	-8.1143
48810.	0.000						
336.000	0.000774	-3675.8150	198.7166	-6.042E-06	83.9904	8.091E+09	-4.7612
29520.	0.000						
340.800	0.000740	-2776.8244	176.1123	-7.956E-06	63.4489	8.091E+09	-4.6572
30211.	0.000						
345.600	0.000698	-1985.1366	154.1530	-9.368E-06	45.3593	8.091E+09	-4.4925
30902.	0.000						
350.400	0.000650	-1296.9558	133.1028	-1.034E-05	29.6347	8.091E+09	-4.2784
31593.	0.000						
355.200	0.000599	-707.3493	113.1730	-1.094E-05	16.1626	8.091E+09	-4.0257
32284.	0.000						
360.000	0.000545	-210.4948	94.5249	-1.121E-05	4.8097	8.091E+09	-3.7443
32976.	0.000						
364.800	0.000491	200.0902	77.2745	-1.121E-05	4.5720	8.091E+09	-3.4434
33667.	0.000						
369.600	0.000437	531.3403	61.4964	-1.099E-05	12.1408	8.091E+09	-3.1309
34358.	0.000						
374.400	0.000385	790.4552	47.2286	-1.060E-05	18.0615	8.091E+09	-2.8140
35049.	0.000						
379.200	0.000336	984.7349	34.4775	-1.008E-05	22.5007	8.091E+09	-2.4990
35740.	0.000						
384.000	0.000289	1121.4387	23.2220	-9.451E-06	25.6243	8.091E+09	-2.1908
36432.	0.000						
388.800	0.000245	1207.6657	13.4186	-8.761E-06	27.5945	8.091E+09	-1.8939
37123.	0.000						
393.600	0.000205	1250.2577	5.0059	-8.031E-06	28.5677	8.091E+09	-1.6114
37814.	0.000						
398.400	0.000168	1255.7225	-2.0917	-7.288E-06	28.6926	8.091E+09	-1.3459
38505.	0.000						
403.200	0.000135	1230.1776	-7.9594	-6.551E-06	28.1089	8.091E+09	-1.0990
39196.	0.000						
408.000	0.000105	1179.3119	-12.6890	-5.836E-06	26.9466	8.091E+09	-0.8716
39888.	0.000						
412.800	7.856E-05	1108.3636	-16.3748	-5.157E-06	25.3255	8.091E+09	-0.6641
40579.	0.000						
417.600	5.538E-05	1022.1140	-19.1114	-4.525E-06	23.3548	8.091E+09	-0.4762
41270.	0.000						
422.400	3.511E-05	924.8938	-20.9909	-3.948E-06	21.1333	8.091E+09	-0.3070
41961.	0.000						
427.200	1.748E-05	820.6013	-22.1004	-3.430E-06	18.7503	8.091E+09	-0.1553
42652.	0.000						
432.000	2.184E-06	712.7301	-22.5205	-2.975E-06	16.2855	8.091E+09	-0.0197
43344.	0.000						
436.800	-1.108E-05	604.4047	-22.3238	-2.585E-06	13.8103	8.091E+09	0.1017
44035.	0.000						
441.600	-2.263E-05	498.4218	-21.5737	-2.258E-06	11.3887	8.091E+09	0.2109
44726.	0.000						
446.400	-3.276E-05	397.2971	-20.3238	-1.992E-06	9.0780	8.091E+09	0.3099
45417.	0.000						
451.200	-4.175E-05	303.3131	-18.6175	-1.784E-06	6.9305	8.091E+09	0.4011
46108.	0.000						
456.000	-4.988E-05	218.5694	-16.4877	-1.629E-06	4.9942	8.091E+09	0.4863
46800.	0.000						
460.800	-5.739E-05	145.0310	-13.9577	-1.521E-06	3.3139	8.091E+09	0.5678
47491.	0.000						
465.600	-6.449E-05	84.5753	-11.0414	-1.453E-06	1.9325	8.091E+09	0.6473
48182.	0.000						

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   470.400  -7.134E-05      39.0336      -7.7445  -1.417E-06        0.8919   8.091E+09        0.7264
48873.       0.000
   475.200  -7.809E-05      10.2281      -4.0660  -1.402E-06        0.2337   8.091E+09        0.8063
49564.       0.000
   480.000  -8.480E-05        0.000        0.000  -1.399E-06         0.000   8.091E+09        0.8879
25128.       0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 5:

Pile-head deflection             =      0.8436084 inches
Computed slope at pile head      =     -0.0098792 radians
Maximum bending moment           =        718637. inch-lbs
Maximum shear force              =         12777. lbs
Depth of maximum bending moment  =     81.6000000 inches below pile head
Depth of maximum shear force     =       0.000000 inches below pile head
Number of iterations             =             13
Number of zero deflection points =              3


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 6
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       19776.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear        Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S        Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00      1.6529   3.119E-07       19776.      -0.0181   7.127E-09   8.091E+09        0.000
0.000      0.000
     4.800      1.5658       94925.       19776.      -0.0181   2168.9806   8.091E+09        0.000
0.000      0.000
     9.600      1.4790      189850.       19776.      -0.0180   4337.9613   8.091E+09        0.000
0.000      0.000
    14.400      1.3927      284774.       19739.      -0.0179   6506.9419   8.091E+09     -15.3142
52.7810      0.000
    19.200      1.3072      379346.       19582.      -0.0177   8667.8604   8.091E+09     -50.2130
184.3755      0.000
    24.000      1.2229      472761.       19252.      -0.0174       10802.   8.091E+09     -87.2014
342.2868      0.000
    28.800      1.1398      564167.       18750.      -0.0171       12891.   8.091E+09   -121.9596
513.5967      0.000
    33.600      1.0584      652763.       18097.      -0.0168       14915.   8.091E+09   -150.1876
681.1314      0.000
    38.400      0.9788      737899.       17334.      -0.0164       16861.   8.091E+09   -167.5985
821.8839      0.000
    43.200      0.9013      819173.       16524.      -0.0159       18718.   8.091E+09   -169.8829
904.6900      0.000
    48.000      0.8262      896533.       15672.      -0.0154       20485.   8.091E+09   -185.3518
1076.8341      0.000
    52.800      0.7536      969623.       14680.      -0.0148       22155.   8.091E+09   -228.0925
1452.7735      0.000
    57.600      0.6838     1037457.       13473.      -0.0142       23705.   8.091E+09   -274.4793
1926.7344      0.000
    62.400      0.6169     1098968.       12038.      -0.0136       25111.   8.091E+09   -323.4476
2516.5687      0.000
    67.200      0.5532     1153026.       10367.      -0.0129       26346.   8.091E+09   -372.9636
3236.1789      0.000
    72.000      0.4927     1198491.   8464.3284       -0.0122       27385.   8.091E+09   -419.8121
4089.6204      0.000
    76.800      0.4357     1234283.   6353.2901       -0.0115       28203.   8.091E+09   -459.7872
5065.4642      0.000
    81.600      0.3822     1259482.   4077.5842       -0.0108       28778.   8.091E+09   -488.4236
6134.6506      0.000
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86.400	0.3322	1273428.	1700.3418	-0.0100	29097.	8.091E+09	-502.0940
7254.3777	0.000						
91.200	0.2859	1275805.	-702.2544	-0.009271	29151.	8.091E+09	-498.9877
8377.4232	0.000						
96.000	0.2432	1266686.	-3050.6064	-0.008517	28943.	8.091E+09	-479.4923
9462.8364	0.000						
100.800	0.2041	1246520.	-5271.4399	-0.007771	28482.	8.091E+09	-445.8550
10483.	0.000						
105.600	0.1686	1216080.	-7304.8606	-0.007041	27787.	8.091E+09	-401.4036
11427.	0.000						
110.400	0.1366	1176393.	-9107.5950	-0.006331	26880.	8.091E+09	-349.7357
12293.	0.000						
115.200	0.1078	1128648.	-10653.	-0.005647	25789.	8.091E+09	-294.1445
13092.	0.000						
120.000	0.0823	1074125.	-11928.	-0.004994	24543.	8.091E+09	-237.3403
13835.	0.000						
124.800	0.0599	1014134.	-12933.	-0.004374	23172.	8.091E+09	-181.3940
14535.	0.000						
129.600	0.0403	949964.	-13676.	-0.003792	21706.	8.091E+09	-127.8036
15204.	0.000						
134.400	0.0235	882849.	-14168.	-0.003248	20173.	8.091E+09	-77.6041
15851.	0.000						
139.200	0.009166	813947.	-14430.	-0.002745	18598.	8.091E+09	-31.4775
16483.	0.000						
144.000	-0.002850	744319.	-14481.	-0.002283	17007.	8.091E+09	10.1565
17107.	0.000						
148.800	-0.0127	674925.	-14344.	-0.001862	15422.	8.091E+09	47.0712
17726.	0.000						
153.600	-0.0207	606615.	-14041.	-0.001481	13861.	8.091E+09	79.1840
18343.	0.000						
158.400	-0.0270	540130.	-13595.	-0.001141	12342.	8.091E+09	106.5216
18959.	0.000						
163.200	-0.0317	476099.	-13030.	-0.000840	10879.	8.091E+09	129.1957
19577.	0.000						
168.000	-0.0350	415045.	-12366.	-0.000576	9483.5623	8.091E+09	147.3861
20195.	0.000						
172.800	-0.0372	357387.	-11625.	-0.000346	8166.1001	8.091E+09	161.3253
20815.	0.000						
177.600	-0.0384	303446.	-10827.	-0.000150	6933.5678	8.091E+09	171.2810
21434.	0.000						
182.400	-0.0386	253450.	-9989.4681	1.481E-05	5791.2067	8.091E+09	177.5738
22055.	0.000						
187.200	-0.0382	207547.	-9129.9941	0.000152	4742.3296	8.091E+09	180.5404
22677.	0.000						
192.000	-0.0372	165803.	-8263.4169	0.000262	3788.4983	8.091E+09	180.5334
23300.	0.000						
196.800	-0.0357	128218.	-7403.1446	0.000350	2929.7092	8.091E+09	177.9134
23924.	0.000						
201.600	-0.0338	94732.	-6560.8529	0.000416	2164.5827	8.091E+09	173.0415
24548.	0.000						
206.400	-0.0317	65234.	-5746.4965	0.000463	1490.5543	8.091E+09	166.2736
25172.	0.000						
211.200	-0.0294	39566.	-4968.3493	0.000494	904.0609	8.091E+09	157.9544
25797.	0.000						
216.000	-0.0270	17538.	-4233.0691	0.000511	400.7229	8.091E+09	148.4124
26422.	0.000						
220.800	-0.0245	-1071.5021	-3545.7836	0.000516	24.4832	8.091E+09	137.9565
27046.	0.000						
225.600	-0.0220	-16502.	-2910.1939	0.000511	377.0619	8.091E+09	126.8725
27671.	0.000						
230.400	-0.0196	-29009.	-2328.6910	0.000497	662.8484	8.091E+09	115.4204
28295.	0.000						
235.200	-0.0172	-38857.	-1802.4817	0.000477	887.8716	8.091E+09	103.8335
28919.	0.000						
240.000	-0.0150	-46313.	-1331.7210	0.000452	1058.2314	8.091E+09	92.3168
29543.	0.000						
244.800	-0.0129	-51642.	-915.6469	0.000423	1179.9910	8.091E+09	81.0474
30167.	0.000						
249.600	-0.0109	-55103.	-552.7150	0.000391	1259.0830	8.091E+09	70.1743
30790.	0.000						
254.400	-0.009141	-56948.	-240.7297	0.000358	1301.2317	8.091E+09	59.8196
31413.	0.000						
259.200	-0.007504	-57414.	23.0294	0.000324	1311.8883	8.091E+09	50.0800
32036.	0.000						
264.000	-0.006030	-56727.	241.6877	0.000290	1296.1801	8.091E+09	41.0277
32658.	0.000						
268.800	-0.004718	-55094.	418.6651	0.000257	1258.8729	8.091E+09	32.7129
33281.	0.000						
273.600	-0.003563	-52708.	557.5745	0.000225	1204.3439	8.091E+09	25.1660
33903.	0.000						

278.400	-0.002558	-49741.	664.1932	0.000195	1136.5662	8.091E+09	19.2585
36138.	0.000						
283.200	-0.001695	-46332.	742.0096	0.000166	1058.6499	8.091E+09	13.1650
37290.	0.000						
288.000	-0.000963	-42618.	792.1188	0.000140	973.8028	8.091E+09	7.7138
38442.	0.000						
292.800	-0.000353	-38727.	817.6219	0.000116	884.8948	8.091E+09	2.9125
39594.	0.000						
297.600	0.000147	-34769.	821.6227	9.381E-05	794.4535	8.091E+09	-1.2455
40746.	0.000						
302.400	0.000548	-30840.	807.1636	7.435E-05	704.6679	8.091E+09	-4.7791
41898.	0.000						
307.200	0.000860	-27020.	777.1715	5.719E-05	617.3983	8.091E+09	-7.7176
43050.	0.000						
312.000	0.001097	-23379.	734.4149	4.224E-05	534.1916	8.091E+09	-10.0977
44202.	0.000						
316.800	0.001266	-19970.	681.4717	2.938E-05	456.3008	8.091E+09	-11.9620
45354.	0.000						
321.600	0.001379	-16837.	620.7067	1.846E-05	384.7074	8.091E+09	-13.3567
46506.	0.000						
326.400	0.001443	-14011.	554.2598	9.313E-06	320.1458	8.091E+09	-14.3295
47658.	0.000						
331.200	0.001468	-11516.	484.0429	1.741E-06	263.1279	8.091E+09	-14.9275
48810.	0.000						
336.000	0.001460	-9364.2740	426.6683	-4.453E-06	213.9686	8.091E+09	-8.9785
29520.	0.000						
340.800	0.001425	-7419.6988	383.5911	-9.431E-06	169.5361	8.091E+09	-8.9703
30211.	0.000						
345.600	0.001369	-5681.7996	340.9037	-1.332E-05	129.8261	8.091E+09	-8.8161
30902.	0.000						
350.400	0.001297	-4147.0228	299.2509	-1.623E-05	94.7572	8.091E+09	-8.5393
31593.	0.000						
355.200	0.001214	-2808.9911	259.1671	-1.830E-05	64.1839	8.091E+09	-8.1623
32284.	0.000						
360.000	0.001122	-1659.0189	221.0826	-1.962E-05	37.9077	8.091E+09	-7.7062
32976.	0.000						
364.800	0.001025	-686.5985	185.3301	-2.032E-05	15.6884	8.091E+09	-7.1906
33667.	0.000						
369.600	0.000927	120.1503	152.1531	-2.049E-05	2.7454	8.091E+09	-6.6332
34358.	0.000						
374.400	0.000829	774.0713	121.7139	-2.022E-05	17.6871	8.091E+09	-6.0498
35049.	0.000						
379.200	0.000733	1288.6040	94.1031	-1.961E-05	29.4439	8.091E+09	-5.4547
35740.	0.000						
384.000	0.000640	1677.4611	69.3486	-1.873E-05	38.3291	8.091E+09	-4.8597
36432.	0.000						
388.800	0.000553	1954.3504	47.4250	-1.765E-05	44.6559	8.091E+09	-4.2751
37123.	0.000						
393.600	0.000471	2132.7411	28.2627	-1.644E-05	48.7320	8.091E+09	-3.7092
37814.	0.000						
398.400	0.000395	2225.6725	11.7567	-1.515E-05	50.8554	8.091E+09	-3.1683
38505.	0.000						
403.200	0.000325	2245.6057	-2.2250	-1.382E-05	51.3109	8.091E+09	-2.6574
39196.	0.000						
408.000	0.000262	2204.3123	-13.8338	-1.250E-05	50.3674	8.091E+09	-2.1796
39888.	0.000						
412.800	0.000205	2112.8013	-23.2327	-1.122E-05	48.2764	8.091E+09	-1.7366
40579.	0.000						
417.600	0.000155	1981.2780	-30.5904	-1.001E-05	45.2711	8.091E+09	-1.3291
41270.	0.000						
422.400	0.000109	1819.1330	-36.0750	-8.878E-06	41.5662	8.091E+09	-0.9562
41961.	0.000						
427.200	6.935E-05	1634.9582	-39.8488	-7.853E-06	37.3579	8.091E+09	-0.6163
42652.	0.000						
432.000	3.399E-05	1436.5846	-42.0644	-6.942E-06	32.8252	8.091E+09	-0.3069
43344.	0.000						
436.800	2.709E-06	1231.1404	-42.8605	-6.151E-06	28.1309	8.091E+09	-0.0248
44035.	0.000						
441.600	-2.506E-05	1025.1236	-42.3597	-5.482E-06	23.4235	8.091E+09	0.2335
44726.	0.000						
446.400	-4.991E-05	824.4873	-40.6658	-4.933E-06	18.8391	8.091E+09	0.4723
45417.	0.000						
451.200	-7.242E-05	634.7323	-37.8627	-4.500E-06	14.5033	8.091E+09	0.6956
46108.	0.000						
456.000	-9.311E-05	461.0049	-34.0144	-4.175E-06	10.5337	8.091E+09	0.9079
46800.	0.000						
460.800	-0.000112	308.1944	-29.1642	-3.947E-06	7.0421	8.091E+09	1.1130
47491.	0.000						
465.600	-0.000131	181.0286	-23.3369	-3.802E-06	4.1364	8.091E+09	1.3150
48182.	0.000						

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   470.400   -0.000149      84.1604     -16.5399  -3.723E-06        1.9230   8.091E+09        1.5170
48873.      0.000
   475.200   -0.000167      22.2451      -8.7667  -3.691E-06        0.5083   8.091E+09        1.7218
49564.      0.000
   480.000   -0.000184         0.000         0.000  -3.685E-06         0.000   8.091E+09        1.9310
25128.      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 6:

Pile-head deflection             =      1.6528741 inches
Computed slope at pile head      =     -0.0181427 radians
Maximum bending moment           =       1275805. inch-lbs
Maximum shear force              =         19776. lbs
Depth of maximum bending moment  =     91.2000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =              17
Number of zero deflection points =               3


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 7
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       24349.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear        Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S        Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       2.3228  -2.183E-06       24349.      -0.0245   4.989E-08   8.091E+09         0.000
0.000      0.000
     4.800       2.2050      116875.       24349.      -0.0245   2670.5355   8.091E+09         0.000
0.000      0.000
     9.600       2.0876      233750.       24349.      -0.0244   5341.0710   8.091E+09         0.000
0.000      0.000
    14.400       1.9708      350626.       24312.      -0.0242   8011.6065   8.091E+09     -15.3144
37.2996      0.000
    19.200       1.8550      467148.       24155.      -0.0240       10674.   8.091E+09     -50.2170
129.9426      0.000
    24.000       1.7405      582513.       23825.      -0.0237       13310.   8.091E+09     -87.2207
240.5369      0.000
    28.800       1.6277      695869.       23323.      -0.0233       15900.   8.091E+09    -122.0090
359.7949      0.000
    33.600       1.5169      806414.       22670.      -0.0228       18426.   8.091E+09    -150.2664
475.4979      0.000
    38.400       1.4084      913496.       21906.      -0.0223       20873.   8.091E+09    -167.6777
571.4805      0.000
    43.200       1.3024     1016716.       21096.      -0.0218       23231.   8.091E+09    -169.9266
626.2462      0.000
    48.000       1.1994     1116020.       20243.      -0.0211       25500.   8.091E+09    -185.4144
742.0233      0.000
    52.800       1.0996     1211052.       19250.      -0.0204       27672.   8.091E+09    -228.3989
997.0518      0.000
    57.600       1.0032     1300822.       18041.      -0.0197       29723.   8.091E+09    -275.6332
1318.8816      0.000
    62.400       0.9105     1384241.       16594.      -0.0189       31629.   8.091E+09    -326.9602
1723.7672      0.000
    67.200       0.8217     1460127.       14893.      -0.0181       33363.   8.091E+09    -381.9084
2230.9493      0.000
    72.000       0.7371     1527214.       12922.      -0.0172       34896.   8.091E+09    -439.3402
2861.0045      0.000
    76.800       0.6568     1584179.       10675.      -0.0162       36198.   8.091E+09    -496.9926
3631.8569      0.000
    81.600       0.5811     1629693.   8159.3837       -0.0153       37238.   8.091E+09    -551.1138
4552.2726      0.000
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86.400	0.5100	1662509.	5405.0269	-0.0143	37987.	8.091E+09	-596.5349
5614.3876	0.000						
91.200	0.4436	1681581.	2467.4217	-0.0133	38423.	8.091E+09	-627.4672
6788.9285	0.000						
96.000	0.3821	1686196.	-571.9680	-0.0123	38529.	8.091E+09	-638.9452
8027.2881	0.000						
100.800	0.3253	1676090.	-3613.4157	-0.0113	38298.	8.091E+09	-628.3247
9271.6276	0.000						
105.600	0.2733	1651508.	-6551.9151	-0.0103	37736.	8.091E+09	-596.0501
10469.	0.000						
110.400	0.2260	1613192.	-9291.2037	-0.009375	36861.	8.091E+09	-545.3202
11583.	0.000						
115.200	0.1833	1562312.	-11754.	-0.008434	35698.	8.091E+09	-480.9660
12596.	0.000						
120.000	0.1450	1500351.	-13888.	-0.007525	34282.	8.091E+09	-408.1906
13510.	0.000						
124.800	0.1110	1428985.	-15664.	-0.006656	32652.	8.091E+09	-331.6629
14337.	0.000						
129.600	0.0811	1349977.	-17072.	-0.005832	30846.	8.091E+09	-255.0942
15093.	0.000						
134.400	0.0551	1265092.	-18119.	-0.005056	28907.	8.091E+09	-181.1848
15796.	0.000						
139.200	0.0326	1176033.	-18822.	-0.004332	26872.	8.091E+09	-111.7644
16462.	0.000						
144.000	0.0135	1084398.	-19206.	-0.003662	24778.	8.091E+09	-47.9901
17103.	0.000						
148.800	-0.002563	991658.	-19298.	-0.003046	22659.	8.091E+09	9.4675
17729.	0.000						
153.600	-0.0158	899136.	-19131.	-0.002485	20545.	8.091E+09	60.2789
18346.	0.000						
158.400	-0.0264	808003.	-18736.	-0.001978	18462.	8.091E+09	104.3512
18960.	0.000						
163.200	-0.0348	719274.	-18145.	-0.001525	16435.	8.091E+09	141.7576
19573.	0.000						
168.000	-0.0411	633811.	-17390.	-0.001124	14482.	8.091E+09	172.6908
20187.	0.000						
172.800	-0.0456	552327.	-16502.	-0.000772	12620.	8.091E+09	197.4305
20802.	0.000						
177.600	-0.0485	475392.	-15509.	-0.000467	10862.	8.091E+09	216.3072
21418.	0.000						
182.400	-0.0500	403440.	-14439.	-0.000207	9218.3917	8.091E+09	229.7400
22036.	0.000						
187.200	-0.0505	336782.	-13316.	1.283E-05	7695.2847	8.091E+09	238.1755
22656.	0.000						
192.000	-0.0499	275611.	-12163.	0.000194	6297.5655	8.091E+09	242.0882
23278.	0.000						
196.800	-0.0486	220018.	-11001.	0.000342	5027.2941	8.091E+09	241.9695
23901.	0.000						
201.600	-0.0466	170000.	-9848.4696	0.000457	3884.4079	8.091E+09	238.3180
24526.	0.000						
206.400	-0.0442	125473.	-8720.5929	0.000545	2866.9847	8.091E+09	231.6306
25152.	0.000						
211.200	-0.0414	86282.	-7630.9320	0.000608	1971.5037	8.091E+09	222.3947
25778.	0.000						
216.000	-0.0384	52216.	-6590.5907	0.000649	1193.1028	8.091E+09	211.0808
26405.	0.000						
220.800	-0.0352	23013.	-5608.4693	0.000671	525.8257	8.091E+09	198.1364
27032.	0.000						
225.600	-0.0319	-1625.5127	-4691.3878	0.000677	37.1421	8.091E+09	183.9809
27658.	0.000						
230.400	-0.0287	-22025.	-3844.2304	0.000670	503.2529	8.091E+09	169.0014
28284.	0.000						
235.200	-0.0255	-38530.	-3070.1081	0.000652	880.3926	8.091E+09	153.5496
28910.	0.000						
240.000	-0.0224	-51498.	-2370.5339	0.000626	1176.6960	8.091E+09	137.9397
29536.	0.000						
244.800	-0.0195	-61287.	-1745.6048	0.000592	1400.3807	8.091E+09	122.4474
30161.	0.000						
249.600	-0.0167	-68256.	-1194.1874	0.000554	1559.6028	8.091E+09	107.3098
30785.	0.000						
254.400	-0.0142	-72751.	-714.1023	0.000512	1662.3315	8.091E+09	92.7257
31410.	0.000						
259.200	-0.0118	-75111.	-302.3037	0.000468	1716.2446	8.091E+09	78.8571
32033.	0.000						
264.000	-0.009676	-75654.	44.9483	0.000423	1728.6433	8.091E+09	65.8312
32657.	0.000						
268.800	-0.007751	-74679.	331.9257	0.000379	1706.3850	8.091E+09	53.7427
33280.	0.000						
273.600	-0.006039	-72467.	563.2832	0.000335	1655.8338	8.091E+09	42.6563
33902.	0.000						

278.400	-0.004534	-69272.	747.5779	0.000293	1582.8261	8.091E+09	34.1332
36138.	0.000						
283.200	-0.003225	-65290.	889.6335	0.000253	1491.8489	8.091E+09	25.0566
37290.	0.000						
288.000	-0.002103	-60731.	990.1875	0.000216	1387.6807	8.091E+09	16.8409
38442.	0.000						
292.800	-0.001153	-55785.	1053.4364	0.000181	1274.6465	8.091E+09	9.5128
39594.	0.000						
297.600	-0.000363	-50618.	1083.6532	0.000150	1156.6043	8.091E+09	3.0775
40746.	0.000						
302.400	0.000284	-45381.	1085.0888	0.000121	1036.9420	8.091E+09	-2.4793
41898.	0.000						
307.200	0.000801	-40202.	1061.8889	9.585E-05	918.5848	8.091E+09	-7.1874
43050.	0.000						
312.000	0.001204	-35187.	1018.0243	7.349E-05	804.0115	8.091E+09	-11.0896
44202.	0.000						
316.800	0.001507	-30429.	957.2373	5.403E-05	695.2763	8.091E+09	-14.2384
45354.	0.000						
321.600	0.001723	-25998.	883.0022	3.729E-05	594.0369	8.091E+09	-16.6929
46506.	0.000						
326.400	0.001865	-21952.	798.5006	2.307E-05	501.5855	8.091E+09	-18.5161
47658.	0.000						
331.200	0.001944	-18332.	706.6095	1.112E-05	418.8819	8.091E+09	-19.7718
48810.	0.000						
336.000	0.001972	-15168.	630.0561	1.182E-06	346.5873	8.091E+09	-12.1254
29520.	0.000						
340.800	0.001956	-12284.	571.4132	-6.961E-06	280.6761	8.091E+09	-12.3091
30211.	0.000						
345.600	0.001905	-9682.7228	512.4401	-1.348E-05	221.2450	8.091E+09	-12.2630
30902.	0.000						
350.400	0.001826	-7364.2801	454.1590	-1.853E-05	168.2698	8.091E+09	-12.0208
31593.	0.000						
355.200	0.001727	-5322.7964	397.4333	-2.230E-05	121.6230	8.091E+09	-11.6149
32284.	0.000						
360.000	0.001612	-3548.9201	342.9745	-2.493E-05	81.0909	8.091E+09	-11.0763
32976.	0.000						
364.800	0.001488	-2030.2407	291.3506	-2.658E-05	46.3899	8.091E+09	-10.4337
33667.	0.000						
369.600	0.001357	-751.9542	242.9964	-2.741E-05	17.1818	8.091E+09	-9.7139
34358.	0.000						
374.400	0.001224	302.5244	198.2251	-2.754E-05	6.9125	8.091E+09	-8.9408
35049.	0.000						
379.200	0.001093	1151.0063	157.2407	-2.711E-05	26.2999	8.091E+09	-8.1360
35740.	0.000						
384.000	0.000964	1812.0351	120.1509	-2.623E-05	41.4040	8.091E+09	-7.3181
36432.	0.000						
388.800	0.000841	2304.4553	86.9802	-2.501E-05	52.6556	8.091E+09	-6.5031
37123.	0.000						
393.600	0.000724	2647.0448	57.6827	-2.354E-05	60.4836	8.091E+09	-5.7042
37814.	0.000						
398.400	0.000615	2858.2088	32.1551	-2.191E-05	65.3085	8.091E+09	-4.9322
38505.	0.000						
403.200	0.000514	2955.7342	10.2492	-2.018E-05	67.5369	8.091E+09	-4.1952
39196.	0.000						
408.000	0.000421	2956.6012	-8.2171	-1.843E-05	67.5567	8.091E+09	-3.4991
39888.	0.000						
412.800	0.000337	2876.8496	-23.4487	-1.670E-05	65.7345	8.091E+09	-2.8474
40579.	0.000						
417.600	0.000261	2731.4941	-35.6629	-1.504E-05	62.4132	8.091E+09	-2.2419
41270.	0.000						
422.400	0.000192	2534.4857	-45.0813	-1.347E-05	57.9116	8.091E+09	-1.6825
41961.	0.000						
427.200	0.000131	2298.7136	-51.9212	-1.204E-05	52.5244	8.091E+09	-1.1675
42652.	0.000						
432.000	7.686E-05	2036.0425	-56.3889	-1.076E-05	46.5225	8.091E+09	-0.6941
43344.	0.000						
436.800	2.813E-05	1757.3803	-58.6741	-9.630E-06	40.1552	8.091E+09	-0.2581
44035.	0.000						
441.600	-1.559E-05	1472.7714	-58.9449	-8.672E-06	33.6520	8.091E+09	0.1453
44726.	0.000						
446.400	-5.512E-05	1191.5092	-57.3446	-7.882E-06	27.2253	8.091E+09	0.5215
45417.	0.000						
451.200	-9.125E-05	922.2628	-53.9892	-7.255E-06	21.0732	8.091E+09	0.8766
46108.	0.000						
456.000	-0.000125	673.2128	-48.9660	-6.782E-06	15.3825	8.091E+09	1.2164
46800.	0.000						
460.800	-0.000156	452.1895	-42.3338	-6.448E-06	10.3323	8.091E+09	1.5470
47491.	0.000						
465.600	-0.000187	266.8087	-34.1241	-6.234E-06	6.0964	8.091E+09	1.8737
48182.	0.000						

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   470.400   -0.000216     124.5980     -24.3439  -6.118E-06        2.8470   8.091E+09        2.2014
48873.      0.000
   475.200   -0.000245      33.1078     -12.9790  -6.072E-06        0.7565   8.091E+09        2.5340
49564.      0.000
   480.000   -0.000274         0.000         0.000  -6.062E-06         0.000   8.091E+09        2.8739
25128.      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 7:

Pile-head deflection             =      2.3228178 inches
Computed slope at pile head      =     -0.0245397 radians
Maximum bending moment           =       1686196. inch-lbs
Maximum shear force              =         24349. lbs
Depth of maximum bending moment  =     96.0000000 inches below pile head
Depth of maximum shear force     =       0.000000 inches below pile head
Number of iterations             =             19
Number of zero deflection points =              3


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                 Computed Values of Pile Loading and Deflection
                   for Lateral Loading for Load Case Number 8
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       27667.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       2.8780   3.743E-06       27667.      -0.0296   8.552E-08   8.091E+09        0.000
0.000      0.000
     4.800       2.7357      132802.       27667.      -0.0296   3034.4452   8.091E+09        0.000
0.000      0.000
     9.600       2.5939      265603.       27667.      -0.0295   6068.8903   8.091E+09        0.000
0.000      0.000
    14.400       2.4527      398405.       27630.      -0.0293   9103.3355   8.091E+09     -15.3144
29.9701      0.000
    19.200       2.3128      530854.       27473.      -0.0290       12130.   8.091E+09     -50.2170
104.2219      0.000
    24.000       2.1743      662145.       27143.      -0.0287       15130.   8.091E+09     -87.2211
192.5490      0.000
    28.800       2.0377      791427.       26641.      -0.0282       18084.   8.091E+09    -122.0103
287.4026      0.000
    33.600       1.9034      917899.       25987.      -0.0277       20973.   8.091E+09    -150.2686
378.9462      0.000
    38.400       1.7717     1040907.       25224.      -0.0271       23784.   8.091E+09    -167.6797
454.2888      0.000
    43.200       1.6430     1160053.       24414.      -0.0265       26507.   8.091E+09    -169.9274
496.4548      0.000
    48.000       1.5175     1275283.       23561.      -0.0258       29140.   8.091E+09    -185.4157
586.4841      0.000
    52.800       1.3957     1386242.       22568.      -0.0250       31675.   8.091E+09    -228.4096
785.5321      0.000
    57.600       1.2778     1491938.       21358.      -0.0241       34090.   8.091E+09    -275.6980
1035.6194      0.000
    62.400       1.1642     1591281.       19911.      -0.0232       36360.   8.091E+09    -327.2565
1349.2569      0.000
    67.200       1.0551     1683085.       18207.      -0.0222       38458.   8.091E+09    -382.9813
1742.2501      0.000
    72.000       0.9508     1766065.       16225.      -0.0212       40354.   8.091E+09    -442.5314
2233.9623      0.000
    76.800       0.8516     1838849.       13951.      -0.0201       42017.   8.091E+09    -505.0068
2846.5036      0.000
    81.600       0.7576     1899998.       11375.      -0.0190       43414.   8.091E+09    -568.4501
3601.7905      0.000
```

86.400	0.6689	1948049.	8500.3899	-0.0179	44512.	8.091E+09	-629.3117	4515.6366	0.000
91.200	0.5859	1981602.	5352.7151	-0.0167	45279.	8.091E+09	-682.2194	5589.3534	0.000
96.000	0.5084	1999435.	1986.1982	-0.0155	45686.	8.091E+09	-720.4960	6801.8348	0.000
100.800	0.4367	2000669.	-1513.2774	-0.0144	45714.	8.091E+09	-737.6188	8107.2493	0.000
105.600	0.3707	1984908.	-5033.6191	-0.0132	45354.	8.091E+09	-729.1902	9442.3568	0.000
110.400	0.3103	1952346.	-8450.2909	-0.0120	44610.	8.091E+09	-694.4230	10742.	0.000
115.200	0.2555	1903785.	-11644.	-0.0109	43500.	8.091E+09	-636.3035	11955.	0.000
120.000	0.2061	1840564.	-14516.	-0.009746	42056.	8.091E+09	-560.4462	13054.	0.000
124.800	0.1619	1764429.	-16997.	-0.008677	40316.	8.091E+09	-473.4123	14034.	0.000
129.600	0.1228	1677388.	-19049.	-0.007656	38327.	8.091E+09	-381.3146	14907.	0.000
134.400	0.0884	1581560.	-20658.	-0.006689	36138.	8.091E+09	-289.0722	15693.	0.000
139.200	0.0586	1479073.	-21832.	-0.005781	33796.	8.091E+09	-200.2410	16412.	0.000
144.000	0.0329	1371972.	-22594.	-0.004936	31349.	8.091E+09	-117.1750	17085.	0.000
148.800	0.0112	1262171.	-22974.	-0.004154	28840.	8.091E+09	-41.3028	17727.	0.000
153.600	-0.006959	1151419.	-23010.	-0.003438	26309.	8.091E+09	26.6040	18350.	0.000
158.400	-0.0218	1041280.	-22739.	-0.002788	23793.	8.091E+09	86.2200	18964.	0.000
163.200	-0.0337	933127.	-22202.	-0.002202	21321.	8.091E+09	137.5157	19574.	0.000
168.000	-0.0430	828143.	-21438.	-0.001680	18923.	8.091E+09	180.6592	20184.	0.000
172.800	-0.0498	727321.	-20486.	-0.001218	16619.	8.091E+09	215.9511	20795.	0.000
177.600	-0.0547	631474.	-19383.	-0.000815	14429.	8.091E+09	243.7623	21406.	0.000
182.400	-0.0577	541244.	-18163.	-0.000467	12367.	8.091E+09	264.5823	22020.	0.000
187.200	-0.0591	457109.	-16859.	-0.000171	10445.	8.091E+09	278.9413	22637.	0.000
192.000	-0.0593	379402.	-15499.	7.687E-05	8669.1317	8.091E+09	287.4082	23257.	0.000
196.800	-0.0584	308316.	-14112.	0.000281	7044.8642	8.091E+09	290.5766	23880.	0.000
201.600	-0.0566	243926.	-12721.	0.000445	5573.5712	8.091E+09	289.0536	24504.	0.000
206.400	-0.0541	186195.	-11347.	0.000572	4254.4509	8.091E+09	283.4486	25130.	0.000
211.200	-0.0511	134995.	-10008.	0.000668	3084.5527	8.091E+09	274.3640	25758.	0.000
216.000	-0.0477	90116.	-8720.0444	0.000734	2059.0938	8.091E+09	262.3864	26386.	0.000
220.800	-0.0441	51282.	-7494.9280	0.000776	1171.7688	8.091E+09	248.0787	27015.	0.000
225.600	-0.0403	18164.	-6342.8036	0.000797	415.0451	8.091E+09	231.9731	27644.	0.000
230.400	-0.0364	-9608.7996	-5271.1103	0.000799	219.5559	8.091E+09	214.5657	28272.	0.000
235.200	-0.0326	-32438.	-4285.0047	0.000787	741.1984	8.091E+09	196.3116	28900.	0.000
240.000	-0.0289	-50745.	-3387.5644	0.000762	1159.4924	8.091E+09	177.6218	29527.	0.000
244.800	-0.0253	-64959.	-2580.0058	0.000728	1484.2771	8.091E+09	158.8610	30154.	0.000
249.600	-0.0219	-75513.	-1861.9075	0.000686	1725.4292	8.091E+09	140.3467	30780.	0.000
254.400	-0.0187	-82833.	-1231.4368	0.000639	1892.6955	8.091E+09	122.3494	31406.	0.000
259.200	-0.0157	-87335.	-685.5727	0.000589	1995.5508	8.091E+09	105.0939	32030.	0.000
264.000	-0.0130	-89415.	-220.3214	0.000536	2043.0792	8.091E+09	88.7608	32654.	0.000
268.800	-0.0106	-89450.	169.0784	0.000483	2043.8793	8.091E+09	73.4891	33278.	0.000
273.600	-0.008407	-87792.	487.9640	0.000431	2005.9910	8.091E+09	59.3799	33901.	0.000

278.400	-0.006465	-84765.	747.2881	0.000380	1936.8421	8.091E+09	48.6719
36138.	0.000						
283.200	-0.004764	-80618.	952.9191	0.000331	1842.0698	8.091E+09	37.0077
37290.	0.000						
288.000	-0.003292	-75617.	1105.0142	0.000284	1727.8147	8.091E+09	26.3653
38442.	0.000						
292.800	-0.002036	-70010.	1208.5928	0.000241	1599.6796	8.091E+09	16.7925
39594.	0.000						
297.600	-0.000979	-64015.	1268.8363	0.000201	1462.7040	8.091E+09	8.3090
40746.	0.000						
302.400	-0.000104	-57829.	1290.9601	0.000165	1321.3542	8.091E+09	0.9093
41898.	0.000						
307.200	0.000606	-51622.	1280.1024	0.000133	1179.5257	8.091E+09	-5.4333
43050.	0.000						
312.000	0.001169	-45540.	1241.2311	0.000104	1040.5575	8.091E+09	-10.7631
44202.	0.000						
316.800	0.001602	-39706.	1179.0693	7.849E-05	907.2556	8.091E+09	-15.1377
45354.	0.000						
321.600	0.001922	-34221.	1098.0393	5.656E-05	781.9229	8.091E+09	-18.6248
46506.	0.000						
326.400	0.002145	-29165.	1002.2240	3.776E-05	666.3954	8.091E+09	-21.2982
47658.	0.000						
331.200	0.002285	-24599.	895.3470	2.181E-05	562.0803	8.091E+09	-23.2339
48810.	0.000						
336.000	0.002355	-20569.	804.8332	8.417E-06	469.9967	8.091E+09	-14.4801
29520.	0.000						
340.800	0.002366	-16873.	734.3470	-2.690E-06	385.5362	8.091E+09	-14.8891
30211.	0.000						
345.600	0.002329	-13520.	662.6324	-1.170E-05	308.9141	8.091E+09	-14.9920
30902.	0.000						
350.400	0.002253	-10512.	591.0576	-1.883E-05	240.1846	8.091E+09	-14.8308
31593.	0.000						
355.200	0.002148	-7845.3825	520.7917	-2.428E-05	179.2628	8.091E+09	-14.4466
32284.	0.000						
360.000	0.002020	-5512.0072	452.8112	-2.824E-05	125.9464	8.091E+09	-13.8786
32976.	0.000						
364.800	0.001877	-3498.3947	387.9097	-3.091E-05	79.9364	8.091E+09	-13.1637
33667.	0.000						
369.600	0.001723	-1788.0737	326.7100	-3.248E-05	40.8565	8.091E+09	-12.3362
34358.	0.000						
374.400	0.001565	-361.9785	269.6776	-3.312E-05	8.2710	8.091E+09	-11.4273
35049.	0.000						
379.200	0.001405	800.8312	217.1356	-3.299E-05	18.2986	8.091E+09	-10.4652
35740.	0.000						
384.000	0.001248	1722.5235	169.2808	-3.224E-05	39.3587	8.091E+09	-9.4744
36432.	0.000						
388.800	0.001096	2425.9264	126.1993	-3.101E-05	55.4311	8.091E+09	-8.4762
37123.	0.000						
393.600	0.000951	2934.0369	87.8835	-2.942E-05	67.0412	8.091E+09	-7.4887
37814.	0.000						
398.400	0.000814	3269.6085	54.2478	-2.758E-05	74.7088	8.091E+09	-6.5262
38505.	0.000						
403.200	0.000686	3454.8156	25.1439	-2.559E-05	78.9407	8.091E+09	-5.6004
39196.	0.000						
408.000	0.000568	3510.9901	0.3763	-2.352E-05	80.2242	8.091E+09	-4.7195
39888.	0.000						
412.800	0.000460	3458.4277	-20.2845	-2.145E-05	79.0232	8.091E+09	-3.8892
40579.	0.000						
417.600	0.000362	3316.2592	-37.0883	-1.944E-05	75.7747	8.091E+09	-3.1124
41270.	0.000						
422.400	0.000273	3102.3802	-50.2942	-1.754E-05	70.8877	8.091E+09	-2.3900
41961.	0.000						
427.200	0.000194	2833.4350	-60.1597	-1.578E-05	64.7425	8.091E+09	-1.7206
42652.	0.000						
432.000	0.000122	2524.8471	-66.9317	-1.419E-05	57.6914	8.091E+09	-1.1011
43344.	0.000						
436.800	5.743E-05	2190.8906	-70.8387	-1.279E-05	50.0607	8.091E+09	-0.5268
44035.	0.000						
441.600	-8.402E-07	1844.7956	-72.0843	-1.159E-05	42.1526	8.091E+09	0.007828
44726.	0.000						
446.400	-5.386E-05	1498.8810	-70.8426	-1.060E-05	34.2486	8.091E+09	0.5096
45417.	0.000						
451.200	-0.000103	1164.7070	-67.2542	-9.810E-06	26.6129	8.091E+09	0.9856
46108.	0.000						
456.000	-0.000148	853.2410	-61.4248	-9.212E-06	19.4961	8.091E+09	1.4433
46800.	0.000						
460.800	-0.000191	575.0287	-53.4247	-8.788E-06	13.1391	8.091E+09	1.8901
47491.	0.000						
465.600	-0.000232	340.3636	-43.2899	-8.516E-06	7.7771	8.091E+09	2.3328
48182.	0.000						

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   470.400   -0.000273     159.4458     -31.0252  -8.368E-06        3.6432   8.091E+09        2.7775
48873.      0.000
   475.200   -0.000313      42.5222     -16.6089  -8.308E-06        0.9716   8.091E+09        3.2292
49564.      0.000
   480.000   -0.000353        0.000         0.000  -8.296E-06         0.000   8.091E+09        3.6912
25128.      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 8:

Pile-head deflection             =      2.8779670 inches
Computed slope at pile head      =     -0.0296341 radians
Maximum bending moment           =       2000669. inch-lbs
Maximum shear force              =          27667. lbs
Depth of maximum bending moment  =    100.8000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =              20
Number of zero deflection points =               3


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                 Computed Values of Pile Loading and Deflection
                   for Lateral Loading for Load Case Number 9
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       30327.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear        Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S        Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00      3.3652        0.000       30327.      -0.0340        0.000   8.091E+09        0.000
0.000      0.000
     4.800      3.2021      145570.       30327.      -0.0339   3326.1871   8.091E+09        0.000
0.000      0.000
     9.600      3.0393      291139.       30327.      -0.0338   6652.3742   8.091E+09        0.000
0.000      0.000
    14.400      2.8775      436709.       30290.      -0.0336   9978.5613   8.091E+09     -15.3144
25.5465      0.000
    19.200      2.7168      581926.       30133.      -0.0333       13297.   8.091E+09     -50.2170
88.7215      0.000
    24.000      2.5579      725985.       29803.      -0.0329       16588.   8.091E+09     -87.2210
163.6765      0.000
    28.800      2.4009      868035.       29301.      -0.0324       19834.   8.091E+09    -122.0103
243.9245      0.000
    33.600      2.2465     1007275.       28647.      -0.0319       23016.   8.091E+09    -150.2687
321.0714      0.000
    38.400      2.0949     1143051.       27884.      -0.0312       26118.   8.091E+09    -167.6797
384.1940      0.000
    43.200      1.9466     1274965.       27074.      -0.0305       29132.   8.091E+09    -169.9273
419.0083      0.000
    48.000      1.8019     1402963.       26221.      -0.0297       32057.   8.091E+09    -185.4156
493.9098      0.000
    52.800      1.6612     1526690.       25228.      -0.0289       34884.   8.091E+09    -228.4100
659.9662      0.000
    57.600      1.5249     1645154.       24018.      -0.0279       37591.   8.091E+09    -275.7033
867.8402      0.000
    62.400      1.3932     1757265.       22571.      -0.0269       40153.   8.091E+09    -327.2911
1127.5776      0.000
    67.200      1.2666     1861836.       20866.      -0.0258       42542.   8.091E+09    -383.1495
1452.0154      0.000
    72.000      1.1452     1957579.       18883.      -0.0247       44730.   8.091E+09    -443.1762
1857.4589      0.000
    76.800      1.0295     2043112.       16602.      -0.0235       46684.   8.091E+09    -507.0300
2364.0791      0.000
    81.600      0.9195     2116962.       14008.      -0.0223       48371.   8.091E+09    -573.7921
2995.2966      0.000
```

86.400	0.8156	2177592.	11092.	-0.0210	49757.	8.091E+09	-641.4202
3775.0111	0.000						
91.200	0.7178	2223444.	7857.7797	-0.0197	50805.	8.091E+09	-706.1218
4721.5887	0.000						
96.000	0.6265	2253027.	4334.2422	-0.0184	51480.	8.091E+09	-762.0188
5838.7583	0.000						
100.800	0.5415	2265053.	581.4854	-0.0170	51755.	8.091E+09	-801.6299
7106.2887	0.000						
105.600	0.4629	2258609.	-3304.3798	-0.0157	51608.	8.091E+09	-817.4806
8476.1550	0.000						
110.400	0.3908	2233331.	-7196.9444	-0.0144	51030.	8.091E+09	-804.4213
9879.4501	0.000						
115.200	0.3251	2189518.	-10955.	-0.0130	50029.	8.091E+09	-761.4875
11243.	0.000						
120.000	0.2656	2128162.	-14444.	-0.0118	48627.	8.091E+09	-692.1985
12510.	0.000						
124.800	0.2121	2050856.	-17553.	-0.0105	46861.	8.091E+09	-603.2181
13649.	0.000						
129.600	0.1645	1959653.	-20206.	-0.009337	44777.	8.091E+09	-502.3063
14654.	0.000						
134.400	0.1225	1856877.	-22364.	-0.008205	42429.	8.091E+09	-396.6106
15540.	0.000						
139.200	0.0858	1744962.	-24016.	-0.007136	39871.	8.091E+09	-291.7757
16329.	0.000						
144.000	0.0540	1626325.	-25176.	-0.006136	37161.	8.091E+09	-191.7733
17047.	0.000						
148.800	0.0269	1503270.	-25874.	-0.005208	34349.	8.091E+09	-99.1344
17715.	0.000						
153.600	0.004004	1377930.	-26149.	-0.004353	31485.	8.091E+09	-15.3088
18351.	0.000						
158.400	-0.0149	1252238.	-26044.	-0.003573	28613.	8.091E+09	58.9995
18969.	0.000						
163.200	-0.0303	1127906.	-25606.	-0.002867	25772.	8.091E+09	123.5760
19578.	0.000						
168.000	-0.0425	1006420.	-24881.	-0.002234	22996.	8.091E+09	178.5198
20185.	0.000						
172.800	-0.0517	889048.	-23915.	-0.001672	20314.	8.091E+09	224.1282
20791.	0.000						
177.600	-0.0585	776839.	-22751.	-0.001178	17750.	8.091E+09	260.7990
21398.	0.000						
182.400	-0.0630	670639.	-21431.	-0.000748	15324.	8.091E+09	289.0752
22008.	0.000						
187.200	-0.0657	571100.	-19994.	-0.000380	13049.	8.091E+09	309.5566
22621.	0.000						
192.000	-0.0667	478692.	-18477.	-6.848E-05	10938.	8.091E+09	322.8920
23239.	0.000						
196.800	-0.0663	393725.	-16910.	0.000190	8996.3950	8.091E+09	329.7618
23859.	0.000						
201.600	-0.0649	316354.	-15325.	0.000401	7228.5289	8.091E+09	330.8648
24483.	0.000						
206.400	-0.0625	246607.	-13746.	0.000568	5634.8471	8.091E+09	326.9062
25109.	0.000						
211.200	-0.0594	184392.	-12197.	0.000696	4213.2656	8.091E+09	318.5866
25738.	0.000						
216.000	-0.0558	129517.	-10696.	0.000789	2959.4045	8.091E+09	306.5926
26367.	0.000						
220.800	-0.0518	81707.	-9260.8090	0.000852	1866.9496	8.091E+09	291.5872
26998.	0.000						
225.600	-0.0476	40614.	-7902.9150	0.000888	928.0012	8.091E+09	274.2020
27628.	0.000						
230.400	-0.0433	5838.5161	-6632.7584	0.000902	133.4070	8.091E+09	255.0299
28259.	0.000						
235.200	-0.0390	-23061.	-5457.6001	0.000896	526.9264	8.091E+09	234.6194
28889.	0.000						
240.000	-0.0347	-46554.	-4382.1869	0.000876	1063.7440	8.091E+09	213.4695
29518.	0.000						
244.800	-0.0306	-65130.	-3408.9945	0.000843	1488.1803	8.091E+09	192.0273
30146.	0.000						
249.600	-0.0266	-79281.	-2538.4828	0.000800	1811.5235	8.091E+09	170.6859
30774.	0.000						
254.400	-0.0229	-89499.	-1769.3561	0.000750	2045.0088	8.091E+09	149.7836
31401.	0.000						
259.200	-0.0194	-96267.	-1098.8226	0.000695	2199.6403	8.091E+09	129.6053
32027.	0.000						
264.000	-0.0162	-100048.	-522.8485	0.000636	2286.0409	8.091E+09	110.3839
32652.	0.000						
268.800	-0.0133	-101286.	-36.4002	0.000577	2314.3296	8.091E+09	92.3029
33276.	0.000						
273.600	-0.0107	-100397.	366.3262	0.000517	2294.0254	8.091E+09	75.4998
33900.	0.000						

278.400	-0.008352	-97769.	698.4330	0.000458	2233.9742	8.091E+09	62.8781
36137.	0.000						
283.200	-0.006292	-93692.	966.6535	0.000401	2140.8207	8.091E+09	48.8804
37290.	0.000						
288.000	-0.004499	-88489.	1170.4392	0.000347	2021.9341	8.091E+09	36.0303
38442.	0.000						
292.800	-0.002958	-82456.	1315.4665	0.000297	1884.0792	8.091E+09	24.3977
39594.	0.000						
297.600	-0.001651	-75861.	1407.6655	0.000250	1733.3801	8.091E+09	14.0185
40746.	0.000						
302.400	-0.000561	-68943.	1453.0648	0.000207	1575.3010	8.091E+09	4.8978
41898.	0.000						
307.200	0.000333	-61911.	1457.6544	0.000168	1414.6434	8.091E+09	-2.9855
43050.	0.000						
312.000	0.001051	-54949.	1427.2708	0.000133	1255.5574	8.091E+09	-9.6744
44202.	0.000						
316.800	0.001612	-48210.	1367.5022	0.000103	1101.5646	8.091E+09	-15.2293
45354.	0.000						
321.600	0.002036	-41821.	1283.6157	7.591E-05	955.5892	8.091E+09	-19.7234
46506.	0.000						
326.400	0.002341	-35887.	1180.5066	5.286E-05	819.9973	8.091E+09	-23.2387
47658.	0.000						
331.200	0.002543	-30488.	1062.6671	3.317E-05	696.6394	8.091E+09	-25.8611
48810.	0.000						
336.000	0.002659	-25685.	961.3538	1.651E-05	586.8961	8.091E+09	-16.3528
29520.	0.000						
340.800	0.002702	-21259.	881.2968	2.587E-06	485.7618	8.091E+09	-17.0043
30211.	0.000						
345.600	0.002684	-17225.	799.0181	-8.828E-06	393.5794	8.091E+09	-17.2785
30902.	0.000						
350.400	0.002617	-13589.	716.2108	-1.797E-05	310.4933	8.091E+09	-17.2246
31593.	0.000						
355.200	0.002511	-10349.	634.3328	-2.507E-05	236.4751	8.091E+09	-16.8912
32284.	0.000						
360.000	0.002376	-7499.0528	554.6139	-3.036E-05	171.3493	8.091E+09	-16.3250
32976.	0.000						
364.800	0.002220	-5024.9698	478.0658	-3.408E-05	114.8179	8.091E+09	-15.5700
33667.	0.000						
369.600	0.002049	-2909.6207	405.4954	-3.643E-05	66.4833	8.091E+09	-14.6676
34358.	0.000						
374.400	0.001870	-1132.2142	337.5196	-3.763E-05	25.8705	8.091E+09	-13.6556
35049.	0.000						
379.200	0.001688	330.5677	274.5832	-3.787E-05	7.5533	8.091E+09	-12.5679
35740.	0.000						
384.000	0.001507	1503.7843	216.9762	-3.732E-05	34.3607	8.091E+09	-11.4350
36432.	0.000						
388.800	0.001330	2413.5391	164.8533	-3.616E-05	55.1481	8.091E+09	-10.2829
37123.	0.000						
393.600	0.001159	3086.3760	118.2528	-3.453E-05	70.5220	8.091E+09	-9.1340
37814.	0.000						
398.400	0.000998	3548.7658	77.1154	-3.256E-05	81.0874	8.091E+09	-8.0066
38505.	0.000						
403.200	0.000847	3826.6840	41.3031	-3.037E-05	87.4377	8.091E+09	-6.9152
39196.	0.000						
408.000	0.000706	3945.2754	10.6165	-2.807E-05	90.1474	8.091E+09	-5.8709
39888.	0.000						
412.800	0.000577	3928.6021	-15.1881	-2.573E-05	89.7664	8.091E+09	-4.8811
40579.	0.000						
417.600	0.000459	3799.4694	-36.3832	-2.344E-05	86.8158	8.091E+09	-3.9502
41270.	0.000						
422.400	0.000352	3579.3230	-53.2560	-2.125E-05	81.7856	8.091E+09	-3.0801
41961.	0.000						
427.200	0.000255	3288.2122	-66.0951	-1.922E-05	75.1339	8.091E+09	-2.2696
42652.	0.000						
432.000	0.000168	2944.8101	-75.1799	-1.737E-05	67.2873	8.091E+09	-1.5158
43344.	0.000						
436.800	8.869E-05	2566.4849	-80.7705	-1.573E-05	58.6428	8.091E+09	-0.8136
44035.	0.000						
441.600	1.683E-05	2169.4133	-83.0997	-1.433E-05	49.5699	8.091E+09	-0.1568
44726.	0.000						
446.400	-4.885E-05	1768.7283	-82.3667	-1.316E-05	40.4145	8.091E+09	0.4622
45417.	0.000						
451.200	-0.000109	1378.6929	-78.7330	-1.223E-05	31.5024	8.091E+09	1.0518
46108.	0.000						
456.000	-0.000166	1012.8915	-72.3192	-1.152E-05	23.1440	8.091E+09	1.6206
46800.	0.000						
460.800	-0.000220	684.4288	-63.2045	-1.101E-05	15.6388	8.091E+09	2.1772
47491.	0.000						
465.600	-0.000272	406.1283	-51.4280	-1.069E-05	9.2798	8.091E+09	2.7297
48182.	0.000						

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   470.400   -0.000323     190.7200     -36.9918  -1.051E-05        4.3578   8.091E+09        3.2854
48873.       0.000
   475.200   -0.000373      51.0071     -19.8667  -1.044E-05        1.1655   8.091E+09        3.8501
49564.       0.000
   480.000   -0.000423         0.000         0.000  -1.043E-05         0.000   8.091E+09        4.4277
25128.       0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 9:

Pile-head deflection             =      3.3651764 inches
Computed slope at pile head      =     -0.0339837 radians
Maximum bending moment           =       2265053. inch-lbs
Maximum shear force              =         30327. lbs
Depth of maximum bending moment  =    100.8000000 inches below pile head
Depth of maximum shear force     =       0.000000 inches below pile head
Number of iterations             =             21
Number of zero deflection points =              3


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 10
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =       33259.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear        Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S        Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       3.9458 -2.183E-06       33259.      -0.0390   4.989E-08   8.091E+09         0.000
0.000       0.000
     4.800       3.7584      159643.       33259.      -0.0390   3647.7613   8.091E+09         0.000
0.000       0.000
     9.600       3.5715      319286.       33259.      -0.0389   7295.5226   8.091E+09         0.000
0.000       0.000
    14.400       3.3854      478930.       33222.      -0.0386       10943.   8.091E+09     -15.3144
21.7135       0.000
    19.200       3.2007      638220.       33065.      -0.0383       14583.   8.091E+09     -50.2170
75.3085       0.000
    24.000       3.0179      796353.       32735.      -0.0379       18196.   8.091E+09     -87.2210
138.7281      0.000
    28.800       2.8373      952477.       32233.      -0.0373       21764.   8.091E+09    -122.0103
206.4143      0.000
    33.600       2.6594     1105790.       31579.      -0.0367       25267.   8.091E+09    -150.2686
271.2263      0.000
    38.400       2.4846     1255640.       30816.      -0.0360       28691.   8.091E+09    -167.6797
323.9373      0.000
    43.200       2.3135     1401627.       30006.      -0.0352       32026.   8.091E+09    -169.9273
352.5675      0.000
    48.000       2.1463     1543699.       29153.      -0.0344       35273.   8.091E+09    -185.4156
414.6671      0.000
    52.800       1.9835     1681499.       28160.      -0.0334       38421.   8.091E+09    -228.4100
552.7412      0.000
    57.600       1.8255     1814037.       26950.      -0.0324       41450.   8.091E+09    -275.7038
724.9315      0.000
    62.400       1.6727     1940222.       25503.      -0.0313       44333.   8.091E+09    -327.2965
939.2145      0.000
    67.200       1.5254     2058867.       23798.      -0.0301       47044.   8.091E+09    -383.1843
1205.7714      0.000
    72.000       1.3840     2168682.       21814.      -0.0288       49553.   8.091E+09    -443.3457
1537.6535      0.000
    76.800       1.2487     2268283.       19532.      -0.0275       51829.   8.091E+09    -507.6868
1951.5374      0.000
    81.600       1.1199     2356187.       16931.      -0.0261       53838.   8.091E+09    -575.8845
2468.2845      0.000
```

86.400	0.9978	2430823.	13996.	-0.0247	55543.	8.091E+09	-647.0415
3112.6014	0.000						
91.200	0.8826	2490551.	10717.	-0.0233	56908.	8.091E+09	-719.0966
3910.5879	0.000						
96.000	0.7746	2533711.	7100.1968	-0.0218	57894.	8.091E+09	-788.0943
4883.8166	0.000						
100.800	0.6737	2558713.	3174.2989	-0.0203	58465.	8.091E+09	-847.6965
6039.6311	0.000						
105.600	0.5801	2564184.	-995.1154	-0.0187	58590.	8.091E+09	-889.5595
7360.2012	0.000						
110.400	0.4939	2549160.	-5302.1712	-0.0172	58247.	8.091E+09	-905.0471
8796.5103	0.000						
115.200	0.4148	2513283.	-9605.3486	-0.0157	57427.	8.091E+09	-887.9435
10274.	0.000						
120.000	0.3430	2456948.	-13745.	-0.0142	56140.	8.091E+09	-836.8289
11711.	0.000						
124.800	0.2781	2381333.	-17567.	-0.0128	54412.	8.091E+09	-755.6555
13041.	0.000						
129.600	0.2200	2288307.	-20946.	-0.0114	52287.	8.091E+09	-652.2439
14228.	0.000						
134.400	0.1685	2180254.	-23797.	-0.0101	49818.	8.091E+09	-535.7834
15265.	0.000						
139.200	0.1231	2059856.	-26078.	-0.008838	47067.	8.091E+09	-414.7002
16167.	0.000						
144.000	0.0836	1929904.	-27783.	-0.007655	44097.	8.091E+09	-295.5501
16963.	0.000						
148.800	0.0496	1793142.	-28931.	-0.006550	40972.	8.091E+09	-182.8306
17679.	0.000						
153.600	0.0208	1652167.	-29560.	-0.005528	37751.	8.091E+09	-79.2979
18343.	0.000						
158.400	-0.003433	1509366.	-29718.	-0.004591	34488.	8.091E+09	13.5683
18973.	0.000						
163.200	-0.0233	1366877.	-29457.	-0.003737	31232.	8.091E+09	95.1438
19585.	0.000						
168.000	-0.0393	1226581.	-28832.	-0.002968	28027.	8.091E+09	165.3461
20189.	0.000						
172.800	-0.0518	1090094.	-27896.	-0.002281	24908.	8.091E+09	224.4227
20791.	0.000						
177.600	-0.0612	958777.	-26703.	-0.001673	21908.	8.091E+09	272.7863
21392.	0.000						
182.400	-0.0679	833746.	-25302.	-0.001141	19051.	8.091E+09	311.0317
21996.	0.000						
187.200	-0.0722	715881.	-23740.	-0.000682	16357.	8.091E+09	339.8381
22604.	0.000						
192.000	-0.0744	605845.	-22060.	-0.000290	13843.	8.091E+09	359.9477
23217.	0.000						
196.800	-0.0749	504103.	-20303.	3.954E-05	11518.	8.091E+09	372.1427
23834.	0.000						
201.600	-0.0740	410935.	-18505.	0.000311	9389.6447	8.091E+09	377.2292
24456.	0.000						
206.400	-0.0720	326458.	-16697.	0.000530	7459.3992	8.091E+09	376.0234
25082.	0.000						
211.200	-0.0690	250645.	-14908.	0.000701	5727.1119	8.091E+09	369.3401
25711.	0.000						
216.000	-0.0652	183342.	-13162.	0.000830	4189.2643	8.091E+09	357.9820
26341.	0.000						
220.800	-0.0610	124286.	-11481.	0.000921	2839.8768	8.091E+09	342.7297
26974.	0.000						
225.600	-0.0564	73127.	-9879.7385	0.000979	1670.9200	8.091E+09	324.3322
27607.	0.000						
230.400	-0.0516	29441.	-8372.9455	0.001010	672.7084	8.091E+09	303.4982
28240.	0.000						
235.200	-0.0467	-7252.9560	-6970.4172	0.001016	165.7261	8.091E+09	280.8886
28872.	0.000						
240.000	-0.0418	-37475.	-5679.2183	0.001003	856.2864	8.091E+09	257.1109
29504.	0.000						
244.800	-0.0371	-61773.	-4503.6390	0.000974	1411.4902	8.091E+09	232.7138
30135.	0.000						
249.600	-0.0325	-80710.	-3445.4818	0.000931	1844.1814	8.091E+09	208.1850
30765.	0.000						
254.400	-0.0281	-94850.	-2504.3597	0.000879	2167.2733	8.091E+09	183.9492
31394.	0.000						
259.200	-0.0240	-104752.	-1677.9968	0.000820	2393.5248	8.091E+09	160.3686
32021.	0.000						
264.000	-0.0203	-110959.	-962.5262	0.000756	2535.3500	8.091E+09	137.7441
32648.	0.000						
268.800	-0.0168	-113992.	-352.7773	0.000689	2604.6596	8.091E+09	116.3179
33273.	0.000						
273.600	-0.0136	-114346.	157.4501	0.000622	2612.7334	8.091E+09	96.2768
33898.	0.000						

278.400	-0.0108	-112481.	583.8594	0.000554	2570.1221	8.091E+09	81.3937
36137.	0.000						
283.200	-0.008310	-108740.	934.1462	0.000489	2484.6610	8.091E+09	64.5592
37289.	0.000						
288.000	-0.006119	-103513.	1206.6955	0.000426	2365.2126	8.091E+09	49.0030
38442.	0.000						
292.800	-0.004222	-97156.	1407.8847	0.000366	2219.9665	8.091E+09	34.8258
39594.	0.000						
297.600	-0.002602	-89997.	1544.4742	0.000311	2056.3863	8.091E+09	22.0865
40746.	0.000						
302.400	-0.001238	-82329.	1623.4168	0.000260	1881.1786	8.091E+09	10.8063
41898.	0.000						
307.200	-0.000109	-74412.	1651.6899	0.000213	1700.2820	8.091E+09	0.9741
43050.	0.000						
312.000	0.000809	-66473.	1636.1505	0.000171	1518.8725	8.091E+09	-7.4488
44202.	0.000						
316.800	0.001537	-58705.	1583.4165	0.000134	1341.3844	8.091E+09	-14.5237
45354.	0.000						
321.600	0.002098	-51272.	1499.7717	0.000102	1171.5424	8.091E+09	-20.3283
46506.	0.000						
326.400	0.002513	-44307.	1391.0972	7.332E-05	1012.4022	8.091E+09	-24.9527
47658.	0.000						
331.200	0.002802	-37918.	1262.8269	4.893E-05	866.3985	8.091E+09	-28.4933
48810.	0.000						
336.000	0.002983	-32184.	1150.4155	2.814E-05	735.3950	8.091E+09	-18.3448
29520.	0.000						
340.800	0.003072	-26874.	1059.9816	1.062E-05	614.0493	8.091E+09	-19.3360
30211.	0.000						
345.600	0.003085	-22009.	965.9106	-3.879E-06	502.8830	8.091E+09	-19.8603
30902.	0.000						
350.400	0.003035	-17601.	870.3043	-1.563E-05	402.1721	8.091E+09	-19.9757
31593.	0.000						
355.200	0.002935	-13654.	774.9874	-2.490E-05	311.9775	8.091E+09	-19.7396
32284.	0.000						
360.000	0.002796	-10161.	681.5139	-3.196E-05	232.1749	8.091E+09	-19.2077
32976.	0.000						
364.800	0.002628	-7111.0704	591.1770	-3.709E-05	162.4841	8.091E+09	-18.4327
33667.	0.000						
369.600	0.002440	-4485.7660	505.0237	-4.053E-05	102.4973	8.091E+09	-17.4645
34358.	0.000						
374.400	0.002239	-2262.8431	423.8719	-4.253E-05	51.7047	8.091E+09	-16.3488
35049.	0.000						
379.200	0.002032	-416.5961	348.3294	-4.332E-05	9.5190	8.091E+09	-15.1272
35740.	0.000						
384.000	0.001823	1081.1194	278.8153	-4.313E-05	24.7030	8.091E+09	-13.8370
36432.	0.000						
388.800	0.001618	2260.0312	215.5815	-4.213E-05	51.6405	8.091E+09	-12.5104
37123.	0.000						
393.600	0.001419	3150.7022	158.7354	-4.053E-05	71.9919	8.091E+09	-11.1755
37814.	0.000						
398.400	0.001229	3783.8907	108.2620	-3.847E-05	86.4599	8.091E+09	-9.8551
38505.	0.000						
403.200	0.001049	4190.0174	64.0465	-3.611E-05	95.7396	8.091E+09	-8.5680
39196.	0.000						
408.000	0.000882	4398.7369	25.8949	-3.356E-05	100.5088	8.091E+09	-7.3284
39888.	0.000						
412.800	0.000727	4438.6089	-6.4451	-3.094E-05	101.4198	8.091E+09	-6.1466
40579.	0.000						
417.600	0.000585	4336.8640	-33.2659	-2.834E-05	99.0950	8.091E+09	-5.0288
41270.	0.000						
422.400	0.000455	4119.2561	-54.8822	-2.583E-05	94.1228	8.091E+09	-3.9780
41961.	0.000						
427.200	0.000337	3809.9952	-71.6151	-2.348E-05	87.0563	8.091E+09	-2.9940
42652.	0.000						
432.000	0.000230	3431.7515	-83.7785	-2.133E-05	78.4137	8.091E+09	-2.0741
43344.	0.000						
436.800	0.000132	3005.7216	-91.6670	-1.942E-05	68.6791	8.091E+09	-1.2128
44035.	0.000						
441.600	4.328E-05	2551.7480	-95.5457	-1.777E-05	58.3061	8.091E+09	-0.4033
44726.	0.000						
446.400	-3.838E-05	2088.4830	-95.6420	-1.639E-05	47.7207	8.091E+09	0.3631
45417.	0.000						
451.200	-0.000114	1633.5844	-92.1403	-1.529E-05	37.3265	8.091E+09	1.0959
46108.	0.000						
456.000	-0.000185	1203.9358	-85.1777	-1.445E-05	27.5093	8.091E+09	1.8052
46800.	0.000						
460.800	-0.000253	815.8784	-74.8430	-1.385E-05	18.6424	8.091E+09	2.5010
47491.	0.000						
465.600	-0.000318	485.4431	-61.1777	-1.346E-05	11.0921	8.091E+09	3.1929
48182.	0.000						

```
   470.400   -0.000382     228.5724     -44.1797  -1.325E-05        5.2228   8.091E+09        3.8896
48873.      0.000
   475.200   -0.000445      61.3177     -23.8096  -1.316E-05        1.4011   8.091E+09        4.5980
49564.      0.000
   480.000   -0.000508         0.000         0.000  -1.315E-05         0.000   8.091E+09        5.3227
25128.      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 10:

Pile-head deflection             =      3.9458295 inches
Computed slope at pile head      =     -0.0390445 radians
Maximum bending moment           =       2564184. inch-lbs
Maximum shear force              =          33259. lbs
Depth of maximum bending moment  =    105.6000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             22
Number of zero deflection points =              3



--------------------------------------------------------------------------------
                           Summary of Pile Response(s)
--------------------------------------------------------------------------------


Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, lbs, and Load 2 = Moment, in-lbs
Load Type 2: Load 1 = Shear, lbs, and Load 2 = Slope, radians
Load Type 3: Load 1 = Shear, lbs, and Load 2 = Rotational Stiffness, in-lbs/radian
Load Type 4: Load 1 = Top Deflection, inches, and Load 2 = Moment, in-lbs
Load Type 5: Load 1 = Top Deflection, inches, and Load 2 = Slope, radians

               Pile-head      Pile-head
Load   Load      Condition 1     Condition 2           Axial           Pile-head          Maximum
Maximum       Pile-head
Case   Type      V(lbs) or       in-lb, rad.,          Loading         Deflection          Moment
Shear         Rotation
 No.    No.     y(inches)     or in-lb/rad.        lbs           inches          in-lbs            lbs
radians
----  ----  --------------  --------------  -------------  -------------  -------------  ---------
-----  -------------
  1      1    V =    386.0000   M =       0.000        0.0000000      0.01930514           18224.
386.0000    -0.00024283
  2      1    V =   5004.0000   M =       0.000        0.0000000      0.26233352          243384.
5004.0000    -0.00326098
  3      1    V =   8371.0000   M =       0.000        0.0000000      0.47660370          429231.
8371.0000    -0.00580119
  4      1    V =      10715.   M =       0.000        0.0000000      0.65798015          575861.
10715.    -0.00785370
  5      1    V =      12777.   M =       0.000        0.0000000      0.84360836          718637.
12777.    -0.00987916
  6      1    V =      19776.   M =       0.000        0.0000000      1.65287406         1275805.
19776.    -0.01814272
  7      1    V =      24349.   M =       0.000        0.0000000      2.32281776         1686196.
24349.    -0.02453973
  8      1    V =      27667.   M =       0.000        0.0000000      2.87796703         2000669.
27667.    -0.02963413
  9      1    V =      30327.   M =       0.000        0.0000000      3.36517635         2265053.
30327.    -0.03398371
 10      1    V =      33259.   M =       0.000        0.0000000      3.94582955         2564184.
33259.    -0.03904448

The analysis ended normally.
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APPENDIX F. LPILE ANALYSIS FOR TP2 (P-MULTIPLIER OF 0.51)

This appendix shows the readout from LPILE when for TP2 with the data input mentioned in the body of the report.

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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                          =         210.000 lbs
Applied moment at pile head                       =           0.000 in-lbs
Axial thrust load on pile head                    =           0.000 lbs

Depth     Deflect.     Bending     Shear        Slope       Total     Bending    Soil Res.   Soil Spr.
Distrib.
X           y          Moment      Force          S         Stress    Stiffness       p           Es*h
Lat. Load
inches     inches      in-lbs       lbs        radians      psi*       lb-in^2     lb/in       lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
0.00       0.0151 -2.071E-08    210.0000   -0.000168   4.733E-10   8.091E+09        0.000        0.000
0.000
4.800       0.0143   1008.0000    210.0000   -0.000168     23.0323   8.091E+09       0.000        0.000
0.000
9.600       0.0135   2016.0000    210.0000   -0.000167     46.0645   8.091E+09       0.000        0.000
0.000
14.400      0.0127   3024.0000    208.9910   -0.000165     69.0968   8.091E+09     -0.4204    158.4771
0.000
19.200      0.0119   4022.3135    205.1417   -0.000163     91.9077   8.091E+09     -1.1834    475.5523
0.000
24.000      0.0112   4993.3606    197.8752   -0.000160    114.0956   8.091E+09     -1.8443    792.6973
0.000
28.800      0.0104   5921.9157    187.6753   -0.000157    135.3126   8.091E+09     -2.4057   1109.8593
0.000
33.600    0.009658   6795.0431    175.0105   -0.000153    155.2631   8.091E+09     -2.8713   1427.0053
0.000
38.400    0.008931   7602.0162    160.3310   -0.000149    173.7020   8.091E+09     -3.2451   1744.0965
0.000
43.200    0.008226   8334.2211    144.0658   -0.000144    190.4325   8.091E+09     -3.5320   2061.0529
0.000
48.000    0.007544   8985.0479    126.6181   -0.000139    205.3035   8.091E+09     -3.7379   2378.2162
0.000
52.800    0.006888   9549.7547    108.3629   -0.000134    218.2068   8.091E+09     -3.8685   2695.7252
0.000
57.600    0.006259      10025.     89.6483   -0.000128    229.0735   8.091E+09     -3.9293   3013.1929
0.000
62.400    0.005659      10410.     70.7939   -0.000122    237.8716   8.091E+09     -3.9267   3330.6238
0.000
67.200    0.005088      10705.     52.0884   -0.000116    244.6024   8.091E+09     -3.8672   3648.0229
0.000
72.000    0.004548      10910.     33.7890   -0.000109    249.2974   8.091E+09     -3.7575   3965.3950
0.000
76.800    0.004039      11029.     16.1216   -0.000103    252.0142   8.091E+09     -3.6040   4282.7444
0.000
```

81.600	0.003562	11065.	-0.7197	-9.623E-05	252.8337	8.091E+09	-3.4132	4600.0750
0.000								
86.400	0.003115	11022.	-16.5713	-8.968E-05	251.8564	8.091E+09	-3.1916	4917.3903
0.000								
91.200	0.002701	10906.	-31.2997	-8.318E-05	249.1987	8.091E+09	-2.9452	5234.6931
0.000								
96.000	0.002317	10722.	-44.8001	-7.676E-05	244.9906	8.091E+09	-2.6799	5551.9859
0.000								
100.800	0.001964	10476.	-56.9948	-7.047E-05	239.3716	8.091E+09	-2.4012	5869.2706
0.000								
105.600	0.001640	10175.	-67.8319	-6.435E-05	232.4885	8.091E+09	-2.1143	6186.5491
0.000								
110.400	0.001346	9824.8425	-77.2833	-5.841E-05	224.4924	8.091E+09	-1.8238	6503.8226
0.000								
115.200	0.001080	9432.8720	-85.3427	-5.270E-05	215.5361	8.091E+09	-1.5342	6821.0924
0.000								
120.000	0.000840	9005.5529	-92.0233	-4.723E-05	205.7720	8.091E+09	-1.2494	7138.3593
0.000								
124.800	0.000626	8549.4485	-97.3561	-4.202E-05	195.3503	8.091E+09	-0.9727	7455.6241
0.000								
129.600	0.000437	8070.9340	-101.3876	-3.709E-05	184.4165	8.091E+09	-0.7071	7772.8874
0.000								
134.400	0.000270	7576.1278	-104.1772	-3.245E-05	173.1104	8.091E+09	-0.4552	8090.1496
0.000								
139.200	0.000125	7070.8329	-105.7957	-2.811E-05	161.5647	8.091E+09	-0.2191	8407.4110
0.000								
144.000	2.520E-07	6560.4893	-106.3227	-2.407E-05	149.9037	8.091E+09	-0.000458	8724.6720
0.000								
148.800	-0.000106	6050.1351	-105.8449	-2.032E-05	138.2423	8.091E+09	0.1995	9041.9327
0.000								
153.600	-0.000195	5544.3780	-104.4542	-1.689E-05	126.6861	8.091E+09	0.3800	9359.1932
0.000								
158.400	-0.000268	5047.3752	-102.2455	-1.374E-05	115.3298	8.091E+09	0.5403	9676.4537
0.000								
163.200	-0.000327	4562.8212	-99.3157	-1.089E-05	104.2580	8.091E+09	0.6804	9993.7142
0.000								
168.000	-0.000373	4093.9440	-95.7618	-8.325E-06	93.5444	8.091E+09	0.8004	10311.
0.000								
172.800	-0.000407	3643.5077	-91.6795	-6.030E-06	83.2522	8.091E+09	0.9006	10628.
0.000								
177.600	-0.000430	3213.8209	-87.1621	-3.996E-06	73.4341	8.091E+09	0.9816	10945.
0.000								
182.400	-0.000445	2806.7513	-82.2997	-2.210E-06	64.1328	8.091E+09	1.0444	11263.
0.000								
187.200	-0.000452	2423.7439	-77.1778	-6.588E-07	55.3812	8.091E+09	1.0897	11580.
0.000								
192.000	-0.000451	2065.8442	-71.8771	6.729E-07	47.2034	8.091E+09	1.1189	11897.
0.000								
196.800	-0.000445	1733.7236	-66.4726	1.800E-06	39.6147	8.091E+09	1.1330	12215.
0.000								
201.600	-0.000434	1427.7076	-61.0331	2.738E-06	32.6224	8.091E+09	1.1334	12532.
0.000								
206.400	-0.000419	1147.8062	-55.6212	3.502E-06	26.2268	8.091E+09	1.1215	12849.
0.000								
211.200	-0.000401	893.7446	-50.2928	4.107E-06	20.4216	8.091E+09	1.0986	13166.
0.000								
216.000	-0.000380	664.9952	-45.0974	4.570E-06	15.1948	8.091E+09	1.0661	13484.
0.000								
220.800	-0.000357	460.8097	-40.0776	4.904E-06	10.5293	8.091E+09	1.0254	13801.
0.000								
225.600	-0.000332	280.2504	-35.2697	5.123E-06	6.4036	8.091E+09	0.9779	14118.
0.000								
230.400	-0.000307	122.2208	-30.7036	5.243E-06	2.7927	8.091E+09	0.9247	14435.
0.000								
235.200	-0.000282	-14.5045	-26.4034	5.275E-06	0.3314	8.091E+09	0.8671	14753.
0.000								
240.000	-0.000257	-131.2515	-22.3871	5.232E-06	2.9990	8.091E+09	0.8063	15070.
0.000								
244.800	-0.000232	-229.4205	-18.6677	5.125E-06	5.2421	8.091E+09	0.7434	15387.
0.000								
249.600	-0.000208	-310.4614	-15.2531	4.964E-06	7.0939	8.091E+09	0.6793	15704.
0.000								
254.400	-0.000184	-375.8505	-12.1467	4.761E-06	8.5880	8.091E+09	0.6150	16022.
0.000								
259.200	-0.000162	-427.0702	-9.3479	4.523E-06	9.7583	8.091E+09	0.5512	16339.
0.000								
264.000	-0.000141	-465.5901	-6.8521	4.258E-06	10.6385	8.091E+09	0.4887	16656.
0.000								
268.800	-0.000121	-492.8506	-4.6519	3.974E-06	11.2614	8.091E+09	0.4281	16973.
0.000								

273.600	-0.000103	-510.2484	-2.7368	3.676E-06	11.6589	8.091E+09	0.3699	17291.000
278.400	-8.577E-05	-519.1239	-0.8159	3.371E-06	11.8617	8.091E+09	0.4305	24093.000
283.200	-7.033E-05	-518.0809	1.0851	3.063E-06	11.8379	8.091E+09	0.3616	24680.000
288.000	-5.636E-05	-508.7066	2.6650	2.758E-06	11.6237	8.091E+09	0.2967	25268.000
292.800	-4.385E-05	-492.4965	3.9439	2.461E-06	11.2533	8.091E+09	0.2362	25855.000
297.600	-3.273E-05	-470.8450	4.9435	2.176E-06	10.7586	8.091E+09	0.1803	26443.000
302.400	-2.296E-05	-445.0390	5.6865	1.904E-06	10.1689	8.091E+09	0.1293	27030.000
307.200	-1.445E-05	-416.2542	6.1964	1.649E-06	9.5112	8.091E+09	0.0832	27618.000
312.000	-7.132E-06	-385.5534	6.4966	1.411E-06	8.8097	8.091E+09	0.0419	28205.000
316.800	-9.101E-07	-353.8870	6.6103	1.191E-06	8.0861	8.091E+09	0.005459	28793.000
321.600	4.305E-06	-322.0949	6.5601	9.909E-07	7.3597	8.091E+09	-0.0263	29381.000
326.400	8.602E-06	-290.9098	6.3680	8.090E-07	6.6471	8.091E+09	-0.0537	29968.000
331.200	1.207E-05	-260.9621	6.0547	6.453E-07	5.9628	8.091E+09	-0.0768	30556.000
336.000	1.480E-05	-232.7848	5.7476	4.989E-07	5.3190	8.091E+09	-0.0511	16580.000
340.800	1.686E-05	-205.7852	5.4822	3.688E-07	4.7021	8.091E+09	-0.0595	16932.000
345.600	1.834E-05	-180.1558	5.1810	2.543E-07	4.1165	8.091E+09	-0.0660	17285.000
350.400	1.930E-05	-156.0479	4.8523	1.546E-07	3.5656	8.091E+09	-0.0709	17637.000
355.200	1.982E-05	-133.5740	4.5038	6.866E-08	3.0521	8.091E+09	-0.0743	17990.000
360.000	1.996E-05	-112.8118	4.1424	-4.428E-09	2.5777	8.091E+09	-0.0763	18342.000
364.800	1.978E-05	-93.8069	3.7745	-6.572E-08	2.1434	8.091E+09	-0.0770	18695.000
369.600	1.933E-05	-76.5769	3.4055	-1.163E-07	1.7497	8.091E+09	-0.0767	19047.000
374.400	1.866E-05	-61.1141	3.0404	-1.571E-07	1.3964	8.091E+09	-0.0754	19400.000
379.200	1.782E-05	-47.3892	2.6833	-1.893E-07	1.0828	8.091E+09	-0.0733	19752.000
384.000	1.685E-05	-35.3541	2.3380	-2.138E-07	0.8078	8.091E+09	-0.0706	20105.000
388.800	1.577E-05	-24.9445	2.0074	-2.317E-07	0.5700	8.091E+09	-0.0672	20457.000
393.600	1.462E-05	-16.0834	1.6939	-2.439E-07	0.3675	8.091E+09	-0.0634	20810.000
398.400	1.343E-05	-8.6828	1.3997	-2.512E-07	0.1984	8.091E+09	-0.0592	21162.000
403.200	1.221E-05	-2.6462	1.1263	-2.546E-07	0.0605	8.091E+09	-0.0547	21515.000
408.000	1.098E-05	2.1296	0.8749	-2.547E-07	0.0487	8.091E+09	-0.0500	21867.000
412.800	9.764E-06	5.7525	0.6463	-2.524E-07	0.1314	8.091E+09	-0.0452	22220.000
417.600	8.560E-06	8.3340	0.4412	-2.482E-07	0.1904	8.091E+09	-0.0403	22572.000
422.400	7.381E-06	9.9881	0.2600	-2.428E-07	0.2282	8.091E+09	-0.0353	22925.000
427.200	6.230E-06	10.8299	0.1029	-2.366E-07	0.2475	8.091E+09	-0.0302	23278.000
432.000	5.109E-06	10.9757	-0.0300	-2.301E-07	0.2508	8.091E+09	-0.0252	23630.000
436.800	4.020E-06	10.5420	-0.1386	-2.238E-07	0.2409	8.091E+09	-0.0201	23983.000
441.600	2.961E-06	9.6454	-0.2228	-2.178E-07	0.2204	8.091E+09	-0.0150	24335.000
446.400	1.930E-06	8.4030	-0.2827	-2.124E-07	0.1920	8.091E+09	-0.009924	24688.000
451.200	9.218E-07	6.9320	-0.3180	-2.079E-07	0.1584	8.091E+09	-0.004809	25040.000
456.000	-6.610E-08	5.3502	-0.3287	-2.042E-07	0.1222	8.091E+09	0.000350	25393.000
460.800	-1.039E-06	3.7764	-0.3145	-2.015E-07	0.0863	8.091E+09	0.005572	25745.000

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465.600 -2.001E-06      2.3310     -0.2750 -1.997E-07      0.0533  8.091E+09      0.0109      26098.
0.000
470.400 -2.956E-06      1.1362     -0.2098 -1.987E-07      0.0260  8.091E+09      0.0163      26450.
0.000
475.200 -3.908E-06      0.3167     -0.1184 -1.983E-07    0.007236  8.091E+09      0.0218      26803.
0.000
480.000 -4.859E-06       0.000       0.000 -1.982E-07       0.000  8.091E+09      0.0275      13578.
0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 1:

Pile-head deflection             =      0.0151407 inches
Computed slope at pile head      =     -0.0001679 radians
Maximum bending moment           =         11065. inch-lbs
Maximum shear force              =    210.0000000 lbs
Depth of maximum bending moment  =     81.6000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =              6
Number of zero deflection points =              3
--------------------------------------------------------------------------------
Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 2
--------------------------------------------------------------------------------
Pile-head conditions are Shear and Moment (Loading Type 1)
Shear force at pile head                          =        2016.000 lbs
Applied moment at pile head                       =           0.000 in-lbs
Axial thrust load on pile head                    =           0.000 lbs
Depth    Deflect.     Bending     Shear        Slope       Total     Bending    Soil Res.   Soil Spr.
Distrib.
X          y          Moment      Force          S         Stress    Stiffness       p          Es*h
Lat. Load
inches     inches      in-lbs       lbs        radians      psi*       lb-in^2     lb/in       lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
- ----------
0.00       0.1478  -5.848E-08   2016.0000   -0.001633   1.336E-09   8.091E+09        0.000        0.000
0.000
4.800      0.1400   9676.8000   2016.0000   -0.001630    221.1097   8.091E+09        0.000        0.000
0.000
9.600      0.1322      19354.   2016.0000   -0.001622    442.2194   8.091E+09        0.000        0.000
0.000
14.400      0.1244      29030.   2006.9516   -0.001607    663.3290   8.091E+09     -3.7702    145.4334
0.000
19.200      0.1168      38620.   1971.8700   -0.001587    882.4539   8.091E+09    -10.8472    445.9285
0.000
24.000      0.1092      47960.   1904.7607   -0.001561   1095.8683   8.091E+09    -17.1150    752.3352
0.000
28.800      0.1018      56906.   1809.7317   -0.001530   1300.2724   8.091E+09    -22.4803   1060.2957
0.000
33.600      0.0945      65334.   1691.1888   -0.001494   1492.8417   8.091E+09    -26.9125   1366.9211
0.000
38.400      0.0874      73141.   1553.6506   -0.001453   1671.2428   8.091E+09    -30.3950   1668.8015
0.000
43.200      0.0806      80249.   1401.7931   -0.001408   1833.6424   8.091E+09    -32.8789   1959.1398
0.000
48.000      0.0739      86599.   1239.0987   -0.001358   1978.7329   8.091E+09    -34.9104   2267.1168
0.000
52.800      0.0675      92144.   1067.3625   -0.001305   2105.4447   8.091E+09    -36.6463   2605.2765
0.000
57.600      0.0614      96845.    889.1547   -0.001249   2212.8640   8.091E+09    -37.6069   2940.6857
0.000
62.400      0.0555     100680.    708.0192   -0.001190   2300.4851   8.091E+09    -37.8662   3273.2892
0.000
67.200      0.0500     103642.    527.1363   -0.001130   2368.1715   8.091E+09    -37.5017   3603.2661
0.000
72.000      0.0447     105741.    349.3128   -0.001068   2416.1150   8.091E+09    -36.5914   3930.8995
0.000
76.800      0.0397     106996.    176.9864   -0.001005   2444.7949   8.091E+09    -35.2113   4256.5053
0.000
81.600      0.0350     107440.     12.2363   -0.000941   2454.9378   8.091E+09    -33.4346   4580.3943
0.000
86.400      0.0307     107113.   -143.2017   -0.000877   2447.4790   8.091E+09    -31.3312   4902.8537
0.000
91.200      0.0266     106065.   -287.9177   -0.000814   2423.5258   8.091E+09    -28.9671   5224.1393
0.000
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96.000	0.0229	104349.	-420.8083	-0.000752	2384.3229	8.091E+09	-26.4040	5544.4731
0.000								
100.800	0.0194	102025.	-541.0567	-0.000690	2331.2195	8.091E+09	-23.6995	5864.0446
0.000								
105.600	0.0162	99155.	-648.1114	-0.000631	2265.6395	8.091E+09	-20.9066	6183.0130
0.000								
110.400	0.0133	95803.	-741.6640	-0.000573	2189.0531	8.091E+09	-18.0737	6501.5101
0.000								
115.200	0.0107	92035.	-821.6277	-0.000517	2102.9519	8.091E+09	-15.2445	6819.6444
0.000								
120.000	0.008378	87916.	-888.1139	-0.000464	2008.8251	8.091E+09	-12.4581	7137.5037
0.000								
124.800	0.006277	83509.	-941.4104	-0.000413	1908.1398	8.091E+09	-9.7488	7455.1583
0.000								
129.600	0.004413	78878.	-981.9587	-0.000365	1802.3222	8.091E+09	-7.1463	7772.6638
0.000								
134.400	0.002774	74082.	-1010.3317	-0.000319	1692.7424	8.091E+09	-4.6758	8090.0637
0.000								
139.200	0.001346	69179.	-1027.2129	-0.000277	1580.7011	8.091E+09	-2.3580	8407.3914
0.000								
144.000	0.000115	64221.	-1033.3750	-0.000237	1467.4183	8.091E+09	-0.2095	8724.6719
0.000								
148.800	-0.000933	59259.	-1029.6604	-0.000201	1354.0253	8.091E+09	1.7572	9041.9238
0.000								
153.600	-0.001812	54336.	-1016.9625	-0.000167	1241.5573	8.091E+09	3.5335	9359.1604
0.000								
158.400	-0.002537	49496.	-996.2082	-0.000136	1130.9496	8.091E+09	5.1141	9676.3910
0.000								
163.200	-0.003121	44773.	-968.3414	-0.000108	1023.0342	8.091E+09	6.4970	9993.6216
0.000								
168.000	-0.003577	40200.	-934.3087	-8.312E-05	918.5392	8.091E+09	7.6833	10311.
0.000								
172.800	-0.003919	35803.	-895.0458	-6.057E-05	818.0891	8.091E+09	8.6763	10628.
0.000								
177.600	-0.004158	31607.	-851.4658	-4.058E-05	722.2066	8.091E+09	9.4820	10945.
0.000								
182.400	-0.004308	27629.	-804.4489	-2.301E-05	631.3160	8.091E+09	10.1083	11263.
0.000								
187.200	-0.004379	23884.	-754.8341	-7.727E-06	545.7468	8.091E+09	10.5645	11580.
0.000								
192.000	-0.004382	20383.	-703.4113	5.404E-06	465.7394	8.091E+09	10.8616	11897.
0.000								
196.800	-0.004327	17132.	-650.9160	1.653E-05	391.4502	8.091E+09	11.0114	12214.
0.000								
201.600	-0.004224	14134.	-598.0249	2.581E-05	322.9579	8.091E+09	11.0266	12532.
0.000								
206.400	-0.004080	11391.	-545.3524	3.338E-05	260.2705	8.091E+09	10.9203	12849.
0.000								
211.200	-0.003903	8898.7733	-493.4492	3.940E-05	203.3322	8.091E+09	10.7060	13166.
0.000								
216.000	-0.003701	6653.5502	-442.8015	4.401E-05	152.0300	8.091E+09	10.3972	13483.
0.000								
220.800	-0.003481	4647.8788	-393.8307	4.736E-05	106.2015	8.091E+09	10.0073	13801.
0.000								
225.600	-0.003247	2872.7751	-346.8951	4.959E-05	65.6414	8.091E+09	9.5492	14118.
0.000								
230.400	-0.003005	1317.6856	-302.2914	5.084E-05	30.1084	8.091E+09	9.0357	14435.
0.000								
235.200	-0.002759	-29.2224	-260.2573	5.122E-05	0.6677	8.091E+09	8.4785	14753.
0.000								
240.000	-0.002513	-1180.7850	-220.9748	5.086E-05	26.9803	8.091E+09	7.8892	15070.
0.000								
244.800	-0.002270	-2150.5809	-184.5734	4.987E-05	49.1396	8.091E+09	7.2781	15387.
0.000								
249.600	-0.002034	-2952.6895	-151.1340	4.836E-05	67.4674	8.091E+09	6.6550	15704.
0.000								
254.400	-0.001806	-3601.4669	-120.6930	4.641E-05	82.2916	8.091E+09	6.0287	16022.
0.000								
259.200	-0.001589	-4111.3422	-93.2466	4.412E-05	93.9420	8.091E+09	5.4072	16339.
0.000								
264.000	-0.001383	-4496.6346	-68.7550	4.157E-05	102.7457	8.091E+09	4.7976	16656.
0.000								
268.800	-0.001189	-4771.3901	-47.1463	3.882E-05	109.0237	8.091E+09	4.2060	16973.
0.000								
273.600	-0.001010	-4949.2387	-28.3209	3.594E-05	113.0874	8.091E+09	3.6379	17291.
0.000								
278.400	-0.000844	-5043.2712	-9.4177	3.297E-05	115.2360	8.091E+09	4.2385	24093.
0.000								
283.200	-0.000693	-5039.6490	9.3105	2.998E-05	115.1533	8.091E+09	3.5649	24680.
0.000								

288.000	-0.000557	-4953.8908	24.8982	2.702E-05	113.1937	8.091E+09	2.9299	25268.0000
292.800	-0.000434	-4800.6267	37.5399	2.413E-05	109.6917	8.091E+09	2.3375	25855.0000
297.600	-0.000325	-4593.5075	47.4465	2.134E-05	104.9592	8.091E+09	1.7903	26443.0000
302.400	-0.000229	-4345.1404	54.8393	1.869E-05	99.2841	8.091E+09	1.2901	27030.0000
307.200	-0.000146	-4067.0504	59.9456	1.619E-05	92.9299	8.091E+09	0.8376	27618.0000
312.000	-7.363E-05	-3769.6627	62.9942	1.387E-05	86.1348	8.091E+09	0.4327	28205.0000
316.800	-1.243E-05	-3462.3059	64.2117	1.172E-05	79.1118	8.091E+09	0.0746	28793.0000
321.600	3.891E-05	-3153.2306	63.8191	9.761E-06	72.0496	8.091E+09	-0.2381	29381.0000
326.400	8.127E-05	-2849.6422	62.0299	7.980E-06	65.1128	8.091E+09	-0.5074	29968.0000
331.200	0.000116	-2557.7439	59.0473	6.376E-06	58.4431	8.091E+09	-0.7353	30556.0000
336.000	0.000142	-2282.7880	56.1013	4.940E-06	52.1605	8.091E+09	-0.4921	16580.0000
340.800	0.000163	-2019.1710	53.5407	3.664E-06	46.1370	8.091E+09	-0.5748	16932.0000
345.600	0.000178	-1768.7972	50.6258	2.541E-06	40.4161	8.091E+09	-0.6397	17285.0000
350.400	0.000187	-1533.1630	47.4384	1.561E-06	35.0320	8.091E+09	-0.6883	17637.0000
355.200	0.000193	-1313.3883	44.0536	7.168E-07	30.0102	8.091E+09	-0.7220	17990.0000
360.000	0.000194	-1110.2486	40.5396	-2.084E-09	25.3686	8.091E+09	-0.7422	18342.0000
364.800	0.000193	-924.2081	36.9579	-6.056E-07	21.1177	8.091E+09	-0.7502	18695.0000
369.600	0.000188	-755.4529	33.3631	-1.104E-06	17.2617	8.091E+09	-0.7476	19047.0000
374.400	0.000182	-603.9226	29.8031	-1.507E-06	13.7993	8.091E+09	-0.7357	19400.0000
379.200	0.000174	-469.3426	26.3197	-1.825E-06	10.7242	8.091E+09	-0.7158	19752.0000
384.000	0.000165	-351.2536	22.9482	-2.069E-06	8.0260	8.091E+09	-0.6890	20105.0000
388.800	0.000154	-249.0398	19.7186	-2.247E-06	5.6904	8.091E+09	-0.6567	20457.0000
393.600	0.000143	-161.9553	16.6554	-2.369E-06	3.7006	8.091E+09	-0.6197	20810.0000
398.400	0.000131	-89.1481	13.7785	-2.443E-06	2.0370	8.091E+09	-0.5790	21162.0000
403.200	0.000119	-29.6818	11.1035	-2.478E-06	0.6782	8.091E+09	-0.5355	21515.0000
408.000	0.000108	17.4457	8.6424	-2.482E-06	0.3986	8.091E+09	-0.4899	21867.0000
412.800	9.565E-05	53.2854	6.4039	-2.461E-06	1.2175	8.091E+09	-0.4428	22220.0000
417.600	8.391E-05	78.9234	4.3942	-2.422E-06	1.8034	8.091E+09	-0.3946	22572.0000
422.400	7.240E-05	95.4696	2.6172	-2.370E-06	2.1814	8.091E+09	-0.3458	22925.0000
427.200	6.116E-05	104.0489	1.0755	-2.311E-06	2.3775	8.091E+09	-0.2966	23278.0000
432.000	5.021E-05	105.7947	-0.2296	-2.249E-06	2.4174	8.091E+09	-0.2472	23630.0000
436.800	3.957E-05	101.8450	-1.2974	-2.187E-06	2.3271	8.091E+09	-0.1977	23983.0000
441.600	2.922E-05	93.3400	-2.1274	-2.129E-06	2.1328	8.091E+09	-0.1481	24335.0000
446.400	1.913E-05	81.4221	-2.7190	-2.077E-06	1.8605	8.091E+09	-0.0984	24688.0000
451.200	9.274E-06	67.2373	-3.0713	-2.033E-06	1.5363	8.091E+09	-0.0484	25040.0000
456.000	-3.900E-07	51.9378	-3.1824	-1.998E-06	1.1868	8.091E+09	0.002063	25393.0000
460.800	-9.906E-06	36.6858	-3.0500	-1.972E-06	0.8383	8.091E+09	0.0531	25745.0000
465.600	-1.932E-05	22.6581	-2.6704	-1.954E-06	0.5177	8.091E+09	0.1050	26098.0000
470.400	-2.867E-05	11.0503	-2.0392	-1.944E-06	0.2525	8.091E+09	0.1580	26450.0000
475.200	-3.798E-05	3.0819	-1.1511	-1.940E-06	0.0704	8.091E+09	0.2121	26803.0000

480.000 -4.729E-05 0.000 0.000 -1.939E-06 0.000 8.091E+09 0.2675 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection = 0.1478393 inches
Computed slope at pile head = -0.0016331 radians
Maximum bending moment = 107440. inch-lbs
Maximum shear force = 2016.0000000 lbs
Depth of maximum bending moment = 81.6000000 inches below pile head
Depth of maximum shear force = 4.8000000 inches below pile head
Number of iterations = 6
Number of zero deflection points = 3

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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 3088.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Distrib. Es*h lb/inch	Lat. Load lb/inch
0.00	0.2317	-2.534E-07	3088.0000	-0.002545	5.791E-09	8.091E+09	0.000	0.000	0.000
4.800	0.2195	14822.	3088.0000	-0.002541	338.6839	8.091E+09	0.000	0.000	0.000
9.600	0.2073	29645.	3088.0000	-0.002528	677.3677	8.091E+09	0.000	0.000	0.000
14.400	0.1952	44467.	3075.2850	-0.002506	1016.0516	8.091E+09	-5.2979	130.2710	0.000
19.200	0.1832	59168.	3025.0582	-0.002475	1351.9464	8.091E+09	-15.6299	409.4173	0.000
24.000	0.1714	73508.	2927.4651	-0.002436	1679.6128	8.091E+09	-25.0339	700.8615	0.000
28.800	0.1599	87271.	2787.7846	-0.002388	1994.1000	8.091E+09	-33.1663	995.8368	0.000
33.600	0.1485	100270.	2612.5288	-0.002332	2291.1268	8.091E+09	-39.8569	1288.0751	0.000
38.400	0.1375	112351.	2408.9450	-0.002269	2567.1708	8.091E+09	-44.9696	1570.1376	0.000
43.200	0.1267	123396.	2185.1887	-0.002199	2819.5405	8.091E+09	-48.2621	1827.7818	0.000
48.000	0.1164	133329.	1945.8695	-0.002123	3046.5026	8.091E+09	-51.4542	2122.5100	0.000
52.800	0.1064	142077.	1690.3481	-0.002041	3246.3764	8.091E+09	-55.0130	2482.6889	0.000
57.600	0.0968	149557.	1420.9385	-0.001955	3417.2886	8.091E+09	-57.2410	2839.4145	0.000
62.400	0.0876	155718.	1143.7859	-0.001864	3558.0662	8.091E+09	-58.2393	3191.3799	0.000
67.200	0.0789	160537.	864.4858	-0.001770	3668.1836	8.091E+09	-58.1358	3538.2155	0.000
72.000	0.0706	164017.	587.9964	-0.001674	3747.6953	8.091E+09	-57.0681	3880.0878	0.000
76.800	0.0628	166182.	318.6151	-0.001576	3797.1634	8.091E+09	-55.1741	4217.4401	0.000
81.600	0.0555	167075.	59.9893	-0.001477	3817.5851	8.091E+09	-52.5866	4550.8331	0.000
86.400	0.0486	166758.	-184.8528	-0.001378	3810.3224	8.091E+09	-49.4309	4880.8513	0.000
91.200	0.0422	165301.	-413.4634	-0.001280	3777.0367	8.091E+09	-45.8235	5208.0530	0.000

96.000	0.0363	162788.	-623.9318	-0.001183	3719.6272	8.091E+09	-41.8717	5532.9440
0.000								
100.800	0.0309	159311.	-814.8411	-0.001087	3640.1742	8.091E+09	-37.6738	5855.9682
0.000								
105.600	0.0259	154966.	-985.2243	-0.000994	3540.8878	8.091E+09	-33.3191	6177.5055
0.000								
110.400	0.0213	149853.	-1134.5216	-0.000903	3424.0605	8.091E+09	-28.8881	6497.8756
0.000								
115.200	0.0172	144075.	-1262.5391	-0.000816	3292.0250	8.091E+09	-24.4526	6817.3429
0.000								
120.000	0.0135	137733.	-1369.4084	-0.000733	3147.1165	8.091E+09	-20.0763	7136.1233
0.000								
124.800	0.0102	130928.	-1455.5476	-0.000653	2991.6387	8.091E+09	-15.8150	7454.3905
0.000								
129.600	0.007236	123759.	-1521.6232	-0.000577	2827.8351	8.091E+09	-11.7165	7772.2827
0.000								
134.400	0.004641	116321.	-1568.5139	-0.000506	2657.8633	8.091E+09	-7.8213	8089.9079
0.000								
139.200	0.002377	108702.	-1597.2755	-0.000439	2483.7739	8.091E+09	-4.1627	8407.3494
0.000								
144.000	0.000422	100987.	-1609.1075	-0.000377	2307.4932	8.091E+09	-0.7673	8724.6701
0.000								
148.800	-0.001245	93254.	-1605.3216	-0.000320	2130.8084	8.091E+09	2.3448	9041.9167
0.000								
153.600	-0.002646	85576.	-1587.3115	-0.000267	1955.3581	8.091E+09	5.1594	9359.1228
0.000								
158.400	-0.003804	78016.	-1556.5257	-0.000218	1782.6240	8.091E+09	7.6680	9676.3119
0.000								
163.200	-0.004739	70633.	-1514.4416	-0.000174	1613.9267	8.091E+09	9.8671	9993.4994
0.000								
168.000	-0.005474	63477.	-1462.5422	-0.000134	1450.4239	8.091E+09	11.7577	10311.
0.000								
172.800	-0.006027	56593.	-1402.2952	-9.855E-05	1293.1110	8.091E+09	13.3452	10628.
0.000								
177.600	-0.006420	50015.	-1335.1347	-6.693E-05	1142.8236	8.091E+09	14.6384	10945.
0.000								
182.400	-0.006670	43775.	-1262.4442	-3.910E-05	1000.2427	8.091E+09	15.6493	11262.
0.000								
187.200	-0.006795	37896.	-1185.5438	-1.488E-05	865.9004	8.091E+09	16.3925	11580.
0.000								
192.000	-0.006813	32394.	-1105.6779	5.971E-06	740.1879	8.091E+09	16.8849	11897.
0.000								
196.800	-0.006738	27281.	-1024.0062	2.367E-05	623.3646	8.091E+09	17.1449	12214.
0.000								
201.600	-0.006585	22564.	-941.5970	3.846E-05	515.5672	8.091E+09	17.1922	12531.
0.000								
206.400	-0.006369	18242.	-859.4219	5.056E-05	416.8207	8.091E+09	17.0474	12849.
0.000								
211.200	-0.006100	14313.	-778.3527	6.022E-05	327.0489	8.091E+09	16.7314	13166.
0.000								
216.000	-0.005790	10770.	-699.1601	6.766E-05	246.0853	8.091E+09	16.2655	13483.
0.000								
220.800	-0.005450	7601.2602	-622.5139	7.311E-05	173.6847	8.091E+09	15.6704	13800.
0.000								
225.600	-0.005089	4793.7169	-548.9845	7.678E-05	109.5339	8.091E+09	14.9668	14118.
0.000								
230.400	-0.004713	2331.0085	-479.0461	7.890E-05	53.2623	8.091E+09	14.1742	14435.
0.000								
235.200	-0.004331	194.8747	-413.0798	7.965E-05	4.4528	8.091E+09	13.3117	14752.
0.000								
240.000	-0.003949	-1634.5579	-351.3793	7.922E-05	37.3488	8.091E+09	12.3969	15070.
0.000								
244.800	-0.003571	-3178.3669	-294.1555	7.779E-05	72.6240	8.091E+09	11.4464	15387.
0.000								
249.600	-0.003202	-4458.4511	-241.5429	7.553E-05	101.8732	8.091E+09	10.4755	15704.
0.000								
254.400	-0.002846	-5497.1788	-193.6056	7.257E-05	125.6076	8.091E+09	9.4983	16022.
0.000								
259.200	-0.002505	-6317.0653	-150.3442	6.907E-05	144.3415	8.091E+09	8.5273	16339.
0.000								
264.000	-0.002183	-6940.4830	-111.7019	6.514E-05	158.5863	8.091E+09	7.5737	16656.
0.000								
268.800	-0.001880	-7389.4039	-77.5717	6.089E-05	168.8439	8.091E+09	6.6473	16973.
0.000								
273.600	-0.001598	-7685.1717	-47.8024	5.642E-05	175.6020	8.091E+09	5.7566	17291.
0.000								
278.400	-0.001338	-7848.3065	-17.8655	5.181E-05	179.3296	8.091E+09	6.7170	24093.
0.000								
283.200	-0.001101	-7856.6810	11.8385	4.715E-05	179.5209	8.091E+09	5.6597	24680.
0.000								

288.000	-0.000886	-7734.6569	36.6103	4.252E-05	176.7328	8.091E+09	4.6619	25268.000
292.800	-0.000692	-7505.2221	56.7513	3.800E-05	171.4903	8.091E+09	3.7302	25855.000
297.600	-0.000521	-7189.8441	72.5890	3.364E-05	164.2841	8.091E+09	2.8689	26443.000
302.400	-0.000370	-6808.3672	84.4684	2.949E-05	155.5675	8.091E+09	2.0808	27030.000
307.200	-0.000238	-6378.9478	92.7439	2.558E-05	145.7555	8.091E+09	1.3673	27618.000
312.000	-0.000124	-5918.0253	97.7734	2.193E-05	135.2237	8.091E+09	0.7283	28205.000
316.800	-2.708E-05	-5440.3236	99.9111	1.856E-05	124.3085	8.091E+09	0.1625	28793.000
321.600	5.428E-05	-4958.8789	99.5036	1.548E-05	113.3077	8.091E+09	-0.3322	29381.000
326.400	0.000122	-4485.0887	96.8855	1.268E-05	102.4819	8.091E+09	-0.7587	29968.000
331.200	0.000176	-4028.7785	92.3760	1.015E-05	92.0554	8.091E+09	-1.1203	30556.000
336.000	0.000219	-3598.2796	87.8719	7.890E-06	82.2188	8.091E+09	-0.7564	16580.000
340.800	0.000252	-3185.2078	83.9254	5.878E-06	72.7803	8.091E+09	-0.8880	16932.000
345.600	0.000275	-2792.5955	79.4140	4.105E-06	63.8093	8.091E+09	-0.9918	17285.000
350.400	0.000291	-2422.8332	74.4664	2.558E-06	55.3604	8.091E+09	-1.0698	17637.000
355.200	0.000300	-2077.7182	69.2008	1.223E-06	47.4747	8.091E+09	-1.1242	17990.000
360.000	0.000303	-1758.5055	63.7249	8.484E-08	40.1809	8.091E+09	-1.1574	18342.000
364.800	0.000301	-1465.9590	58.1357	-8.716E-07	33.4964	8.091E+09	-1.1715	18695.000
369.600	0.000295	-1200.4030	52.5194	-1.663E-06	27.4286	8.091E+09	-1.1687	19047.000
374.400	0.000285	-961.7730	46.9519	-2.304E-06	21.9760	8.091E+09	-1.1511	19400.000
379.200	0.000272	-749.6651	41.4990	-2.812E-06	17.1294	8.091E+09	-1.1209	19752.000
384.000	0.000258	-563.3830	36.2170	-3.201E-06	12.8730	8.091E+09	-1.0799	20105.000
388.800	0.000242	-401.9822	31.1533	-3.487E-06	9.1851	8.091E+09	-1.0299	20457.000
393.600	0.000224	-264.3114	26.3471	-3.685E-06	6.0394	8.091E+09	-0.9726	20810.000
398.400	0.000206	-149.0503	21.8300	-3.808E-06	3.4057	8.091E+09	-0.9095	21162.000
403.200	0.000188	-54.7435	17.6270	-3.868E-06	1.2509	8.091E+09	-0.8418	21515.000
408.000	0.000169	20.1693	13.7574	-3.878E-06	0.4609	8.091E+09	-0.7706	21867.000
412.800	0.000151	77.3274	10.2352	-3.849E-06	1.7669	8.091E+09	-0.6970	22220.000
417.600	0.000132	118.4271	7.0704	-3.791E-06	2.7060	8.091E+09	-0.6217	22572.000
422.400	0.000114	145.2035	4.2698	-3.713E-06	3.3178	8.091E+09	-0.5453	22925.000
427.200	9.655E-05	159.4171	1.8374	-3.623E-06	3.6426	8.091E+09	-0.4682	23278.000
432.000	7.939E-05	162.8429	-0.2243	-3.527E-06	3.7209	8.091E+09	-0.3908	23630.000
436.800	6.269E-05	157.2642	-1.9139	-3.432E-06	3.5934	8.091E+09	-0.3132	23983.000
441.600	4.644E-05	144.4691	-3.2307	-3.343E-06	3.3010	8.091E+09	-0.2354	24335.000
446.400	3.060E-05	126.2496	-4.1734	-3.262E-06	2.8847	8.091E+09	-0.1574	24688.000
451.200	1.512E-05	104.4042	-4.7404	-3.194E-06	2.3856	8.091E+09	-0.0789	25040.000
456.000	-6.429E-08	80.7417	-4.9289	-3.139E-06	1.8449	8.091E+09	0.000340	25393.000
460.800	-1.502E-05	57.0870	-4.7348	-3.098E-06	1.3044	8.091E+09	0.0805	25745.000
465.600	-2.981E-05	35.2881	-4.1525	-3.071E-06	0.8063	8.091E+09	0.1621	26098.000
470.400	-4.450E-05	17.2231	-3.1751	-3.055E-06	0.3935	8.091E+09	0.2452	26450.000
475.200	-5.914E-05	4.8074	-1.7941	-3.049E-06	0.1098	8.091E+09	0.3302	26803.000

480.000 -7.376E-05 0.000 0.000 -3.047E-06 0.000 8.091E+09 0.4173 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection = 0.2316905 inches
Computed slope at pile head = -0.0025452 radians
Maximum bending moment = 167075. inch-lbs
Maximum shear force = 3088.0000000 lbs
Depth of maximum bending moment = 81.6000000 inches below pile head
Depth of maximum shear force = 4.8000000 inches below pile head
Number of iterations = 6
Number of zero deflection points = 3

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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 5198.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X	Deflect. y	Bending Moment	Shear Force	Slope S	Total Stress	Bending Stiffness	Soil Res. p	Soil Spr. Distrib. Es*h
Lat. Load inches	inches	in-lbs	lbs	radians	psi*	lb-in^2	lb/in	lb/inch
lb/inch								
0.00	0.4184	1.560E-07	5198.0000	-0.004518	3.563E-09	8.091E+09	0.000	0.000
0.000								
4.800	0.3967	24950.	5198.0000	-0.004511	570.1032	8.091E+09	0.000	0.000
0.000								
9.600	0.3751	49901.	5198.0000	-0.004488	1140.2065	8.091E+09	0.000	0.000
0.000								
14.400	0.3536	74851.	5181.0456	-0.004451	1710.3097	8.091E+09	-7.0643	95.8879
0.000								
19.200	0.3324	99639.	5111.3383	-0.004400	2276.6939	8.091E+09	-21.9804	317.4367
0.000								
24.000	0.3114	123920.	4971.0464	-0.004333	2831.5065	8.091E+09	-36.4746	562.2431
0.000								
28.800	0.2908	147361.	4764.9952	-0.004253	3367.1170	8.091E+09	-49.3801	815.1646
0.000								
33.600	0.2706	169664.	4502.6808	-0.004159	3876.7312	8.091E+09	-59.9176	1062.9788
0.000								
38.400	0.2508	190587.	4197.1341	-0.004052	4354.8018	8.091E+09	-67.3935	1289.6022
0.000								
43.200	0.2317	209956.	3865.4098	-0.003933	4797.3929	8.091E+09	-70.8249	1467.4562
0.000								
48.000	0.2131	227695.	3512.3860	-0.003803	5202.6981	8.091E+09	-76.2683	1718.0305
0.000								
52.800	0.1952	243675.	3123.6376	-0.003664	5567.8518	8.091E+09	-85.7102	2108.1237
0.000								
57.600	0.1779	257681.	2694.8849	-0.003515	5887.8831	8.091E+09	-92.9368	2507.3404
0.000								
62.400	0.1614	269546.	2237.1966	-0.003358	6158.9878	8.091E+09	-97.7667	2907.3414
0.000								
67.200	0.1457	279159.	1762.0140	-0.003196	6378.6230	8.091E+09	-100.2261	3302.4419
0.000								
72.000	0.1307	286462.	1280.3101	-0.003028	6545.4941	8.091E+09	-100.4839	3689.3447
0.000								
76.800	0.1166	291450.	802.0496	-0.002856	6659.4652	8.091E+09	-98.7913	4066.5968
0.000								
81.600	0.1033	294161.	335.9068	-0.002683	6721.4275	8.091E+09	-95.4349	4434.0104
0.000								
86.400	0.0909	294674.	-110.8307	-0.002508	6733.1480	8.091E+09	-90.7057	4792.1714
0.000								
91.200	0.0792	293097.	-532.2400	-0.002334	6697.1163	8.091E+09	-84.8815	5142.0741
0.000								

96.000	0.0685	289565.	-923.6761	-0.002161	6616.3986	8.091E+09	-78.2169	5484.8753
0.000								
100.800	0.0585	284230.	-1281.6542	-0.001991	6494.5035	8.091E+09	-70.9407	5821.7402
0.000								
105.600	0.0493	277261.	-1603.7241	-0.001824	6335.2615	8.091E+09	-63.2551	6153.7568
0.000								
110.400	0.0410	268834.	-1888.3459	-0.001662	6142.7188	8.091E+09	-55.3373	6481.8925
0.000								
115.200	0.0334	259133.	-2134.7746	-0.001506	5921.0437	8.091E+09	-47.3413	6806.9796
0.000								
120.000	0.0265	248340.	-2342.9534	-0.001355	5674.4457	8.091E+09	-39.3999	7129.7159
0.000								
124.800	0.0204	236640.	-2513.4171	-0.001211	5407.1055	8.091E+09	-31.6267	7450.6744
0.000								
129.600	0.0149	224212.	-2647.2042	-0.001074	5123.1155	8.091E+09	-24.1179	7770.3173
0.000								
134.400	0.0101	211227.	-2745.7766	-0.000945	4826.4285	8.091E+09	-16.9539	8089.0107
0.000								
139.200	0.005824	197852.	-2810.9462	-0.000824	4520.8161	8.091E+09	-10.2001	8407.0399
0.000								
144.000	0.002151	184242.	-2844.8080	-0.000711	4209.8338	8.091E+09	-3.9089	8724.6227
0.000								
148.800	-0.000998	170542.	-2849.6775	-0.000605	3896.7937	8.091E+09	1.8800	9041.9225
0.000								
153.600	-0.003661	156885.	-2828.0342	-0.000508	3584.7433	8.091E+09	7.1381	9359.0582
0.000								
158.400	-0.005877	143393.	-2782.4691	-0.000419	3276.4507	8.091E+09	11.8474	9676.1142
0.000								
163.200	-0.007685	130174.	-2715.6369	-0.000338	2974.3952	8.091E+09	15.9993	9993.1478
0.000								
168.000	-0.009122	117323.	-2630.2131	-0.000265	2680.7626	8.091E+09	19.5939	10310.
0.000								
172.800	-0.0102	104923.	-2528.8547	-0.000199	2397.4452	8.091E+09	22.6387	10627.
0.000								
177.600	-0.0110	93046.	-2414.1665	-0.000140	2126.0461	8.091E+09	25.1480	10944.
0.000								
182.400	-0.0116	81747.	-2288.6703	-8.811E-05	1867.8861	8.091E+09	27.1420	11261.
0.000								
187.200	-0.0119	71075.	-2154.7792	-4.278E-05	1624.0152	8.091E+09	28.6459	11579.
0.000								
192.000	-0.0120	61062.	-2014.7759	-3.588E-06	1395.2249	8.091E+09	29.6888	11896.
0.000								
196.800	-0.0119	51733.	-1870.7952	2.987E-05	1182.0643	8.091E+09	30.3032	12213.
0.000								
201.600	-0.0117	43102.	-1724.8104	5.800E-05	984.8569	8.091E+09	30.5238	12530.
0.000								
206.400	-0.0114	35175.	-1578.6235	8.122E-05	803.7188	8.091E+09	30.3874	12848.
0.000								
211.200	-0.0109	27947.	-1433.8586	9.994E-05	638.5782	8.091E+09	29.9313	13165.
0.000								
216.000	-0.0104	21409.	-1291.9587	0.000115	489.1950	8.091E+09	29.1936	13482.
0.000								
220.800	-0.009813	15544.	-1154.1851	0.000126	355.1808	8.091E+09	28.2120	13800.
0.000								
225.600	-0.009188	10329.	-1021.6200	0.000133	236.0189	8.091E+09	27.0234	14117.
0.000								
230.400	-0.008534	5736.8311	-895.1706	0.000138	131.0835	8.091E+09	25.6638	14434.
0.000								
235.200	-0.007864	1735.6590	-775.5756	0.000140	39.6589	8.091E+09	24.1675	14752.
0.000								
240.000	-0.007188	-1708.6947	-663.4131	0.000140	39.0428	8.091E+09	22.5669	15069.
0.000								
244.800	-0.006518	-4633.1064	-559.1101	0.000138	105.8640	8.091E+09	20.8927	15387.
0.000								
249.600	-0.005860	-7076.1515	-462.9529	0.000135	161.6863	8.091E+09	19.1729	15704.
0.000								
254.400	-0.005223	-9077.4539	-375.0979	0.000130	207.4149	8.091E+09	17.4334	16021.
0.000								
259.200	-0.004612	-10677.	-295.5835	0.000124	243.9658	8.091E+09	15.6976	16339.
0.000								
264.000	-0.004031	-11915.	-224.3415	0.000118	272.2526	8.091E+09	13.9865	16656.
0.000								
268.800	-0.003484	-12831.	-161.2093	0.000110	293.1762	8.091E+09	12.3186	16973.
0.000								
273.600	-0.002973	-13463.	-105.9410	0.000102	307.6146	8.091E+09	10.7099	17291.
0.000								
278.400	-0.002501	-13848.	-50.1097	9.426E-05	316.4149	8.091E+09	12.5531	24093.
0.000								
283.200	-0.002068	-13944.	5.5401	8.602E-05	318.6065	8.091E+09	10.6343	24680.
0.000								

288.000	-0.001675	-13795.	52.2266	7.779E-05	315.1996	8.091E+09	8.8185	25268.
0.000								
292.800	-0.001321	-13442.	90.4742	6.971E-05	307.1503	8.091E+09	7.1180	25855.
0.000								
297.600	-0.001006	-12926.	120.8578	6.189E-05	295.3537	8.091E+09	5.5418	26443.
0.000								
302.400	-0.000727	-12282.	143.9879	5.441E-05	280.6396	8.091E+09	4.0957	27030.
0.000								
307.200	-0.000484	-11544.	160.4959	4.734E-05	263.7692	8.091E+09	2.7826	27618.
0.000								
312.000	-0.000273	-10741.	171.0213	4.073E-05	245.4340	8.091E+09	1.6030	28205.
0.000								
316.800	-9.257E-05	-9901.9782	176.2011	3.461E-05	226.2549	8.091E+09	0.5553	28793.
0.000								
321.600	5.947E-05	-9049.8162	176.6601	2.899E-05	206.7834	8.091E+09	-0.3640	29381.
0.000								
326.400	0.000186	-8206.0411	173.0034	2.387E-05	187.5036	8.091E+09	-1.1596	29968.
0.000								
331.200	0.000289	-7388.9832	165.8108	1.925E-05	168.8343	8.091E+09	-1.8374	30556.
0.000								
336.000	0.000370	-6614.2578	158.3298	1.509E-05	151.1322	8.091E+09	-1.2797	16580.
0.000								
340.800	0.000434	-5869.0170	151.5884	1.139E-05	134.1039	8.091E+09	-1.5292	16932.
0.000								
345.600	0.000480	-5159.0096	143.7714	8.117E-06	117.8806	8.091E+09	-1.7278	17285.
0.000								
350.400	0.000511	-4488.8113	135.1145	5.256E-06	102.5669	8.091E+09	-1.8792	17637.
0.000								
355.200	0.000530	-3861.9106	125.8346	2.779E-06	88.2426	8.091E+09	-1.9874	17990.
0.000								
360.000	0.000538	-3280.7994	116.1297	6.598E-07	74.9645	8.091E+09	-2.0563	18342.
0.000								
364.800	0.000537	-2747.0651	106.1788	-1.128E-06	62.7690	8.091E+09	-2.0899	18695.
0.000								
369.600	0.000527	-2261.4831	96.1413	-2.614E-06	51.6737	8.091E+09	-2.0923	19047.
0.000								
374.400	0.000512	-1824.1088	86.1580	-3.826E-06	41.6799	8.091E+09	-2.0673	19400.
0.000								
379.200	0.000491	-1434.3661	76.3516	-4.792E-06	32.7745	8.091E+09	-2.0187	19752.
0.000								
384.000	0.000466	-1091.1332	66.8274	-5.541E-06	24.9318	8.091E+09	-1.9498	20105.
0.000								
388.800	0.000437	-792.8232	57.6744	-6.100E-06	18.1156	8.091E+09	-1.8640	20457.
0.000								
393.600	0.000407	-537.4592	48.9666	-6.495E-06	12.2807	8.091E+09	-1.7643	20810.
0.000								
398.400	0.000375	-322.7437	40.7644	-6.750E-06	7.3745	8.091E+09	-1.6533	21162.
0.000								
403.200	0.000342	-146.1207	33.1159	-6.889E-06	3.3388	8.091E+09	-1.5336	21515.
0.000								
408.000	0.000309	-4.8312	26.0582	-6.934E-06	0.1104	8.091E+09	-1.4071	21867.
0.000								
412.800	0.000276	104.0385	19.6196	-6.904E-06	2.3772	8.091E+09	-1.2757	22220.
0.000								
417.600	0.000243	183.5165	13.8201	-6.819E-06	4.1933	8.091E+09	-1.1408	22572.
0.000								
422.400	0.000210	236.7111	8.6738	-6.695E-06	5.4087	8.091E+09	-1.0035	22925.
0.000								
427.200	0.000178	266.7850	4.1900	-6.545E-06	6.0959	8.091E+09	-0.8647	23278.
0.000								
432.000	0.000147	276.9354	0.3746	-6.384E-06	6.3278	8.091E+09	-0.7250	23630.
0.000								
436.800	0.000117	270.3809	-2.7689	-6.222E-06	6.1781	8.091E+09	-0.5847	23983.
0.000								
441.600	8.755E-05	250.3544	-5.2375	-6.067E-06	5.7205	8.091E+09	-0.4439	24335.
0.000								
446.400	5.879E-05	220.1013	-7.0284	-5.928E-06	5.0292	8.091E+09	-0.3023	24688.
0.000								
451.200	3.065E-05	182.8820	-8.1377	-5.808E-06	4.1788	8.091E+09	-0.1599	25040.
0.000								
456.000	3.029E-06	141.9792	-8.5599	-5.712E-06	3.2441	8.091E+09	-0.0160	25393.
0.000								
460.800	-2.418E-05	100.7072	-8.2870	-5.640E-06	2.3011	8.091E+09	0.1297	25745.
0.000								
465.600	-5.111E-05	62.4239	-7.3087	-5.591E-06	1.4264	8.091E+09	0.2779	26098.
0.000								
470.400	-7.786E-05	30.5434	-5.6121	-5.564E-06	0.6979	8.091E+09	0.4290	26450.
0.000								
475.200	-0.000105	8.5481	-3.1816	-5.552E-06	0.1953	8.091E+09	0.5836	26803.
0.000								

480.000 -0.000131 0.000 0.000 -5.550E-06 0.000 8.091E+09 0.7420 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection = 0.4184035 inches
Computed slope at pile head = -0.0045180 radians
Maximum bending moment = 294674. inch-lbs
Maximum shear force = 5198.0000000 lbs
Depth of maximum bending moment = 86.4000000 inches below pile head
Depth of maximum shear force = 9.6000000 inches below pile head
Number of iterations = 9
Number of zero deflection points = 3

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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 7092.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X	Deflect. y	Bending Moment	Shear Force	Slope S	Total Stress	Bending Stiffness	Soil Res. p	Soil Spr. Distrib. Es*h
Lat. Load inches	inches	in-lbs	lbs	radians	psi*	lb-in^2	lb/in	lb/inch
lb/inch								
0.00	0.6210	-3.509E-07	7092.0000	-0.006567	8.018E-09	8.091E+09	0.000	0.000
0.000								
4.800	0.5895	34042.	7092.0000	-0.006557	777.8323	8.091E+09	0.000	0.000
0.000								
9.600	0.5581	68083.	7092.0000	-0.006527	1555.6645	8.091E+09	0.000	0.000
0.000								
14.400	0.5268	102125.	7073.6842	-0.006476	2333.4968	8.091E+09	-7.6316	69.5296
0.000								
19.200	0.4959	135991.	6996.4906	-0.006405	3107.3114	8.091E+09	-24.5325	237.4549
0.000								
24.000	0.4654	169291.	6837.3770	-0.006315	3868.2108	8.091E+09	-41.7648	430.7911
0.000								
28.800	0.4353	201629.	6599.0945	-0.006205	4607.1231	8.091E+09	-57.5195	634.2814
0.000								
33.600	0.4058	232642.	6292.2373	-0.006076	5315.7541	8.091E+09	-70.3377	832.0092
0.000								
38.400	0.3770	262035.	5934.1883	-0.005929	5987.3558	8.091E+09	-78.8494	1004.0351
0.000								
43.200	0.3489	289611.	5549.6464	-0.005766	6617.4471	8.091E+09	-81.3764	1119.6374
0.000								
48.000	0.3216	315311.	5142.4565	-0.005586	7204.6976	8.091E+09	-88.2861	1317.6783
0.000								
52.800	0.2952	338978.	4681.6326	-0.005392	7745.4698	8.091E+09	-103.7238	1686.3315
0.000								
57.600	0.2698	360255.	4150.8536	-0.005185	8231.6364	8.091E+09	-117.4341	2088.9425
0.000								
62.400	0.2455	378826.	3560.4991	-0.004965	8655.9796	8.091E+09	-128.5470	2513.6705
0.000								
67.200	0.2222	394436.	2924.4284	-0.004736	9012.6491	8.091E+09	-136.4825	2948.6756
0.000								
72.000	0.2000	406901.	2258.4834	-0.004498	9297.4671	8.091E+09	-140.9946	3383.8500
0.000								
76.800	0.1790	416117.	1578.9663	-0.004254	9508.0583	8.091E+09	-142.1375	3811.7619
0.000								
81.600	0.1592	422059.	901.3872	-0.004006	9643.8210	8.091E+09	-140.1871	4227.8073
0.000								
86.400	0.1405	424771.	239.6152	-0.003754	9705.7820	8.091E+09	-135.5513	4629.8209
0.000								
91.200	0.1231	424359.	-394.5748	-0.003503	9696.3817	8.091E+09	-128.6945	5017.4501
0.000								

96.000	0.1069	420983.	-991.6423	-0.003252	9619.2301	8.091E+09	-120.0836	5391.5204
0.000								
100.800	0.0919	414840.	-1544.2147	-0.003004	9478.8602	8.091E+09	-110.1550	5753.5103
0.000								
105.600	0.0781	406158.	-2046.9055	-0.002760	9280.4991	8.091E+09	-99.2995	6105.1706
0.000								
110.400	0.0654	395189.	-2496.0817	-0.002523	9029.8616	8.091E+09	-87.8572	6448.2775
0.000								
115.200	0.0539	382196.	-2889.6226	-0.002292	8732.9715	8.091E+09	-76.1182	6784.4878
0.000								
120.000	0.0434	367449.	-3226.6912	-0.002070	8396.0089	8.091E+09	-64.3271	7115.2674
0.000								
124.800	0.0340	351220.	-3507.5278	-0.001857	8025.1812	8.091E+09	-52.6882	7441.8656
0.000								
129.600	0.0256	333777.	-3733.2685	-0.001653	7626.6157	8.091E+09	-41.3704	7765.3170
0.000								
134.400	0.0181	315380.	-3905.7864	-0.001461	7206.2707	8.091E+09	-30.5120	8086.4581
0.000								
139.200	0.0115	296281.	-4027.5538	-0.001279	6769.8625	8.091E+09	-20.2244	8405.9512
0.000								
144.000	0.005829	276716.	-4101.5211	-0.001109	6322.8073	8.091E+09	-10.5954	8724.3100
0.000								
148.800	0.000898	256906.	-4131.0108	-0.000951	5870.1740	8.091E+09	-1.6920	9041.9244
0.000								
153.600	-0.003301	237058.	-4119.6225	-0.000805	5416.6500	8.091E+09	6.4371	9359.0835
0.000								
158.400	-0.006826	217358.	-4071.1492	-0.000670	4966.5149	8.091E+09	13.7601	9675.9955
0.000								
163.200	-0.009732	197975.	-3989.5018	-0.000547	4523.6238	8.091E+09	20.2597	9992.8054
0.000								
168.000	-0.0121	179059.	-3878.6419	-0.000435	4091.3984	8.091E+09	25.9319	10310.
0.000								
172.800	-0.0139	160740.	-3742.5221	-0.000334	3672.8249	8.091E+09	30.7847	10626.
0.000								
177.600	-0.0153	143131.	-3585.0335	-0.000244	3270.4580	8.091E+09	34.8356	10943.
0.000								
182.400	-0.0162	126324.	-3409.9589	-0.000164	2886.4305	8.091E+09	38.1121	11260.
0.000								
187.200	-0.0169	110395.	-3220.9322	-9.371E-05	2522.4671	8.091E+09	40.6490	11577.
0.000								
192.000	-0.0171	95403.	-3021.4051	-3.266E-05	2179.9034	8.091E+09	42.4873	11894.
0.000								
196.800	-0.0172	81390.	-2814.6188	1.978E-05	1859.7072	8.091E+09	43.6736	12211.
0.000								
201.600	-0.0170	68382.	-2603.5832	6.421E-05	1562.5031	8.091E+09	44.2579	12529.
0.000								
206.400	-0.0166	56395.	-2391.0597	0.000101	1288.5987	8.091E+09	44.2935	12846.
0.000								
211.200	-0.0160	45428.	-2179.5504	0.000131	1038.0126	8.091E+09	43.8353	13163.
0.000								
216.000	-0.0153	35471.	-1971.2917	0.000155	810.5037	8.091E+09	42.9391	13481.
0.000								
220.800	-0.0145	26504.	-1768.2523	0.000174	605.6002	8.091E+09	41.6606	13798.
0.000								
225.600	-0.0136	18496.	-1572.1351	0.000187	422.6291	8.091E+09	40.0549	14116.
0.000								
230.400	-0.0127	11411.	-1384.3822	0.000196	260.7448	8.091E+09	38.1755	14433.
0.000								
235.200	-0.0117	5206.1666	-1206.1840	0.000201	118.9581	8.091E+09	36.0738	14751.
0.000								
240.000	-0.0108	-167.9461	-1038.4892	0.000202	3.8375	8.091E+09	33.7990	15068.
0.000								
244.800	-0.009795	-4763.3297	-882.0185	0.000201	108.8395	8.091E+09	31.3971	15386.
0.000								
249.600	-0.008837	-8635.3239	-737.2790	0.000197	197.3125	8.091E+09	28.9110	15703.
0.000								
254.400	-0.007904	-11841.	-604.5798	0.000191	270.5652	8.091E+09	26.3803	16021.
0.000								
259.200	-0.007004	-14439.	-484.0492	0.000183	329.9300	8.091E+09	23.8408	16338.
0.000								
264.000	-0.006146	-16488.	-375.6513	0.000174	376.7438	8.091E+09	21.3250	16656.
0.000								
268.800	-0.005334	-18046.	-279.2033	0.000164	412.3309	8.091E+09	18.8616	16973.
0.000								
273.600	-0.004574	-19168.	-194.3929	0.000153	437.9884	8.091E+09	16.4760	17290.
0.000								
278.400	-0.003868	-19912.	-108.2518	0.000141	454.9720	8.091E+09	19.4161	24092.
0.000								
283.200	-0.003219	-20208.	-21.9252	0.000129	461.7339	8.091E+09	16.5533	24680.
0.000								

288.000	-0.002628	-20122.	51.0057	0.000117	459.7814	8.091E+09	13.8345	25268.
0.000								
292.800	-0.002094	-19718.	111.2796	0.000105	450.5456	8.091E+09	11.2796	25855.
0.000								
297.600	-0.001616	-19054.	159.7184	9.391E-05	435.3716	8.091E+09	8.9032	26443.
0.000								
302.400	-0.001193	-18185.	197.2031	8.286E-05	415.5106	8.091E+09	6.7154	27030.
0.000								
307.200	-0.000821	-17161.	224.6523	7.238E-05	392.1142	8.091E+09	4.7218	27618.
0.000								
312.000	-0.000498	-16028.	243.0030	6.254E-05	366.2320	8.091E+09	2.9243	28205.
0.000								
316.800	-0.000220	-14828.	253.1930	5.338E-05	338.8103	8.091E+09	1.3215	28793.
0.000								
321.600	1.481E-05	-13597.	256.1471	4.495E-05	310.6929	8.091E+09	-0.0907	29381.
0.000								
326.400	0.000211	-12369.	252.7646	3.725E-05	282.6232	8.091E+09	-1.3187	29968.
0.000								
331.200	0.000372	-11171.	243.9102	3.027E-05	255.2478	8.091E+09	-2.3706	30556.
0.000								
336.000	0.000502	-10027.	234.0611	2.398E-05	229.1203	8.091E+09	-1.7332	16580.
0.000								
340.800	0.000603	-8923.8566	224.7998	1.836E-05	203.9053	8.091E+09	-2.1257	16932.
0.000								
345.600	0.000678	-7869.3055	213.8386	1.338E-05	179.8094	8.091E+09	-2.4415	17285.
0.000								
350.400	0.000731	-6871.0060	201.5326	9.003E-06	156.9988	8.091E+09	-2.6860	17637.
0.000								
355.200	0.000764	-5934.5921	188.2102	5.205E-06	135.6022	8.091E+09	-2.8650	17990.
0.000								
360.000	0.000781	-5064.1877	174.1719	1.942E-06	115.7140	8.091E+09	-2.9843	18342.
0.000								
364.800	0.000783	-4262.5417	159.6899	-8.244E-07	97.3968	8.091E+09	-3.0499	18695.
0.000								
369.600	0.000773	-3531.1651	145.0079	-3.136E-06	80.6852	8.091E+09	-3.0676	19047.
0.000								
374.400	0.000753	-2870.4662	130.3419	-5.035E-06	65.5886	8.091E+09	-3.0432	19400.
0.000								
379.200	0.000725	-2279.8832	115.8807	-6.563E-06	52.0941	8.091E+09	-2.9822	19752.
0.000								
384.000	0.000690	-1758.0110	101.7875	-7.761E-06	40.1696	8.091E+09	-2.8899	20105.
0.000								
388.800	0.000650	-1302.7228	88.2009	-8.668E-06	29.7665	8.091E+09	-2.7712	20457.
0.000								
393.600	0.000607	-911.2823	75.2369	-9.325E-06	20.8223	8.091E+09	-2.6305	20810.
0.000								
398.400	0.000561	-580.4482	62.9910	-9.768E-06	13.2629	8.091E+09	-2.4720	21162.
0.000								
403.200	0.000513	-306.5685	51.5399	-1.003E-05	7.0049	8.091E+09	-2.2993	21515.
0.000								
408.000	0.000464	-85.6649	40.9441	-1.015E-05	1.9574	8.091E+09	-2.1156	21867.
0.000								
412.800	0.000416	86.4944	31.2496	-1.015E-05	1.9764	8.091E+09	-1.9237	22220.
0.000								
417.600	0.000367	214.3314	22.4909	-1.006E-05	4.8974	8.091E+09	-1.7258	22572.
0.000								
422.400	0.000319	302.4067	14.6924	-9.904E-06	6.9098	8.091E+09	-1.5236	22925.
0.000								
427.200	0.000272	355.3781	7.8711	-9.709E-06	8.1202	8.091E+09	-1.3186	23278.
0.000								
432.000	0.000226	377.9696	2.0387	-9.492E-06	8.6364	8.091E+09	-1.1116	23630.
0.000								
436.800	0.000181	374.9499	-2.7969	-9.268E-06	8.5674	8.091E+09	-0.9032	23983.
0.000								
441.600	0.000137	351.1195	-6.6295	-9.053E-06	8.0229	8.091E+09	-0.6937	24335.
0.000								
446.400	9.387E-05	311.3070	-9.4530	-8.857E-06	7.1132	8.091E+09	-0.4828	24688.
0.000								
451.200	5.180E-05	260.3709	-11.2602	-8.687E-06	5.9493	8.091E+09	-0.2702	25040.
0.000								
456.000	1.047E-05	203.2086	-12.0418	-8.549E-06	4.6432	8.091E+09	-0.0554	25393.
0.000								
460.800	-3.027E-05	144.7696	-11.7851	-8.446E-06	3.3079	8.091E+09	0.1624	25745.
0.000								
465.600	-7.061E-05	90.0718	-10.4740	-8.377E-06	2.0581	8.091E+09	0.3839	26098.
0.000								
470.400	-0.000111	44.2190	-8.0888	-8.337E-06	1.0104	8.091E+09	0.6099	26450.
0.000								
475.200	-0.000151	12.4192	-4.6061	-8.320E-06	0.2838	8.091E+09	0.8412	26803.
0.000								

480.000 -0.000191 0.000 0.000 -8.316E-06 0.000 8.091E+09 1.0781 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 5:

Pile-head deflection = 0.6210237 inches
Computed slope at pile head = -0.0065669 radians
Maximum bending moment = 424771. inch-lbs
Maximum shear force = 7092.0000000 lbs
Depth of maximum bending moment = 86.4000000 inches below pile head
Depth of maximum shear force = 9.6000000 inches below pile head
Number of iterations = 11
Number of zero deflection points = 3

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 6

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 11620.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Distrib. Es*h lb/inch	Lat. Load lb/inch
0.00	1.2636	1.248E-06	11620.	-0.0126	2.851E-08	8.091E+09	0.000	0.000	0.000
4.800	1.2030	55776.	11620.	-0.0126	1274.4516	8.091E+09	0.000	0.000	0.000
9.600	1.1426	111552.	11620.	-0.0126	2548.9032	8.091E+09	0.000	0.000	0.000
14.400	1.0824	167328.	11601.	-0.0125	3823.3548	8.091E+09	-7.8087	34.6279	0.000
19.200	1.0228	222924.	11521.	-0.0124	5093.6955	8.091E+09	-25.5921	120.1082	0.000
24.000	0.9637	277931.	11353.	-0.0122	6350.5632	8.091E+09	-44.4137	221.2073	0.000
28.800	0.9055	331914.	11098.	-0.0120	7584.0493	8.091E+09	-62.0773	329.0656	0.000
33.600	0.8482	384467.	10765.	-0.0118	8784.8546	8.091E+09	-76.4256	432.4850	0.000
38.400	0.7920	435259.	10377.	-0.0116	9945.4255	8.091E+09	-85.3135	517.0325	0.000
43.200	0.7371	484085.	9964.4584	-0.0113	11061.	8.091E+09	-86.5470	563.6120	0.000
48.000	0.6835	530917.	9530.1466	-0.0110	12131.	8.091E+09	-94.4162	663.0507	0.000
52.800	0.6314	575574.	9025.2360	-0.0107	13152.	8.091E+09	-115.9632	881.5107	0.000
57.600	0.5810	617560.	8413.2046	-0.0103	14111.	8.091E+09	-139.0499	1148.7377	0.000
62.400	0.5324	656341.	7688.3366	-0.009944	14997.	8.091E+09	-162.9785	1469.4993	0.000
67.200	0.4856	691368.	6849.1529	-0.009544	15797.	8.091E+09	-186.6814	1845.4343	0.000
72.000	0.4407	722093.	5900.0921	-0.009125	16499.	8.091E+09	-208.7606	2273.5926	0.000
76.800	0.3980	748009.	4852.7010	-0.008689	17092.	8.091E+09	-227.6523	2745.7998	0.000
81.600	0.3573	768679.	3725.7994	-0.008239	17564.	8.091E+09	-241.8900	3249.3484	0.000
86.400	0.3189	783776.	2544.3485	-0.007778	17909.	8.091E+09	-250.3812	3768.9856	0.000
91.200	0.2827	793105.	1337.2030	-0.007310	18122.	8.091E+09	-252.5961	4289.5556	0.000

96.000	0.2487	796613.	134.3108	-0.006839	18202.	8.091E+09	-248.6090	4798.3672
0.000								
100.800	0.2170	794394.	-1035.9493	-0.006367	18151.	8.091E+09	-238.9994	5286.5927
0.000								
105.600	0.1876	786668.	-2148.7702	-0.005898	17975.	8.091E+09	-224.6760	5749.5261
0.000								
110.400	0.1604	773766.	-3184.0497	-0.005435	17680.	8.091E+09	-206.6905	6185.9846
0.000								
115.200	0.1354	756101.	-4126.7258	-0.004981	17277.	8.091E+09	-186.0912	6597.3065
0.000								
120.000	0.1126	734149.	-4966.5376	-0.004539	16775.	8.091E+09	-163.8304	6986.3265
0.000								
124.800	0.0918	708423.	-5697.4609	-0.004111	16187.	8.091E+09	-140.7210	7356.5427
0.000								
129.600	0.0731	679454.	-6317.0170	-0.003700	15525.	8.091E+09	-117.4274	7711.5387
0.000								
134.400	0.0563	647779.	-6825.5851	-0.003306	14801.	8.091E+09	-94.4760	8054.6386
0.000								
139.200	0.0414	613928.	-7225.7846	-0.002932	14028.	8.091E+09	-72.2738	8388.7356
0.000								
144.000	0.0282	578412.	-7521.9522	-0.002578	13216.	8.091E+09	-51.1293	8716.2366
0.000								
148.800	0.0166	541717.	-7719.7129	-0.002246	12378.	8.091E+09	-31.2710	9039.0742
0.000								
153.600	0.006597	504303.	-7825.6350	-0.001935	11523.	8.091E+09	-12.8632	9358.7539
0.000								
158.400	-0.001975	466591.	-7846.9518	-0.001647	10661.	8.091E+09	3.9812	9676.4160
0.000								
163.200	-0.009219	428972.	-7791.3368	-0.001382	9801.7750	8.091E+09	19.1917	9992.8988
0.000								
168.000	-0.0152	391794.	-7666.7205	-0.001138	8952.2930	8.091E+09	32.7318	10309.
0.000								
172.800	-0.0201	355371.	-7481.1380	-0.000917	8120.0428	8.091E+09	44.5942	10625.
0.000								
177.600	-0.0240	319976.	-7242.6045	-0.000716	7311.2692	8.091E+09	54.7947	10940.
0.000								
182.400	-0.0270	285842.	-6959.0065	-0.000537	6531.3424	8.091E+09	63.3711	11256.
0.000								
187.200	-0.0292	253169.	-6638.0062	-0.000377	5784.7774	8.091E+09	70.3790	11571.
0.000								
192.000	-0.0306	222117.	-6286.9633	-0.000236	5075.2636	8.091E+09	75.8889	11888.
0.000								
196.800	-0.0315	192814.	-5912.8695	-0.000113	4405.7016	8.091E+09	79.9836	12204.
0.000								
201.600	-0.0317	165354.	-5522.2946	-6.543E-06	3778.2471	8.091E+09	82.7559	12521.
0.000								
206.400	-0.0315	139800.	-5121.3453	8.397E-05	3194.3596	8.091E+09	84.3063	12838.
0.000								
211.200	-0.0309	116189.	-4715.6331	0.000160	2654.8552	8.091E+09	84.7405	13155.
0.000								
216.000	-0.0300	94530.	-4310.2530	0.000222	2159.9626	8.091E+09	84.1679	13473.
0.000								
220.800	-0.0288	74811.	-3909.7710	0.000273	1709.3804	8.091E+09	82.6996	13791.
0.000								
225.600	-0.0274	56996.	-3518.2196	0.000312	1302.3355	8.091E+09	80.4468	14109.
0.000								
230.400	-0.0258	41036.	-3139.1013	0.000341	937.6419	8.091E+09	77.5192	14427.
0.000								
235.200	-0.0241	26861.	-2775.3983	0.000361	613.7584	8.091E+09	74.0238	14745.
0.000								
240.000	-0.0223	14392.	-2429.5882	0.000373	328.8448	8.091E+09	70.0638	15063.
0.000								
244.800	-0.0205	3536.9090	-2103.6649	0.000379	80.8165	8.091E+09	65.7376	15382.
0.000								
249.600	-0.0187	-5803.3852	-1799.1630	0.000378	132.6042	8.091E+09	61.1382	15700.
0.000								
254.400	-0.0169	-13735.	-1517.1861	0.000372	313.8386	8.091E+09	56.3522	16018.
0.000								
259.200	-0.0151	-20368.	-1258.4372	0.000362	465.4063	8.091E+09	51.4598	16336.
0.000								
264.000	-0.0134	-25816.	-1023.2509	0.000348	589.8829	8.091E+09	46.5345	16654.
0.000								
268.800	-0.0118	-30192.	-811.6261	0.000332	689.8614	8.091E+09	41.6425	16971.
0.000								
273.600	-0.0102	-33608.	-623.2593	0.000313	767.9170	8.091E+09	36.8436	17289.
0.000								
278.400	-0.008776	-36175.	-429.1271	0.000292	826.5763	8.091E+09	44.0448	24091.
0.000								
283.200	-0.007426	-37727.	-231.7899	0.000270	862.0481	8.091E+09	38.1790	24679.
0.000								

288.000	-0.006183	-38400.	-62.0458	0.000247	877.4205	8.091E+09	32.5477	25267.
0.000								
292.800	-0.005050	-38323.	81.3502	0.000225	875.6582	8.091E+09	27.2007	25855.
0.000								
297.600	-0.004026	-37619.	199.8571	0.000202	859.5760	8.091E+09	22.1772	26442.
0.000								
302.400	-0.003109	-36404.	295.0969	0.000180	831.8186	8.091E+09	17.5061	27030.
0.000								
307.200	-0.002295	-34786.	368.8078	0.000159	794.8451	8.091E+09	13.2068	27618.
0.000								
312.000	-0.001581	-32864.	422.8013	0.000139	750.9188	8.091E+09	9.2905	28205.
0.000								
316.800	-0.000960	-30727.	458.9239	0.000120	702.1016	8.091E+09	5.7606	28793.
0.000								
321.600	-0.000427	-28458.	479.0238	0.000103	650.2516	8.091E+09	2.6143	29381.
0.000								
326.400	2.507E-05	-26129.	484.9226	8.645E-05	597.0254	8.091E+09	-0.1565	29968.
0.000								
331.200	0.000403	-23803.	478.3925	7.164E-05	543.8815	8.091E+09	-2.5644	30556.
0.000								
336.000	0.000713	-21536.	466.3285	5.819E-05	492.0877	8.091E+09	-2.4622	16580.
0.000								
340.800	0.000962	-19326.	452.2788	4.607E-05	441.5901	8.091E+09	-3.3918	16932.
0.000								
345.600	0.001155	-17194.	434.1552	3.524E-05	392.8781	8.091E+09	-4.1597	17285.
0.000								
350.400	0.001300	-15158.	412.7092	2.564E-05	346.3560	8.091E+09	-4.7761	17637.
0.000								
355.200	0.001401	-13232.	388.6416	1.722E-05	302.3484	8.091E+09	-5.2520	17990.
0.000								
360.000	0.001465	-11427.	362.5993	9.909E-06	261.1056	8.091E+09	-5.5989	18342.
0.000								
364.800	0.001496	-9751.2336	335.1740	3.626E-06	222.8104	8.091E+09	-5.8284	18695.
0.000								
369.600	0.001500	-8209.5410	306.9006	-1.701E-06	187.5836	8.091E+09	-5.9522	19047.
0.000								
374.400	0.001480	-6804.9879	278.2581	-6.155E-06	155.4903	8.091E+09	-5.9821	19400.
0.000								
379.200	0.001441	-5538.2634	249.6704	-9.816E-06	126.5463	8.091E+09	-5.9294	19752.
0.000								
384.000	0.001386	-4408.1522	221.5082	-1.277E-05	100.7239	8.091E+09	-5.8048	20105.
0.000								
388.800	0.001318	-3411.7845	194.0917	-1.509E-05	77.9574	8.091E+09	-5.6187	20457.
0.000								
393.600	0.001241	-2544.8716	167.6936	-1.685E-05	58.1489	8.091E+09	-5.3805	20810.
0.000								
398.400	0.001157	-1801.9257	142.5427	-1.814E-05	41.1730	8.091E+09	-5.0990	21162.
0.000								
403.200	0.001067	-1176.4614	118.8279	-1.903E-05	26.8815	8.091E+09	-4.7821	21515.
0.000								
408.000	0.000974	-661.1776	96.7025	-1.957E-05	15.1076	8.091E+09	-4.4368	21867.
0.000								
412.800	0.000879	-248.1177	76.2883	-1.984E-05	5.6694	8.091E+09	-4.0691	22220.
0.000								
417.600	0.000783	71.1900	57.6805	-1.989E-05	1.6267	8.091E+09	-3.6841	22572.
0.000								
422.400	0.000688	305.6150	40.9519	-1.978E-05	6.9831	8.091E+09	-3.2861	22925.
0.000								
427.200	0.000594	464.3279	26.1573	-1.955E-05	10.6096	8.091E+09	-2.8783	23278.
0.000								
432.000	0.000500	556.7251	13.3380	-1.925E-05	12.7209	8.091E+09	-2.4631	23630.
0.000								
436.800	0.000409	592.3727	2.5255	-1.891E-05	13.5354	8.091E+09	-2.0421	23983.
0.000								
441.600	0.000319	580.9696	-6.2547	-1.856E-05	13.2748	8.091E+09	-1.6163	24335.
0.000								
446.400	0.000231	532.3278	-12.9794	-1.823E-05	12.1634	8.091E+09	-1.1857	24688.
0.000								
451.200	0.000144	456.3676	-17.6252	-1.794E-05	10.4278	8.091E+09	-0.7501	25040.
0.000								
456.000	5.833E-05	363.1257	-20.1660	-1.769E-05	8.2972	8.091E+09	-0.3086	25393.
0.000								
460.800	-2.609E-05	262.7740	-20.5708	-1.751E-05	6.0042	8.091E+09	0.1399	25745.
0.000								
465.600	-0.000110	165.6459	-18.8029	-1.738E-05	3.7849	8.091E+09	0.5967	26098.
0.000								
470.400	-0.000193	82.2666	-14.8189	-1.731E-05	1.8797	8.091E+09	1.0633	26450.
0.000								
475.200	-0.000276	23.3847	-8.5694	-1.728E-05	0.5343	8.091E+09	1.5407	26803.
0.000								

480.000 -0.000359 0.000 0.000 -1.727E-05 0.000 8.091E+09 2.0299 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 6:

Pile-head deflection = 1.2636150 inches
Computed slope at pile head = -0.0126272 radians
Maximum bending moment = 796613. inch-lbs
Maximum shear force = 11620. lbs
Depth of maximum bending moment = 96.0000000 inches below pile head
Depth of maximum shear force = 9.6000000 inches below pile head
Number of iterations = 15
Number of zero deflection points = 3

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 7

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 14710.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	1.8250	-3.119E-07	14710.	-0.0176	7.127E-09	8.091E+09	0.000	0.000	0.000
4.800	1.7407	70608.	14710.	-0.0176	1613.3548	8.091E+09	0.000	0.000	0.000
9.600	1.6565	141216.	14710.	-0.0175	3226.7097	8.091E+09	0.000	0.000	0.000
14.400	1.5727	211824.	14691.	-0.0174	4840.0645	8.091E+09	-7.8103	23.8380	0.000
19.200	1.4895	282252.	14611.	-0.0172	6449.3076	8.091E+09	-25.6102	82.5304	0.000
24.000	1.4071	352090.	14443.	-0.0171	8045.0681	8.091E+09	-44.4802	151.7321	0.000
28.800	1.3257	420903.	14187.	-0.0168	9617.4120	8.091E+09	-62.2188	225.2704	0.000
33.600	1.2456	488283.	13854.	-0.0166	11157.	8.091E+09	-76.6274	295.2974	0.000
38.400	1.1668	553897.	13464.	-0.0162	12656.	8.091E+09	-85.5083	351.7731	0.000
43.200	1.0896	617541.	13051.	-0.0159	14110.	8.091E+09	-86.6595	381.7726	0.000
48.000	1.0141	679188.	12616.	-0.0155	15519.	8.091E+09	-94.5575	447.5602	0.000
52.800	0.9406	738657.	12110.	-0.0151	16878.	8.091E+09	-116.4625	594.3272	0.000
57.600	0.8692	795443.	11493.	-0.0146	18175.	8.091E+09	-140.4896	775.8478	0.000
62.400	0.8000	848991.	10756.	-0.0142	19399.	8.091E+09	-166.4914	998.9125	0.000
67.200	0.7333	898704.	9890.8949	-0.0136	20535.	8.091E+09	-194.1291	1270.7269	0.000
72.000	0.6691	943944.	8890.3913	-0.0131	21569.	8.091E+09	-222.7474	1597.8930	0.000
76.800	0.6076	984052.	7752.7729	-0.0125	22485.	8.091E+09	-251.2603	1984.8141	0.000
81.600	0.5490	1018371.	6482.2767	-0.0119	23269.	8.091E+09	-278.1131	2431.7871	0.000
86.400	0.4932	1046282.	5091.4683	-0.0113	23907.	8.091E+09	-301.3903	2933.4017	0.000
91.200	0.4404	1067249.	3602.3163	-0.0107	24386.	8.091E+09	-319.0897	3478.0600	0.000

96.000	0.3906	1080864.	2045.6851	-0.0100	24697.	8.091E+09	-329.5066	4049.1866
0.000								
100.800	0.3439	1086887.	459.0447	-0.009404	24835.	8.091E+09	-331.5936	4627.9860
0.000								
105.600	0.3003	1085271.	-1117.1522	-0.008760	24798.	8.091E+09	-325.1551	5196.8210
0.000								
110.400	0.2598	1076163.	-2643.4828	-0.008119	24590.	8.091E+09	-310.8159	5741.9886
0.000								
115.200	0.2224	1059893.	-4084.9725	-0.007485	24218.	8.091E+09	-289.8048	6255.0835
0.000								
120.000	0.1880	1036947.	-5413.2963	-0.006863	23694.	8.091E+09	-263.6635	6732.8796
0.000								
124.800	0.1565	1007926.	-6607.6471	-0.006256	23031.	8.091E+09	-233.9827	7176.2274
0.000								
129.600	0.1279	973513.	-7654.5339	-0.005669	22244.	8.091E+09	-202.2201	7588.6032
0.000								
134.400	0.1021	934442.	-8546.9213	-0.005103	21351.	8.091E+09	-169.6080	7974.7842
0.000								
139.200	0.0789	891463.	-9283.0893	-0.004561	20369.	8.091E+09	-137.1287	8339.8652
0.000								
144.000	0.0583	845324.	-9865.4743	-0.004046	19315.	8.091E+09	-105.5317	8688.6443
0.000								
148.800	0.0401	796754.	-10300.	-0.003559	18205.	8.091E+09	-75.3686	9025.3066
0.000								
153.600	0.0241	746448.	-10593.	-0.003101	17056.	8.091E+09	-47.0318	9353.3123
0.000								
158.400	0.0103	695058.	-10756.	-0.002673	15882.	8.091E+09	-20.7899	9675.4069
0.000								
163.200	-0.001529	643189.	-10798.	-0.002276	14697.	8.091E+09	3.1833	9993.6927
0.000								
168.000	-0.0115	591393.	-10731.	-0.001910	13513.	8.091E+09	24.7870	10310.
0.000								
172.800	-0.0199	540168.	-10566.	-0.001575	12343.	8.091E+09	43.9762	10625.
0.000								
177.600	-0.0267	489957.	-10315.	-0.001269	11195.	8.091E+09	60.7484	10939.
0.000								
182.400	-0.0321	441145.	-9988.7991	-0.000993	10080.	8.091E+09	75.1372	11253.
0.000								
187.200	-0.0362	394064.	-9599.1760	-0.000745	9004.1591	8.091E+09	87.2058	11567.
0.000								
192.000	-0.0392	348993.	-9156.9817	-0.000525	7974.3010	8.091E+09	97.0418	11881.
0.000								
196.800	-0.0412	306157.	-8672.6743	-0.000330	6995.5308	8.091E+09	104.7529	12197.
0.000								
201.600	-0.0424	265735.	-8156.1576	-0.000161	6071.9080	8.091E+09	110.4624	12512.
0.000								
206.400	-0.0428	227858.	-7616.7116	-1.434E-05	5206.4382	8.091E+09	114.3067	12829.
0.000								
211.200	-0.0425	192615.	-7062.9404	0.000110	4401.1454	8.091E+09	116.4313	13146.
0.000								
216.000	-0.0417	160054.	-6502.7329	0.000215	3657.1481	8.091E+09	116.9885	13463.
0.000								
220.800	-0.0404	130189.	-5943.2374	0.000301	2974.7395	8.091E+09	116.1347	13781.
0.000								
225.600	-0.0388	102999.	-5390.8471	0.000370	2353.4702	8.091E+09	114.0279	14100.
0.000								
230.400	-0.0369	78436.	-4851.1976	0.000424	1792.2311	8.091E+09	110.8260	14418.
0.000								
235.200	-0.0347	56427.	-4329.1729	0.000464	1289.3365	8.091E+09	106.6842	14737.
0.000								
240.000	-0.0324	36876.	-3828.9215	0.000492	842.6061	8.091E+09	101.7539	15056.
0.000								
244.800	-0.0300	19670.	-3353.8788	0.000509	449.4441	8.091E+09	96.1806	15375.
0.000								
249.600	-0.0276	4679.1697	-2906.7976	0.000516	106.9165	8.091E+09	90.1033	15694.
0.000								
254.400	-0.0251	-8235.4690	-2489.7826	0.000515	188.1760	8.091E+09	83.6530	16013.
0.000								
259.200	-0.0226	-19223.	-2104.3303	0.000507	439.2293	8.091E+09	76.9521	16332.
0.000								
264.000	-0.0202	-28437.	-1751.3714	0.000492	649.7711	8.091E+09	70.1140	16650.
0.000								
268.800	-0.0179	-36036.	-1431.3158	0.000473	823.4011	8.091E+09	63.2425	16969.
0.000								
273.600	-0.0157	-42178.	-1144.0978	0.000450	963.7371	8.091E+09	56.4317	17287.
0.000								
278.400	-0.0136	-47019.	-845.2444	0.000424	1074.3645	8.091E+09	68.0906	24087.
0.000								
283.200	-0.0116	-50292.	-538.6763	0.000395	1149.1455	8.091E+09	59.6461	24676.
0.000								

288.000	-0.009779	-52191.	-271.9926	0.000364	1192.5258	8.091E+09	51.4721	25265.0000
292.800	-0.008104	-52903.	-43.6975	0.000333	1208.8084	8.091E+09	43.6509	25854.0000
297.600	-0.006580	-52610.	148.0612	0.000302	1202.1110	8.091E+09	36.2486	26442.0000
302.400	-0.005206	-51482.	305.4168	0.000271	1176.3305	8.091E+09	29.3162	27030.0000
307.200	-0.003978	-49678.	430.7132	0.000241	1135.1164	8.091E+09	22.8906	27618.0000
312.000	-0.002892	-47347.	526.4397	0.000212	1081.8515	8.091E+09	16.9955	28205.0000
316.800	-0.001941	-44624.	595.1722	0.000185	1019.6393	8.091E+09	11.6431	28793.0000
321.600	-0.001117	-41633.	639.5210	0.000159	951.2976	8.091E+09	6.8356	29380.0000
326.400	-0.000411	-38485.	662.0857	0.000136	879.3573	8.091E+09	2.5664	29968.0000
331.200	0.000185	-35277.	665.4182	0.000114	806.0659	8.091E+09	-1.1779	30556.0000
336.000	0.000681	-32097.	656.9487	9.374E-05	733.3946	8.091E+09	-2.3511	16580.0000
340.800	0.001085	-28971.	642.1209	7.562E-05	661.9610	8.091E+09	-3.8271	16932.0000
345.600	0.001407	-25932.	620.7789	5.934E-05	592.5422	8.091E+09	-5.0654	17285.0000
350.400	0.001655	-23011.	594.0310	4.482E-05	525.7901	8.091E+09	-6.0796	17637.0000
355.200	0.001837	-20230.	562.9170	3.199E-05	462.2386	8.091E+09	-6.8846	17990.0000
360.000	0.001962	-17607.	528.4028	2.077E-05	402.3116	8.091E+09	-7.4963	18342.0000
364.800	0.002036	-15157.	491.3773	1.105E-05	346.3309	8.091E+09	-7.9310	18695.0000
369.600	0.002068	-12890.	452.6499	2.732E-06	294.5256	8.091E+09	-8.2054	19047.0000
374.400	0.002063	-10812.	412.9502	-4.298E-06	247.0400	8.091E+09	-8.3361	19400.0000
379.200	0.002027	-8925.5034	372.9291	-1.015E-05	203.9430	8.091E+09	-8.3393	19752.0000
384.000	0.001965	-7231.5131	333.1607	-1.495E-05	165.2362	8.091E+09	-8.2308	20105.0000
388.800	0.001883	-5727.1611	294.1454	-1.879E-05	130.8626	8.091E+09	-8.0255	20457.0000
393.600	0.001785	-4407.7172	256.3143	-2.180E-05	100.7140	8.091E+09	-7.7375	20810.0000
398.400	0.001674	-3266.5443	220.0333	-2.407E-05	74.6388	8.091E+09	-7.3796	21162.0000
403.200	0.001554	-2295.3977	185.6091	-2.572E-05	52.4486	8.091E+09	-6.9638	21515.0000
408.000	0.001427	-1484.6970	153.2947	-2.684E-05	33.9245	8.091E+09	-6.5005	21867.0000
412.800	0.001296	-823.7685	123.2956	-2.753E-05	18.8227	8.091E+09	-5.9991	22220.0000
417.600	0.001163	-301.0592	95.7761	-2.786E-05	6.8790	8.091E+09	-5.4674	22572.0000
422.400	0.001028	95.6816	70.8655	-2.792E-05	2.1863	8.091E+09	-4.9120	22925.0000
427.200	0.000895	379.2499	48.6650	-2.778E-05	8.6657	8.091E+09	-4.3382	23278.0000
432.000	0.000762	562.8653	29.2530	-2.750E-05	12.8612	8.091E+09	-3.7501	23630.0000
436.800	0.000631	660.0782	12.6915	-2.714E-05	15.0824	8.091E+09	-3.1505	23983.0000
441.600	0.000501	684.7037	-0.9684	-2.674E-05	15.6451	8.091E+09	-2.5411	24335.0000
446.400	0.000374	650.7813	-11.6819	-2.634E-05	14.8700	8.091E+09	-1.9228	24688.0000
451.200	0.000248	572.5575	-19.4057	-2.598E-05	13.0826	8.091E+09	-1.2954	25040.0000
456.000	0.000124	464.4868	-24.0946	-2.567E-05	10.6133	8.091E+09	-0.6583	25393.0000
460.800	1.859E-06	341.2497	-25.6983	-2.543E-05	7.7974	8.091E+09	-0.009973	25745.0000
465.600	-0.000120	217.7830	-24.1598	-2.527E-05	4.9762	8.091E+09	0.6510	26098.0000
470.400	-0.000241	109.3160	-19.4137	-2.517E-05	2.4978	8.091E+09	1.3265	26450.0000
475.200	-0.000361	31.4111	-11.3871	-2.513E-05	0.7177	8.091E+09	2.0180	26803.0000

480.000 -0.000482 0.000 0.000 -2.512E-05 0.000 8.091E+09 2.7267 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 7:

Pile-head deflection = 1.8250470 inches
Computed slope at pile head = -0.0175812 radians
Maximum bending moment = 1086887. inch-lbs
Maximum shear force = 14710. lbs
Depth of maximum bending moment = 100.8000000 inches below pile head
Depth of maximum shear force = 4.8000000 inches below pile head
Number of iterations = 17
Number of zero deflection points = 3

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 8

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 17134.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	2.3335	-1.092E-06	17134.	-0.0219	2.494E-08	8.091E+09	0.000	0.000	0.000
4.800	2.2285	82243.	17134.	-0.0219	1879.2129	8.091E+09	0.000	0.000	0.000
9.600	2.1237	164486.	17134.	-0.0218	3758.4258	8.091E+09	0.000	0.000	0.000
14.400	2.0193	246730.	17115.	-0.0217	5637.6387	8.091E+09	-7.8104	18.5655	0.000
19.200	1.9157	328793.	17035.	-0.0215	7512.7398	8.091E+09	-25.6107	64.1710	0.000
24.000	1.8130	410266.	16867.	-0.0213	9374.3582	8.091E+09	-44.4827	117.7712	0.000
28.800	1.7114	490714.	16611.	-0.0210	11213.	8.091E+09	-62.2250	174.5192	0.000
33.600	1.6113	569729.	16277.	-0.0207	13018.	8.091E+09	-76.6365	228.2962	0.000
38.400	1.5128	646978.	15888.	-0.0203	14783.	8.091E+09	-85.5163	271.3381	0.000
43.200	1.4161	722257.	15475.	-0.0199	16503.	8.091E+09	-86.6629	293.7476	0.000
48.000	1.3215	795538.	15040.	-0.0195	18178.	8.091E+09	-94.5619	343.4700	0.000
52.800	1.2292	866642.	14534.	-0.0190	19802.	8.091E+09	-116.4877	454.8987	0.000
57.600	1.1393	935061.	13917.	-0.0184	21366.	8.091E+09	-140.5985	592.3720	0.000
62.400	1.0521	1000241.	13179.	-0.0179	22855.	8.091E+09	-166.8688	761.3410	0.000
67.200	0.9677	1061576.	12310.	-0.0173	24256.	8.091E+09	-195.2169	968.3372	0.000
72.000	0.8863	1118414.	11300.	-0.0166	25555.	8.091E+09	-225.4303	1220.8353	0.000
76.800	0.8082	1170057.	10142.	-0.0159	26735.	8.091E+09	-257.0458	1526.6868	0.000
81.600	0.7333	1215779.	8831.1810	-0.0152	27780.	8.091E+09	-289.1993	1892.9335	0.000
86.400	0.6620	1254837.	7367.9093	-0.0145	28672.	8.091E+09	-320.4972	2323.9646	0.000
91.200	0.5942	1286510.	5761.1372	-0.0137	29396.	8.091E+09	-348.9912	2819.3240	0.000

96.000	0.5300	1310144.	4029.9417	-0.0130	29936.	8.091E+09	-372.3403	3371.9037
0.000								
100.800	0.4696	1325198.	2204.6861	-0.0122	30280.	8.091E+09	-388.1829	3967.5057
0.000								
105.600	0.4130	1331309.	325.9322	-0.0114	30420.	8.091E+09	-394.6312	4586.4467
0.000								
110.400	0.3602	1328327.	-1558.8792	-0.0106	30352.	8.091E+09	-390.7069	5206.9901
0.000								
115.200	0.3111	1316343.	-3400.2675	-0.009829	30078.	8.091E+09	-376.5382	5809.4059
0.000								
120.000	0.2658	1295684.	-5151.7685	-0.009055	29606.	8.091E+09	-353.2538	6379.1408
0.000								
124.800	0.2242	1266886.	-6773.9467	-0.008294	28948.	8.091E+09	-322.6538	6908.1585
0.000								
129.600	0.1862	1230654.	-8236.6691	-0.007554	28120.	8.091E+09	-286.8139	7394.4816
0.000								
134.400	0.1517	1187814.	-9519.6379	-0.006836	27141.	8.091E+09	-247.7564	7840.6367
0.000								
139.200	0.1206	1139266.	-10612.	-0.006146	26032.	8.091E+09	-207.2457	8251.8189
0.000								
144.000	0.0927	1085943.	-11509.	-0.005486	24813.	8.091E+09	-166.7042	8634.3199
0.000								
148.800	0.0679	1028778.	-12215.	-0.004859	23507.	8.091E+09	-127.2119	8994.4367
0.000								
153.600	0.0460	968683.	-12735.	-0.004266	22134.	8.091E+09	-89.5496	9337.8439
0.000								
158.400	0.0269	906525.	-13080.	-0.003710	20714.	8.091E+09	-54.2565	9669.3160
0.000								
163.200	0.0104	843116.	-13262.	-0.003191	19265.	8.091E+09	-21.6865	9992.6729
0.000								
168.000	-0.003699	779208.	-13295.	-0.002710	17804.	8.091E+09	7.9449	10311.
0.000								
172.800	-0.0156	715483.	-13193.	-0.002266	16348.	8.091E+09	34.5244	10626.
0.000								
177.600	-0.0255	652553.	-12971.	-0.001860	14910.	8.091E+09	58.0126	10939.
0.000								
182.400	-0.0335	590960.	-12644.	-0.001492	13503.	8.091E+09	78.4258	11252.
0.000								
187.200	-0.0398	531174.	-12225.	-0.001159	12137.	8.091E+09	95.8251	11564.
0.000								
192.000	-0.0446	473596.	-11731.	-0.000861	10821.	8.091E+09	110.3072	11877.
0.000								
196.800	-0.0480	418559.	-11173.	-0.000596	9563.8512	8.091E+09	121.9975	12190.
0.000								
201.600	-0.0503	366333.	-10566.	-0.000363	8370.5154	8.091E+09	131.0436	12504.
0.000								
206.400	-0.0515	317126.	-9921.1396	-0.000161	7246.1677	8.091E+09	137.6108	12820.
0.000								
211.200	-0.0518	271090.	-9250.3668	1.393E-05	6194.2654	8.091E+09	141.8779	13136.
0.000								
216.000	-0.0514	228323.	-8564.1800	0.000162	5217.0549	8.091E+09	144.0333	13453.
0.000								
220.800	-0.0503	188874.	-7872.2469	0.000286	4315.6711	8.091E+09	144.2721	13771.
0.000								
225.600	-0.0486	152749.	-7183.2904	0.000387	3490.2395	8.091E+09	142.7931	14089.
0.000								
230.400	-0.0466	119914.	-6505.0771	0.000468	2739.9816	8.091E+09	139.7958	14408.
0.000								
235.200	-0.0442	90301.	-5844.4193	0.000530	2063.3193	8.091E+09	135.4783	14728.
0.000								
240.000	-0.0415	63808.	-5207.1870	0.000576	1457.9799	8.091E+09	130.0351	15047.
0.000								
244.800	-0.0386	40312.	-4598.3307	0.000607	921.0977	8.091E+09	123.6550	15367.
0.000								
249.600	-0.0357	19664.	-4021.9127	0.000625	449.3138	8.091E+09	116.5192	15687.
0.000								
254.400	-0.0326	1701.2065	-3481.1460	0.000631	38.8717	8.091E+09	108.8002	16007.
0.000								
259.200	-0.0296	-13755.	-2978.4398	0.000628	314.2924	8.091E+09	100.6607	16327.
0.000								
264.000	-0.0266	-26892.	-2515.4493	0.000615	614.4635	8.091E+09	92.2521	16646.
0.000								
268.800	-0.0237	-37903.	-2093.1290	0.000596	866.0684	8.091E+09	83.7147	16965.
0.000								
273.600	-0.0209	-46986.	-1711.7886	0.000571	1073.6015	8.091E+09	75.1771	17284.
0.000								
278.400	-0.0182	-54336.	-1312.1695	0.000541	1241.5575	8.091E+09	91.3308	24083.
0.000								
283.200	-0.0157	-59583.	-899.4929	0.000507	1361.4322	8.091E+09	80.6178	24673.
0.000								

288.000	-0.0133	-62972.	-537.5868	0.000471	1438.8656	8.091E+09	70.1765	25263.
0.000								
292.800	-0.0112	-64744.	-224.8690	0.000433	1479.3545	8.091E+09	60.1226	25852.
0.000								
297.600	-0.009177	-65130.	40.7467	0.000394	1488.1917	8.091E+09	50.5507	26441.
0.000								
302.400	-0.007376	-64352.	261.7534	0.000356	1470.4165	8.091E+09	41.5354	27029.
0.000								
307.200	-0.005759	-62617.	440.9572	0.000318	1430.7749	8.091E+09	33.1328	27617.
0.000								
312.000	-0.004319	-60119.	581.3913	0.000282	1373.6904	8.091E+09	25.3814	28205.
0.000								
316.800	-0.003051	-57036.	686.2369	0.000247	1303.2439	8.091E+09	18.3043	28793.
0.000								
321.600	-0.001946	-53531.	758.7529	0.000214	1223.1610	8.091E+09	11.9107	29380.
0.000								
326.400	-0.000993	-49752.	802.2141	0.000184	1136.8078	8.091E+09	6.1981	29968.
0.000								
331.200	-0.000181	-45830.	819.8593	0.000155	1047.1915	8.091E+09	1.1541	30556.
0.000								
336.000	0.000500	-41881.	818.4869	0.000129	956.9676	8.091E+09	-1.7259	16580.
0.000								
340.800	0.001061	-37973.	805.3589	0.000106	867.6524	8.091E+09	-3.7440	16932.
0.000								
345.600	0.001515	-34150.	783.2805	8.436E-05	780.3083	8.091E+09	-5.4553	17285.
0.000								
350.400	0.001871	-30453.	753.6858	6.520E-05	695.8360	8.091E+09	-6.8758	17637.
0.000								
355.200	0.002141	-26915.	717.9269	4.818E-05	614.9836	8.091E+09	-8.0237	17990.
0.000								
360.000	0.002334	-23561.	677.2660	3.321E-05	538.3553	8.091E+09	-8.9183	18342.
0.000								
364.800	0.002460	-20413.	632.8702	2.017E-05	466.4221	8.091E+09	-9.5799	18695.
0.000								
369.600	0.002527	-17485.	585.8079	8.926E-06	399.5322	8.091E+09	-10.0294	19047.
0.000								
374.400	0.002545	-14789.	537.0472	-6.470E-07	337.9223	8.091E+09	-10.2876	19400.
0.000								
379.200	0.002521	-12330.	487.4569	-8.691E-06	281.7283	8.091E+09	-10.3751	19752.
0.000								
384.000	0.002462	-10109.	437.8081	-1.535E-05	230.9962	8.091E+09	-10.3120	20105.
0.000								
388.800	0.002374	-8126.7977	388.7775	-2.076E-05	185.6930	8.091E+09	-10.1175	20457.
0.000								
393.600	0.002263	-6377.2188	340.9523	-2.506E-05	145.7160	8.091E+09	-9.8097	20810.
0.000								
398.400	0.002133	-4853.6552	294.8358	-2.839E-05	110.9034	8.091E+09	-9.4055	21162.
0.000								
403.200	0.001990	-3546.7948	250.8536	-3.088E-05	81.0424	8.091E+09	-8.9204	21515.
0.000								
408.000	0.001837	-2445.4606	209.3608	-3.266E-05	55.8775	8.091E+09	-8.3683	21867.
0.000								
412.800	0.001677	-1536.9310	170.6498	-3.384E-05	35.1180	8.091E+09	-7.7613	22220.
0.000								
417.600	0.001512	-807.2227	134.9578	-3.454E-05	18.4446	8.091E+09	-7.1103	22572.
0.000								
422.400	0.001345	-241.3360	102.4751	-3.485E-05	5.5144	8.091E+09	-6.4241	22925.
0.000								
427.200	0.001177	176.5387	73.3530	-3.487E-05	4.0338	8.091E+09	-5.7101	23278.
0.000								
432.000	0.001010	462.8528	47.7114	-3.468E-05	10.5759	8.091E+09	-4.9739	23630.
0.000								
436.800	0.000845	634.5680	25.6465	-3.435E-05	14.4995	8.091E+09	-4.2198	23983.
0.000								
441.600	0.000681	709.0596	7.2380	-3.395E-05	16.2016	8.091E+09	-3.4504	24335.
0.000								
446.400	0.000519	704.0529	-7.4448	-3.353E-05	16.0872	8.091E+09	-2.6674	24688.
0.000								
451.200	0.000359	637.5891	-18.3372	-3.314E-05	14.5686	8.091E+09	-1.8711	25040.
0.000								
456.000	0.000201	528.0163	-25.3736	-3.279E-05	12.0649	8.091E+09	-1.0608	25393.
0.000								
460.800	4.389E-05	394.0027	-28.4844	-3.252E-05	9.0027	8.091E+09	-0.2354	25745.
0.000								
465.600	-0.000112	254.5658	-27.5927	-3.232E-05	5.8167	8.091E+09	0.6069	26098.
0.000								
470.400	-0.000266	129.1127	-22.6126	-3.221E-05	2.9502	8.091E+09	1.4681	26450.
0.000								
475.200	-0.000421	37.4848	-13.4492	-3.216E-05	0.8565	8.091E+09	2.3500	26803.
0.000								

480.000 -0.000575 0.000 0.000 -3.215E-05 0.000 8.091E+09 3.2539 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 8:

Pile-head deflection = 2.3335169 inches
Computed slope at pile head = -0.0218842 radians
Maximum bending moment = 1331309. inch-lbs
Maximum shear force = 17134. lbs
Depth of maximum bending moment = 105.6000000 inches below pile head
Depth of maximum shear force = 4.8000000 inches below pile head
Number of iterations = 18
Number of zero deflection points = 3

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 9

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 19470.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	2.8804	1.404E-06	19470.	-0.0264	3.207E-08	8.091E+09	0.000	0.000	0.000
4.800	2.7538	93456.	19470.	-0.0263	2135.4194	8.091E+09	0.000	0.000	0.000
9.600	2.6276	186912.	19470.	-0.0263	4270.8387	8.091E+09	0.000	0.000	0.000
14.400	2.5018	280368.	19451.	-0.0261	6406.2581	8.091E+09	-7.8103	14.9850	0.000
19.200	2.3769	373644.	19371.	-0.0259	8537.5657	8.091E+09	-25.6106	51.7197	0.000
24.000	2.2530	466330.	19203.	-0.0257	10655.	8.091E+09	-44.4827	94.7704	0.000
28.800	2.1304	557991.	18947.	-0.0254	12750.	8.091E+09	-62.2252	140.1969	0.000
33.600	2.0095	648219.	18613.	-0.0250	14811.	8.091E+09	-76.6369	183.0614	0.000
38.400	1.8904	736680.	18224.	-0.0246	16833.	8.091E+09	-85.5166	217.1440	0.000
43.200	1.7733	823172.	17811.	-0.0241	18809.	8.091E+09	-86.6629	234.5759	0.000
48.000	1.6587	907666.	17376.	-0.0236	20740.	8.091E+09	-94.5619	273.6531	0.000
52.800	1.5466	989982.	16870.	-0.0231	22621.	8.091E+09	-116.4890	361.5409	0.000
57.600	1.4373	1069614.	16253.	-0.0224	24440.	8.091E+09	-140.6081	469.5764	0.000
62.400	1.3311	1146007.	15515.	-0.0218	26186.	8.091E+09	-166.9162	601.9218	0.000
67.200	1.2281	1218554.	14645.	-0.0211	27843.	8.091E+09	-195.3989	763.7104	0.000
72.000	1.1286	1286598.	13634.	-0.0203	29398.	8.091E+09	-226.0060	961.2094	0.000
76.800	1.0328	1349436.	12471.	-0.0196	30834.	8.091E+09	-258.5947	1201.8594	0.000
81.600	0.9408	1406316.	11147.	-0.0187	32134.	8.091E+09	-292.8229	1494.0089	0.000
86.400	0.8528	1456448.	9657.1699	-0.0179	33279.	8.091E+09	-327.9934	1846.0993	0.000
91.200	0.7690	1499024.	7999.0832	-0.0170	34252.	8.091E+09	-362.8760	2265.1065	0.000

96.000	0.6894	1533240.	6178.7755	-0.0161	35034.	8.091E+09	-395.5855	2754.2708
0.000								
100.800	0.6142	1558341.	4212.6764	-0.0152	35607.	8.091E+09	-423.6225	3310.6004
0.000								
105.600	0.5434	1573681.	2129.9831	-0.0143	35958.	8.091E+09	-444.1664	3923.1396
0.000								
110.400	0.4772	1578788.	-27.0807	-0.0133	36074.	8.091E+09	-454.6102	4573.1594
0.000								
115.200	0.4154	1573421.	-2205.7692	-0.0124	35952.	8.091E+09	-453.1767	5236.8441
0.000								
120.000	0.3581	1557613.	-4347.8706	-0.0115	35591.	8.091E+09	-439.3656	5889.8137
0.000								
124.800	0.3052	1531682.	-6396.0364	-0.0106	34998.	8.091E+09	-414.0369	6511.7638
0.000								
129.600	0.2567	1496211.	-8299.6215	-0.009662	34188.	8.091E+09	-379.1236	7089.4764
0.000								
134.400	0.2124	1452005.	-10019.	-0.008788	33178.	8.091E+09	-337.1383	7617.4598
0.000								
139.200	0.1723	1400032.	-11525.	-0.007942	31990.	8.091E+09	-290.6839	8096.6617
0.000								
144.000	0.1362	1341361.	-12804.	-0.007128	30649.	8.091E+09	-242.1066	8532.2845
0.000								
148.800	0.1039	1277113.	-13849.	-0.006352	29181.	8.091E+09	-193.3230	8931.6252
0.000								
153.600	0.0752	1208409.	-14663.	-0.005614	27612.	8.091E+09	-145.7862	9302.4359
0.000								
158.400	0.0500	1136348.	-15254.	-0.004919	25965.	8.091E+09	-100.5323	9651.9104
0.000								
163.200	0.0280	1061969.	-15635.	-0.004267	24265.	8.091E+09	-58.2583	9986.1887
0.000								
168.000	0.009034	986249.	-15822.	-0.003659	22535.	8.091E+09	-19.4038	10310.
0.000								
172.800	-0.007127	910081.	-15830.	-0.003097	20795.	8.091E+09	15.7801	10628.
0.000								
177.600	-0.0207	834277.	-15679.	-0.002579	19063.	8.091E+09	47.1760	10941.
0.000								
182.400	-0.0319	759560.	-15387.	-0.002107	17356.	8.091E+09	74.7598	11253.
0.000								
187.200	-0.0409	686566.	-14971.	-0.001678	15688.	8.091E+09	98.5765	11563.
0.000								
192.000	-0.0480	615843.	-14449.	-0.001291	14072.	8.091E+09	118.7242	11874.
0.000								
196.800	-0.0533	547855.	-13839.	-0.000946	12518.	8.091E+09	135.3423	12185.
0.000								
201.600	-0.0571	482985.	-13158.	-0.000640	11036.	8.091E+09	148.6011	12497.
0.000								
206.400	-0.0595	421539.	-12420.	-0.000372	9631.9417	8.091E+09	158.6949	12810.
0.000								
211.200	-0.0607	363750.	-11641.	-0.000139	8311.4815	8.091E+09	165.8358	13125.
0.000								
216.000	-0.0608	309781.	-10835.	6.063E-05	7078.3259	8.091E+09	170.2494	13441.
0.000								
220.800	-0.0601	259735.	-10013.	0.000230	5934.7982	8.091E+09	172.1702	13758.
0.000								
225.600	-0.0586	213655.	-9187.4509	0.000370	4881.9099	8.091E+09	171.8389	14076.
0.000								
230.400	-0.0565	171535.	-8368.2416	0.000484	3919.4864	8.091E+09	169.4983	14396.
0.000								
235.200	-0.0539	133320.	-7564.5061	0.000575	3046.2956	8.091E+09	165.3914	14716.
0.000								
240.000	-0.0510	98916.	-6784.1473	0.000644	2260.1754	8.091E+09	159.7581	15036.
0.000								
244.800	-0.0478	68192.	-6033.9291	0.000693	1558.1601	8.091E+09	152.8329	15357.
0.000								
249.600	-0.0443	40990.	-5319.5072	0.000726	936.6039	8.091E+09	144.8429	15678.
0.000								
254.400	-0.0408	17125.	-4645.4700	0.000743	391.3005	8.091E+09	136.0059	15999.
0.000								
259.200	-0.0372	-3606.3187	-4015.3870	0.000747	82.4024	8.091E+09	126.5287	16319.
0.000								
264.000	-0.0336	-21423.	-3431.8646	0.000739	489.4941	8.091E+09	116.6057	16640.
0.000								
268.800	-0.0301	-36552.	-2896.6066	0.000722	835.1985	8.091E+09	106.4184	16960.
0.000								
273.600	-0.0267	-49230.	-2410.4793	0.000697	1124.8788	8.091E+09	96.1346	17280.
0.000								
278.400	-0.0234	-59693.	-1897.6989	0.000664	1363.9488	8.091E+09	117.5239	24077.
0.000								
283.200	-0.0203	-67448.	-1364.9375	0.000627	1541.1482	8.091E+09	104.4601	24668.
0.000								

288.000	-0.0174	-72796.	-894.3013	0.000585	1663.3545	8.091E+09	91.6384	25259.
0.000								
292.800	-0.0147	-76033.	-484.2561	0.000541	1737.3176	8.091E+09	79.2138	25849.
0.000								
297.600	-0.0122	-77445.	-132.5866	0.000495	1769.5784	8.091E+09	67.3152	26439.
0.000								
302.400	-0.009954	-77306.	163.4806	0.000449	1766.4011	8.091E+09	56.0462	27028.
0.000								
307.200	-0.007906	-75876.	407.1591	0.000404	1733.7182	8.091E+09	45.4866	27616.
0.000								
312.000	-0.006075	-73397.	601.9927	0.000360	1677.0888	8.091E+09	35.6941	28205.
0.000								
316.800	-0.004452	-70097.	751.7534	0.000317	1601.6681	8.091E+09	26.7062	28792.
0.000								
321.600	-0.003029	-66180.	860.3505	0.000277	1512.1880	8.091E+09	18.5426	29380.
0.000								
326.400	-0.001795	-61837.	931.7494	0.000239	1412.9461	8.091E+09	11.2070	29968.
0.000								
331.200	-0.000737	-57236.	969.9024	0.000203	1307.8043	8.091E+09	4.6901	30556.
0.000								
336.000	0.000159	-52526.	979.8445	0.000171	1200.1933	8.091E+09	-0.5475	16580.
0.000								
340.800	0.000904	-47829.	970.8753	0.000141	1092.8706	8.091E+09	-3.1897	16932.
0.000								
345.600	0.001514	-43206.	950.1378	0.000114	987.2272	8.091E+09	-5.4509	17285.
0.000								
350.400	0.002000	-38708.	919.4165	8.987E-05	884.4533	8.091E+09	-7.3496	17637.
0.000								
355.200	0.002376	-34379.	880.4015	6.819E-05	785.5487	8.091E+09	-8.9066	17990.
0.000								
360.000	0.002655	-30256.	834.6779	4.902E-05	691.3330	8.091E+09	-10.1448	18342.
0.000								
364.800	0.002847	-26366.	783.7183	3.222E-05	602.4581	8.091E+09	-11.0884	18695.
0.000								
369.600	0.002964	-22732.	728.8770	1.766E-05	519.4206	8.091E+09	-11.7622	19047.
0.000								
374.400	0.003016	-19369.	671.3881	5.167E-06	442.5754	8.091E+09	-12.1915	19400.
0.000								
379.200	0.003014	-16287.	612.3644	-5.409E-06	372.1484	8.091E+09	-12.4017	19752.
0.000								
384.000	0.002965	-13490.	552.7994	-1.424E-05	308.2503	8.091E+09	-12.4171	20105.
0.000								
388.800	0.002877	-10980.	493.5705	-2.150E-05	250.8891	8.091E+09	-12.2616	20457.
0.000								
393.600	0.002758	-8752.2048	435.4442	-2.735E-05	199.9832	8.091E+09	-11.9577	20810.
0.000								
398.400	0.002614	-6799.8252	379.0823	-3.197E-05	155.3723	8.091E+09	-11.5264	21162.
0.000								
403.200	0.002451	-5113.0146	325.0494	-3.550E-05	116.8296	8.091E+09	-10.9873	21515.
0.000								
408.000	0.002274	-3679.3510	273.8211	-3.811E-05	84.0712	8.091E+09	-10.3578	21867.
0.000								
412.800	0.002085	-2484.3318	225.7932	-3.994E-05	56.7656	8.091E+09	-9.6538	22220.
0.000								
417.600	0.001890	-1511.7359	181.2909	-4.112E-05	34.5424	8.091E+09	-8.8888	22572.
0.000								
422.400	0.001691	-743.9387	140.5786	-4.179E-05	16.9986	8.091E+09	-8.0746	22925.
0.000								
427.200	0.001489	-162.1814	103.8693	-4.206E-05	3.7058	8.091E+09	-7.2209	23277.
0.000								
432.000	0.001287	253.2070	71.3347	-4.203E-05	5.7856	8.091E+09	-6.3352	23630.
0.000								
436.800	0.001085	522.6321	43.1139	-4.180E-05	11.9419	8.091E+09	-5.4235	23983.
0.000								
441.600	0.000886	667.1006	19.3224	-4.145E-05	15.2429	8.091E+09	-4.4897	24335.
0.000								
446.400	0.000688	708.1271	0.0601	-4.104E-05	16.1803	8.091E+09	-3.5363	24688.
0.000								
451.200	0.000492	667.6772	-14.5815	-4.063E-05	15.2561	8.091E+09	-2.5644	25040.
0.000								
456.000	0.000297	568.1446	-24.5128	-4.027E-05	12.9818	8.091E+09	-1.5737	25393.
0.000								
460.800	0.000105	432.3545	-29.6412	-3.997E-05	9.8791	8.091E+09	-0.5632	25745.
0.000								
465.600	-8.624E-05	283.5889	-29.8675	-3.976E-05	6.4799	8.091E+09	0.4689	26098.
0.000								
470.400	-0.000277	145.6268	-25.0830	-3.963E-05	3.3275	8.091E+09	1.5246	26450.
0.000								
475.200	-0.000467	42.7922	-15.1695	-3.958E-05	0.9778	8.091E+09	2.6060	26803.
0.000								

480.000 -0.000657 0.000 0.000 -3.956E-05 0.000 8.091E+09 3.7146 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 9:

Pile-head deflection = 2.8803813 inches
Computed slope at pile head = -0.0263629 radians
Maximum bending moment = 1578788. inch-lbs
Maximum shear force = 19470. lbs
Depth of maximum bending moment = 110.4000000 inches below pile head
Depth of maximum shear force = 4.8000000 inches below pile head
Number of iterations = 20
Number of zero deflection points = 3

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 10

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 21731.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	3.4631	-7.798E-06	21731.	-0.0310	1.782E-07	8.091E+09	0.000	0.000	0.000
4.800	3.3143	104309.	21731.	-0.0310	2383.4000	8.091E+09	0.000	0.000	0.000
9.600	3.1658	208618.	21731.	-0.0309	4766.8000	8.091E+09	0.000	0.000	0.000
14.400	3.0179	312926.	21712.	-0.0307	7150.2000	8.091E+09	-7.8103	12.4225	0.000
19.200	2.8709	417055.	21632.	-0.0305	9529.4882	8.091E+09	-25.6106	42.8200	0.000
24.000	2.7251	520594.	21464.	-0.0302	11895.	8.091E+09	-44.4827	78.3532	0.000
28.800	2.5807	623108.	21208.	-0.0299	14238.	8.091E+09	-62.2252	115.7356	0.000
33.600	2.4382	724188.	20874.	-0.0295	16547.	8.091E+09	-76.6369	150.8754	0.000
38.400	2.2977	823503.	20485.	-0.0290	18817.	8.091E+09	-85.5166	178.6519	0.000
43.200	2.1595	920847.	20072.	-0.0285	21041.	8.091E+09	-86.6629	192.6294	0.000
48.000	2.0240	1016194.	19637.	-0.0279	23219.	8.091E+09	-94.5619	224.2622	0.000
52.800	1.8913	1109363.	19131.	-0.0273	25348.	8.091E+09	-116.4890	295.6395	0.000
57.600	1.7618	1199848.	18514.	-0.0266	27416.	8.091E+09	-140.6088	383.0799	0.000
62.400	1.6358	1287093.	17775.	-0.0259	29409.	8.091E+09	-166.9210	489.8139	0.000
67.200	1.5134	1370493.	16906.	-0.0251	31315.	8.091E+09	-195.4236	619.8330	0.000
72.000	1.3949	1449390.	15894.	-0.0243	33118.	8.091E+09	-226.1075	778.0794	0.000
76.800	1.2805	1523077.	14730.	-0.0234	34801.	8.091E+09	-258.9387	970.6452	0.000
81.600	1.1705	1590798.	13403.	-0.0225	36349.	8.091E+09	-293.8123	1204.9099	0.000
86.400	1.0650	1651750.	11905.	-0.0215	37742.	8.091E+09	-330.4602	1489.4595	0.000
91.200	0.9642	1705088.	10228.	-0.0205	38960.	8.091E+09	-368.2966	1833.5458	0.000

96.000	0.8682	1749941.	8369.3709	-0.0195	39985.	8.091E+09	-406.2156	2245.8092
0.000								
100.800	0.7772	1785434.	6332.6864	-0.0184	40796.	8.091E+09	-442.4029	2732.1173
0.000								
105.600	0.6914	1810735.	4132.6615	-0.0174	41374.	8.091E+09	-474.2741	3292.7575
0.000								
110.400	0.6106	1825108.	1797.5833	-0.0163	41703.	8.091E+09	-498.6751	3919.8293
0.000								
115.200	0.5351	1827992.	-629.0038	-0.0152	41769.	8.091E+09	-512.4029	4596.1876
0.000								
120.000	0.4648	1819069.	-3089.8370	-0.0141	41565.	8.091E+09	-512.9442	5297.1197
0.000								
124.800	0.3997	1798329.	-5518.8616	-0.0130	41091.	8.091E+09	-499.1494	5994.7843
0.000								
129.600	0.3396	1766088.	-7848.5085	-0.0120	40354.	8.091E+09	-471.5368	6663.8710
0.000								
134.400	0.2847	1722983.	-10017.	-0.0109	39369.	8.091E+09	-432.1011	7286.1832
0.000								
139.200	0.2346	1669923.	-11975.	-0.009939	38157.	8.091E+09	-383.7576	7852.5693
0.000								
144.000	0.1893	1608021.	-13688.	-0.008966	36742.	8.091E+09	-329.6960	8362.1537
0.000								
148.800	0.1485	1538522.	-15134.	-0.008033	35154.	8.091E+09	-272.8714	8819.9571
0.000								
153.600	0.1121	1462737.	-16306.	-0.007143	33423.	8.091E+09	-215.7242	9234.1843
0.000								
158.400	0.0799	1381981.	-17208.	-0.006299	31578.	8.091E+09	-160.1000	9614.0115
0.000								
163.200	0.0517	1297536.	-17850.	-0.005504	29648.	8.091E+09	-107.2965	9968.1480
0.000								
168.000	0.0271	1210620.	-18247.	-0.004760	27662.	8.091E+09	-58.1652	10304.
0.000								
172.800	0.005971	1122363.	-18419.	-0.004068	25645.	8.091E+09	-13.2209	10628.
0.000								
177.600	-0.0120	1033802.	-18385.	-0.003428	23622.	8.091E+09	27.2624	10944.
0.000								
182.400	-0.0269	945868.	-18168.	-0.002841	21613.	8.091E+09	63.1756	11256.
0.000								
187.200	-0.0392	859391.	-17789.	-0.002306	19637.	8.091E+09	94.5217	11565.
0.000								
192.000	-0.0491	775091.	-17271.	-0.001821	17710.	8.091E+09	121.3860	11873.
0.000								
196.800	-0.0567	693588.	-16634.	-0.001385	15848.	8.091E+09	143.9146	12181.
0.000								
201.600	-0.0624	615401.	-15900.	-0.000997	14062.	8.091E+09	162.2979	12490.
0.000								
206.400	-0.0663	540953.	-15086.	-0.000654	12360.	8.091E+09	176.7588	12800.
0.000								
211.200	-0.0687	470577.	-14211.	-0.000354	10752.	8.091E+09	187.5439	13113.
0.000								
216.000	-0.0697	404523.	-13294.	-9.428E-05	9243.1253	8.091E+09	194.9166	13427.
0.000								
220.800	-0.0696	342959.	-12348.	0.000127	7836.4308	8.091E+09	199.1525	13743.
0.000								
225.600	-0.0685	285984.	-11389.	0.000314	6534.5805	8.091E+09	200.5350	14061.
0.000								
230.400	-0.0665	233629.	-10429.	0.000468	5338.3021	8.091E+09	199.3518	14380.
0.000								
235.200	-0.0640	185868.	-9480.2152	0.000593	4246.9728	8.091E+09	195.8917	14701.
0.000								
240.000	-0.0609	142619.	-8553.0145	0.000690	3258.7711	8.091E+09	190.4419	15022.
0.000								
244.800	-0.0573	103759.	-7656.0706	0.000763	2370.8277	8.091E+09	183.2848	15343.
0.000								
249.600	-0.0535	69121.	-6796.9173	0.000814	1579.3749	8.091E+09	174.6958	15666.
0.000								
254.400	-0.0495	38508.	-5981.7892	0.000846	879.8910	8.091E+09	164.9409	15988.
0.000								
259.200	-0.0454	11696.	-5215.6716	0.000861	267.2405	8.091E+09	154.2748	16310.
0.000								
264.000	-0.0413	-11562.	-4502.3594	0.000861	264.1918	8.091E+09	142.9387	16632.
0.000								
268.800	-0.0371	-31527.	-3844.5233	0.000848	720.3738	8.091E+09	131.1597	16953.
0.000								
273.600	-0.0331	-48470.	-3243.7818	0.000825	1107.5066	8.091E+09	119.1493	17274.
0.000								
278.400	-0.0292	-62667.	-2606.2157	0.000792	1431.9130	8.091E+09	146.5032	24068.
0.000								
283.200	-0.0255	-73489.	-1940.0852	0.000751	1679.1926	8.091E+09	131.0511	24662.
0.000								

288.000	-0.0220	-81292.	-1347.7003	0.000705	1857.4801	8.091E+09	115.7759	25254.
0.000								
292.800	-0.0187	-86427.	-827.7307	0.000656	1974.8172	8.091E+09	100.8781	25846.
0.000								
297.600	-0.0157	-89238.	-377.9587	0.000604	2039.0468	8.091E+09	86.5268	26436.
0.000								
302.400	-0.0129	-90056.	4.5699	0.000550	2057.7242	8.091E+09	72.8601	27026.
0.000								
307.200	-0.0104	-89194.	323.4020	0.000497	2038.0444	8.091E+09	59.9866	27615.
0.000								
312.000	-0.008167	-86951.	582.5404	0.000445	1986.7844	8.091E+09	47.9877	28204.
0.000								
316.800	-0.006155	-83602.	786.3171	0.000394	1910.2613	8.091E+09	36.9192	28792.
0.000								
321.600	-0.004381	-79402.	939.2781	0.000346	1814.3020	8.091E+09	26.8145	29380.
0.000								
326.400	-0.002833	-74585.	1046.0809	0.000300	1704.2261	8.091E+09	17.6867	29968.
0.000								
331.200	-0.001497	-69360.	1111.4050	0.000258	1584.8391	8.091E+09	9.5317	30555.
0.000								
336.000	-0.000359	-63915.	1137.2595	0.000218	1460.4340	8.091E+09	1.2410	16580.
0.000								
340.800	0.000597	-58442.	1135.1858	0.000182	1335.3757	8.091E+09	-2.1051	16932.
0.000								
345.600	0.001386	-53018.	1118.1520	0.000149	1211.4256	8.091E+09	-4.9923	17285.
0.000								
350.400	0.002025	-47708.	1088.3123	0.000119	1090.1036	8.091E+09	-7.4408	17637.
0.000								
355.200	0.002528	-42570.	1047.7168	9.212E-05	972.6990	8.091E+09	-9.4740	17990.
0.000								
360.000	0.002909	-37650.	998.2967	6.833E-05	860.2819	8.091E+09	-11.1177	18342.
0.000								
364.800	0.003184	-32986.	941.8542	4.737E-05	753.7178	8.091E+09	-12.4000	18695.
0.000								
369.600	0.003364	-28608.	880.0549	2.910E-05	653.6816	8.091E+09	-13.3498	19047.
0.000								
374.400	0.003463	-24538.	814.4232	1.334E-05	560.6735	8.091E+09	-13.9968	19400.
0.000								
379.200	0.003492	-20790.	746.3408	-1.060E-07	475.0340	8.091E+09	-14.3708	19752.
0.000								
384.000	0.003462	-17373.	677.0479	-1.143E-05	396.9600	8.091E+09	-14.5012	20105.
0.000								
388.800	0.003383	-14290.	607.6459	-2.082E-05	326.5202	8.091E+09	-14.4163	20457.
0.000								
393.600	0.003262	-11539.	539.1030	-2.848E-05	263.6699	8.091E+09	-14.1433	20810.
0.000								
398.400	0.003109	-9114.6729	472.2605	-3.461E-05	208.2654	8.091E+09	-13.7077	21162.
0.000								
403.200	0.002930	-7005.7353	407.8419	-3.939E-05	160.0773	8.091E+09	-13.1334	21515.
0.000								
408.000	0.002731	-5199.3902	346.4616	-4.301E-05	118.8033	8.091E+09	-12.4418	21867.
0.000								
412.800	0.002517	-3679.7038	288.6355	-4.564E-05	84.0793	8.091E+09	-11.6524	22220.
0.000								
417.600	0.002293	-2428.4897	234.7918	-4.745E-05	55.4897	8.091E+09	-10.7824	22572.
0.000								
422.400	0.002062	-1425.7025	185.2826	-4.860E-05	32.5765	8.091E+09	-9.8464	22925.
0.000								
427.200	0.001826	-649.7767	140.3950	-4.921E-05	14.8470	8.091E+09	-8.8568	23277.
0.000								
432.000	0.001589	-77.9105	100.3625	-4.943E-05	1.7802	8.091E+09	-7.8234	23630.
0.000								
436.800	0.001352	313.7038	65.3763	-4.936E-05	7.1680	8.091E+09	-6.7542	23983.
0.000								
441.600	0.001115	549.7021	35.5954	-4.910E-05	12.5604	8.091E+09	-5.6546	24335.
0.000								
446.400	0.000880	655.4195	11.1566	-4.875E-05	14.9760	8.091E+09	-4.5283	24688.
0.000								
451.200	0.000647	656.8054	-7.8166	-4.836E-05	15.0077	8.091E+09	-3.3772	25040.
0.000								
456.000	0.000416	580.3804	-21.2063	-4.799E-05	13.2614	8.091E+09	-2.2018	25393.
0.000								
460.800	0.000187	453.2253	-28.8939	-4.768E-05	10.3560	8.091E+09	-1.0013	25745.
0.000								
465.600	-4.154E-05	302.9992	-30.7551	-4.746E-05	6.9234	8.091E+09	0.2258	26098.
0.000								
470.400	-0.000269	157.9764	-26.6568	-4.732E-05	3.6097	8.091E+09	1.4818	26450.
0.000								
475.200	-0.000496	47.0938	-16.4559	-4.726E-05	1.0761	8.091E+09	2.7686	26803.
0.000								

480.000 -0.000723 0.000 0.000 -4.725E-05 0.000 8.091E+09 4.0880 13578.
0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 10:

Pile-head deflection = 3.4630766 inches
Computed slope at pile head = -0.0309983 radians
Maximum bending moment = 1827992. inch-lbs
Maximum shear force = 21731. lbs
Depth of maximum bending moment = 115.2000000 inches below pile head
Depth of maximum shear force = 4.8000000 inches below pile head
Number of iterations = 21
Number of zero deflection points = 3

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 11

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 23682.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 0.000 lbs

Depth X inches	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Distrib. Es*h lb/inch	Lat. Load lb/inch
0.00	4.0082	-5.302E-06	23682.	-0.0352	1.212E-07	8.091E+09	0.000	0.000	0.000
4.800	3.8391	113674.	23682.	-0.0352	2597.3806	8.091E+09	0.000	0.000	0.000
9.600	3.6704	227347.	23682.	-0.0351	5194.7613	8.091E+09	0.000	0.000	0.000
14.400	3.5022	341021.	23663.	-0.0349	7792.1419	8.091E+09	-7.8103	10.7045	0.000
19.200	3.3351	454514.	23583.	-0.0347	10385.	8.091E+09	-25.6106	36.8600	0.000
24.000	3.1692	567418.	23415.	-0.0344	12965.	8.091E+09	-44.4827	67.3722	0.000
28.800	3.0050	679297.	23159.	-0.0340	15522.	8.091E+09	-62.2252	99.3958	0.000
33.600	2.8427	789742.	22825.	-0.0336	18045.	8.091E+09	-76.6369	129.4063	0.000
38.400	2.6826	898421.	22436.	-0.0331	20528.	8.091E+09	-85.5166	153.0161	0.000
43.200	2.5251	1005130.	22023.	-0.0325	22967.	8.091E+09	-86.6628	164.7397	0.000
48.000	2.3704	1109842.	21588.	-0.0319	25359.	8.091E+09	-94.5618	191.4821	0.000
52.800	2.2190	1212376.	21082.	-0.0312	27702.	8.091E+09	-116.4890	251.9865	0.000
57.600	2.0709	1312226.	20465.	-0.0305	29984.	8.091E+09	-140.6088	325.9037	0.000
62.400	1.9266	1408836.	19726.	-0.0296	32191.	8.091E+09	-166.9213	415.8668	0.000
67.200	1.7863	1501600.	18857.	-0.0288	34311.	8.091E+09	-195.4261	525.1188	0.000
72.000	1.6503	1589862.	17845.	-0.0279	36327.	8.091E+09	-226.1218	657.6722	0.000
76.800	1.5189	1672913.	16681.	-0.0269	38225.	8.091E+09	-259.0002	818.5072	0.000
81.600	1.3921	1749998.	15354.	-0.0259	39987.	8.091E+09	-294.0307	1013.7912	0.000
86.400	1.2704	1820308.	13853.	-0.0248	41593.	8.091E+09	-331.1173	1251.0569	0.000
91.200	1.1539	1882988.	12171.	-0.0237	43025.	8.091E+09	-370.0065	1539.1983	0.000

96.000	1.0427	1937145.	10298.	-0.0226	44263.	8.091E+09	-410.1289	1888.0351
0.000								
100.800	0.9370	1981851.	8232.9777	-0.0214	45284.	8.091E+09	-450.3773	2307.1350
0.000								
105.600	0.8370	2016181.	5978.7625	-0.0202	46069.	8.091E+09	-488.8791	2803.6601
0.000								
110.400	0.7427	2039247.	3550.5305	-0.0190	46596.	8.091E+09	-522.8843	3379.3566
0.000								
115.200	0.6542	2050266.	978.1828	-0.0178	46847.	8.091E+09	-548.9273	4027.4663
0.000								
120.000	0.5716	2048638.	-1691.3210	-0.0166	46810.	8.091E+09	-563.3660	4731.0177
0.000								
124.800	0.4948	2034030.	-4395.1261	-0.0154	46476.	8.091E+09	-563.2195	5464.0168
0.000								
129.600	0.4238	2006445.	-7059.6516	-0.0142	45846.	8.091E+09	-546.9995	6195.9572
0.000								
134.400	0.3585	1966257.	-9608.8117	-0.0130	44928.	8.091E+09	-515.1506	6898.2011
0.000								
139.200	0.2988	1914200.	-11973.	-0.0119	43738.	8.091E+09	-469.8943	7549.5752
0.000								
144.000	0.2445	1851317.	-14096.	-0.0108	42302.	8.091E+09	-414.5952	8139.0629
0.000								
148.800	0.1955	1778881.	-15938.	-0.009676	40646.	8.091E+09	-352.9788	8665.2446
0.000								
153.600	0.1516	1698313.	-17477.	-0.008645	38806.	8.091E+09	-288.4994	9133.6554
0.000								
158.400	0.1125	1611098.	-18707.	-0.007663	36813.	8.091E+09	-223.9878	9553.6157
0.000								
163.200	0.0780	1518722.	-19633.	-0.006735	34702.	8.091E+09	-161.5535	9935.6010
0.000								
168.000	0.0479	1422624.	-20267.	-0.005862	32506.	8.091E+09	-102.6459	10290.
0.000								
172.800	0.0218	1324161.	-20629.	-0.005048	30256.	8.091E+09	-48.1839	10624.
0.000								
177.600	-0.000573	1224588.	-20741.	-0.004292	27981.	8.091E+09	1.3061	10945.
0.000								
182.400	-0.0194	1125045.	-20629.	-0.003595	25707.	8.091E+09	45.5723	11259.
0.000								
187.200	-0.0351	1026552.	-20316.	-0.002956	23456.	8.091E+09	84.5418	11568.
0.000								
192.000	-0.0478	930007.	-19830.	-0.002376	21250.	8.091E+09	118.2662	11874.
0.000								
196.800	-0.0579	836187.	-19193.	-0.001852	19106.	8.091E+09	146.8860	12179.
0.000								
201.600	-0.0656	745751.	-18431.	-0.001383	17040.	8.091E+09	170.6046	12485.
0.000								
206.400	-0.0712	659245.	-17567.	-0.000966	15063.	8.091E+09	189.6695	12793.
0.000								
211.200	-0.0749	577110.	-16621.	-0.000599	13187.	8.091E+09	204.3584	13103.
0.000								
216.000	-0.0769	499683.	-15615.	-0.000280	11417.	8.091E+09	214.9701	13415.
0.000								
220.800	-0.0776	427209.	-14566.	-4.992E-06	9761.4916	8.091E+09	221.8181	13729.
0.000								
225.600	-0.0770	359845.	-13493.	0.000228	8222.2751	8.091E+09	225.2252	14046.
0.000								
230.400	-0.0754	297671.	-12412.	0.000424	6801.6287	8.091E+09	225.5198	14365.
0.000								
235.200	-0.0729	240693.	-11335.	0.000583	5499.7076	8.091E+09	223.0326	14685.
0.000								
240.000	-0.0698	188854.	-10276.	0.000711	4315.2024	8.091E+09	218.0937	15007.
0.000								
244.800	-0.0661	142039.	-9246.5810	0.000809	3245.5130	8.091E+09	211.0291	15329.
0.000								
249.600	-0.0620	100086.	-8254.9298	0.000881	2286.9201	8.091E+09	202.1589	15652.
0.000								
254.400	-0.0576	62792.	-7309.4441	0.000929	1434.7542	8.091E+09	191.7936	15976.
0.000								
259.200	-0.0531	29916.	-6416.5813	0.000956	683.5582	8.091E+09	180.2326	16299.
0.000								
264.000	-0.0484	1192.4134	-5581.3950	0.000966	27.2460	8.091E+09	167.7617	16622.
0.000								
268.800	-0.0438	-23666.	-4807.6030	0.000959	540.7478	8.091E+09	154.6516	16945.
0.000								
273.600	-0.0392	-44961.	-4097.6645	0.000939	1027.3250	8.091E+09	141.1561	17268.
0.000								
278.400	-0.0348	-63003.	-3340.3358	0.000907	1439.5903	8.091E+09	174.3975	24057.
0.000								
283.200	-0.0305	-77028.	-2545.3886	0.000865	1760.0438	8.091E+09	156.8305	24653.
0.000								

288.000	-0.0265	-87439.	-1834.5574	0.000816	1997.9336	8.091E+09	139.3492	25248.
0.000								
292.800	-0.0227	-94640.	-1206.8396	0.000762	2162.4628	8.091E+09	122.1999	25841.
0.000								
297.600	-0.0192	-99025.	-660.1384	0.000705	2262.6597	8.091E+09	105.5923	26433.
0.000								
302.400	-0.0159	-100977.	-191.4377	0.000645	2307.2674	8.091E+09	89.6997	27024.
0.000								
307.200	-0.0130	-100862.	203.0280	0.000586	2304.6525	8.091E+09	74.6610	27613.
0.000								
312.000	-0.0103	-99028.	527.6118	0.000526	2262.7322	8.091E+09	60.5822	28203.
0.000								
316.800	-0.007926	-95797.	787.1033	0.000469	2188.9183	8.091E+09	47.5392	28791.
0.000								
321.600	-0.005813	-91472.	986.5904	0.000413	2090.0773	8.091E+09	35.5804	29380.
0.000								
326.400	-0.003961	-86326.	1131.3348	0.000360	1972.5049	8.091E+09	24.7297	29968.
0.000								
331.200	-0.002355	-80611.	1226.6625	0.000311	1841.9135	8.091E+09	14.9901	30555.
0.000								
336.000	-0.000978	-74550.	1270.7477	0.000265	1703.4306	8.091E+09	3.3787	16580.
0.000								
340.800	0.000186	-68412.	1277.2801	0.000222	1563.1689	8.091E+09	-0.6569	16932.
0.000								
345.600	0.001156	-62288.	1265.7149	0.000184	1423.2530	8.091E+09	-4.1619	17285.
0.000								
350.400	0.001948	-56261.	1238.5479	0.000148	1285.5282	8.091E+09	-7.1577	17637.
0.000								
355.200	0.002580	-50398.	1198.1631	0.000117	1151.5715	8.091E+09	-9.6693	17990.
0.000								
360.000	0.003068	-44758.	1146.8158	8.849E-05	1022.7053	8.091E+09	-11.7254	18342.
0.000								
364.800	0.003429	-39389.	1086.6187	6.353E-05	900.0119	8.091E+09	-13.3568	18695.
0.000								
369.600	0.003678	-34327.	1019.5319	4.166E-05	784.3502	8.091E+09	-14.5961	19047.
0.000								
374.400	0.003829	-29601.	947.3567	2.270E-05	676.3727	8.091E+09	-15.4769	19400.
0.000								
379.200	0.003896	-25232.	871.7328	6.434E-06	576.5429	8.091E+09	-16.0330	19752.
0.000								
384.000	0.003891	-21233.	794.1382	-7.349E-06	485.1539	8.091E+09	-16.2981	20105.
0.000								
388.800	0.003826	-17609.	715.8917	-1.887E-05	402.3449	8.091E+09	-16.3046	20457.
0.000								
393.600	0.003710	-14360.	638.1585	-2.835E-05	328.1195	8.091E+09	-16.0842	20810.
0.000								
398.400	0.003553	-11482.	561.9568	-3.602E-05	262.3617	8.091E+09	-15.6665	21162.
0.000								
403.200	0.003364	-8965.2702	488.1669	-4.208E-05	204.8516	8.091E+09	-15.0793	21515.
0.000								
408.000	0.003149	-6795.7825	417.5415	-4.676E-05	155.2800	8.091E+09	-14.3479	21867.
0.000								
412.800	0.002915	-4956.8714	350.7174	-5.024E-05	113.2618	8.091E+09	-13.4955	22220.
0.000								
417.600	0.002667	-3428.8959	288.2269	-5.273E-05	78.3484	8.091E+09	-12.5422	22572.
0.000								
422.400	0.002409	-2189.8935	230.5113	-5.440E-05	50.0379	8.091E+09	-11.5059	22925.
0.000								
427.200	0.002145	-1215.9873	177.9337	-5.541E-05	27.7847	8.091E+09	-10.4014	23277.
0.000								
432.000	0.001877	-481.7303	130.7915	-5.591E-05	11.0073	8.091E+09	-9.2411	23630.
0.000								
436.800	0.001608	39.6112	89.3297	-5.604E-05	0.9051	8.091E+09	-8.0346	23983.
0.000								
441.600	0.001339	375.8351	53.7526	-5.592E-05	8.5876	8.091E+09	-6.7892	24335.
0.000								
446.400	0.001071	555.6364	24.2353	-5.564E-05	12.6960	8.091E+09	-5.5097	24688.
0.000								
451.200	0.000805	608.4935	0.9339	-5.530E-05	13.9038	8.091E+09	-4.1992	25040.
0.000								
456.000	0.000540	564.6015	-16.0050	-5.495E-05	12.9008	8.091E+09	-2.8587	25393.
0.000								
460.800	0.000277	454.8452	-26.4370	-5.465E-05	10.3930	8.091E+09	-1.4880	25745.
0.000								
465.600	1.575E-05	310.8062	-30.2137	-5.442E-05	7.1018	8.091E+09	-0.0857	26098.
0.000								
470.400	-0.000245	164.7937	-27.1788	-5.428E-05	3.7654	8.091E+09	1.3502	26450.
0.000								
475.200	-0.000505	49.8902	-17.1660	-5.422E-05	1.1400	8.091E+09	2.8218	26803.
0.000								

```
480.000  -0.000766       0.000       0.000 -5.420E-05       0.000  8.091E+09      4.3307      13578.
0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 11:

Pile-head deflection             =      4.0082396 inches
Computed slope at pile head      =     -0.0352291 radians
Maximum bending moment           =       2050266. inch-lbs
Maximum shear force              =          23682. lbs
Depth of maximum bending moment  =    115.2000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             22
Number of zero deflection points =              3



--------------------------------------------------------------------------------
Summary of Pile Response(s)
--------------------------------------------------------------------------------


Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, lbs, and Load 2 = Moment, in-lbs
Load Type 2: Load 1 = Shear, lbs, and Load 2 = Slope, radians
Load Type 3: Load 1 = Shear, lbs, and Load 2 = Rotational Stiffness, in-lbs/radian
Load Type 4: Load 1 = Top Deflection, inches, and Load 2 = Moment, in-lbs
Load Type 5: Load 1 = Top Deflection, inches, and Load 2 = Slope, radians


Pile-head      Pile-head
Load   Load      Condition 1     Condition 2           Axial           Pile-head          Maximum
Maximum       Pile-head
Case   Type      V(lbs) or       in-lb, rad.,          Loading         Deflection          Moment
Shear         Rotation
No.    No.     y(inches)     or in-lb/rad.        lbs           inches          in-lbs            lbs
radians
----  ----  --------------  --------------  -------------  -------------  -------------  --------
-----  -------------
1       1    V =    210.0000   M =        0.000        0.0000000       0.01514065           11065.
210.0000    -0.00016793
2       1    V =   2016.0000   M =        0.000        0.0000000       0.14783931          107440.
2016.0000    -0.00163308
3       1    V =   3088.0000   M =        0.000        0.0000000       0.23169054          167075.
3088.0000    -0.00254519
4       1    V =   5198.0000   M =        0.000        0.0000000       0.41840353          294674.
5198.0000    -0.00451800
5       1    V =   7092.0000   M =        0.000        0.0000000       0.62102372          424771.
7092.0000    -0.00656691
6       1    V =      11620.   M =        0.000        0.0000000       1.26361497          796613.
11620.    -0.01262720
7       1    V =      14710.   M =        0.000        0.0000000       1.82504699         1086887.
14710.    -0.01758122
8       1    V =      17134.   M =        0.000        0.0000000       2.33351690         1331309.
17134.    -0.02188421
9       1    V =      19470.   M =        0.000        0.0000000       2.88038133         1578788.
19470.    -0.02636294
10      1    V =      21731.   M =        0.000        0.0000000       3.46307657         1827992.
21731.    -0.03099828
11      1    V =      23682.   M =        0.000        0.0000000       4.00823962         2050266.
23682.    -0.03522911

The analysis ended normally.
```

APPENDIX G. LPILE ANALYSIS FOR TP1 (P-MULTIPLIER OF 0.16)

This appendix shows the readout from LPILE when for TP3 with the data input mentioned in the body of the report.

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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                              =         572.000 lbs
Applied moment at pile head                           =           0.000 in-lbs
Axial thrust load on pile head                        =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S        Stress    Stiffness       p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs        radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       0.0788   2.924E-08    572.0000   -0.000701   6.681E-10   8.091E+09         0.000
0.000       0.000
     4.800       0.0754   2745.6000    572.0000   -0.000700      62.7355   8.091E+09         0.000
0.000       0.000
     9.600       0.0721   5491.2000    572.0000   -0.000697     125.4710   8.091E+09         0.000
0.000       0.000
    14.400       0.0687   8236.8000    570.3608   -0.000693     188.2065   8.091E+09        -0.6830
47.7020       0.000
    19.200       0.0654       10967.    563.9943   -0.000688     250.5824   8.091E+09        -1.9697
144.5463      0.000
    24.000       0.0621       13651.    551.7432   -0.000680     311.9213   8.091E+09        -3.1349
242.2093      0.000
    28.800       0.0589       16263.    534.2101   -0.000671     371.6099   8.091E+09        -4.1706
339.9962      0.000
    33.600       0.0557       18780.    512.0232   -0.000661     429.1029   8.091E+09        -5.0739
437.4037      0.000
    38.400       0.0525       21179.    485.8253   -0.000649     483.9247   8.091E+09        -5.8419
533.7587      0.000
    43.200       0.0494       23443.    456.2872   -0.000636     535.6710   8.091E+09        -6.4656
627.6133      0.000
    48.000       0.0464       25559.    423.9508   -0.000621     584.0135   8.091E+09        -7.0079
724.4736      0.000
    52.800       0.0435       27513.    389.1437   -0.000606     628.6667   8.091E+09        -7.4951
827.3289      0.000
    57.600       0.0406       29295.    352.2722   -0.000589     669.3741   8.091E+09        -7.8681
929.8234      0.000
    62.400       0.0378       30895.    313.8678   -0.000571     705.9393   8.091E+09        -8.1337
1031.9472      0.000
    67.200       0.0351       32308.    274.4292   -0.000552     738.2225   8.091E+09        -8.2990
1133.7176      0.000
```

72.000	0.0325	33530.	234.4199	-0.000533	766.1367	8.091E+09	-8.3715
1235.1642	0.000						
76.800	0.0300	34559.	194.2672	-0.000512	789.6436	8.091E+09	-8.3587
1336.3210	0.000						
81.600	0.0276	35395.	154.3627	-0.000492	808.7501	8.091E+09	-8.2682
1437.2229	0.000						
86.400	0.0253	36040.	115.0612	-0.000470	823.5038	8.091E+09	-8.1074
1537.9027	0.000						
91.200	0.0231	36499.	76.6820	-0.000449	833.9894	8.091E+09	-7.8839
1638.3908	0.000						
96.000	0.0210	36777.	39.5088	-0.000427	840.3244	8.091E+09	-7.6049
1738.7145	0.000						
100.800	0.0190	36879.	3.7907	-0.000405	842.6558	8.091E+09	-7.2776
1838.8981	0.000						
105.600	0.0171	36813.	-30.2568	-0.000383	841.1559	8.091E+09	-6.9089
1938.9630	0.000						
110.400	0.0153	36588.	-62.4511	-0.000362	836.0188	8.091E+09	-6.5054
2038.9278	0.000						
115.200	0.0136	36213.	-92.6409	-0.000340	827.4569	8.091E+09	-6.0737
2138.8087	0.000						
120.000	0.0120	35699.	-120.7051	-0.000319	815.6976	8.091E+09	-5.6197
2238.6197	0.000						
124.800	0.0106	35055.	-146.5511	-0.000298	800.9797	8.091E+09	-5.1495
2338.3726	0.000						
129.600	0.009191	34292.	-170.1137	-0.000277	783.5509	8.091E+09	-4.6683
2438.0779	0.000						
134.400	0.007909	33422.	-191.3530	-0.000257	763.6644	8.091E+09	-4.1814
2537.7442	0.000						
139.200	0.006722	32455.	-210.2528	-0.000238	741.5767	8.091E+09	-3.6935
2637.3788	0.000						
144.000	0.005628	31403.	-226.8188	-0.000219	717.5445	8.091E+09	-3.2090
2736.9881	0.000						
148.800	0.004623	30277.	-241.0771	-0.000200	691.8229	8.091E+09	-2.7319
2836.5771	0.000						
153.600	0.003704	29089.	-253.0719	-0.000183	664.6630	8.091E+09	-2.2659
2936.1502	0.000						
158.400	0.002868	27848.	-262.8639	-0.000166	636.3103	8.091E+09	-1.8141
3035.7110	0.000						
163.200	0.002112	26565.	-270.5284	-0.000150	607.0026	8.091E+09	-1.3794
3135.2624	0.000						
168.000	0.001431	25251.	-276.1535	-0.000134	576.9686	8.091E+09	-0.9644
3234.8067	0.000						
172.800	0.000822	23914.	-279.8384	-0.000120	546.4269	8.091E+09	-0.5710
3334.3458	0.000						
177.600	0.000281	22564.	-281.6914	-0.000106	515.5847	8.091E+09	-0.2011
3433.8812	0.000						
182.400	-0.000196	21210.	-281.8286	-9.301E-05	484.6366	8.091E+09	0.1439
3533.4142	0.000						
187.200	-0.000612	19859.	-280.3719	-8.083E-05	453.7642	8.091E+09	0.4630
3632.9454	0.000						
192.000	-0.000971	18518.	-277.4477	-6.944E-05	423.1356	8.091E+09	0.7554
3732.4753	0.000						
196.800	-0.001278	17195.	-273.1852	-5.885E-05	392.9047	8.091E+09	1.0206
3832.0044	0.000						
201.600	-0.001536	15896.	-267.7156	-4.903E-05	363.2111	8.091E+09	1.2584
3931.5332	0.000						
206.400	-0.001749	14625.	-261.1700	-3.998E-05	334.1800	8.091E+09	1.4689
4031.0619	0.000						
211.200	-0.001920	13389.	-253.6788	-3.167E-05	305.9222	8.091E+09	1.6524
4130.5908	0.000						
216.000	-0.002053	12190.	-245.3704	-2.408E-05	278.5344	8.091E+09	1.8094
4230.1201	0.000						
220.800	-0.002151	11033.	-236.3705	-1.719E-05	252.0991	8.091E+09	1.9406
4329.6499	0.000						
225.600	-0.002218	9920.8180	-226.8007	-1.098E-05	226.6854	8.091E+09	2.0468
4429.1804	0.000						
230.400	-0.002257	8855.7545	-216.7781	-5.409E-06	202.3492	8.091E+09	2.1292
4528.7115	0.000						
235.200	-0.002270	7839.7486	-206.4145	-4.564E-07	179.1340	8.091E+09	2.1889
4628.2432	0.000						
240.000	-0.002261	6874.1752	-195.8160	3.908E-06	157.0712	8.091E+09	2.2271
4727.7756	0.000						
244.800	-0.002233	5959.9151	-185.0821	7.715E-06	136.1809	8.091E+09	2.2453
4827.3085	0.000						
249.600	-0.002187	5097.3872	-174.3056	1.099E-05	116.4726	8.091E+09	2.2449
4926.8420	0.000						
254.400	-0.002127	4286.5818	-163.5721	1.378E-05	97.9461	8.091E+09	2.2274
5026.3759	0.000						
259.200	-0.002055	3527.0953	-152.9599	1.610E-05	80.5922	8.091E+09	2.1943
5125.9102	0.000						

264.000	-0.001973	2818.1666	-142.5398	1.798E-05	64.3936	8.091E+09	2.1474
5225.4447	0.000						
268.800	-0.001882	2158.7136	-132.3746	1.945E-05	49.3254	8.091E+09	2.0881
5324.9795	0.000						
273.600	-0.001786	1547.3703	-122.5197	2.055E-05	35.3566	8.091E+09	2.0181
5424.5144	0.000						
278.400	-0.001685	982.5247	-111.0688	2.130E-05	22.4502	8.091E+09	2.7531
7843.0069	0.000						
283.200	-0.001581	481.1102	-98.1147	2.174E-05	10.9931	8.091E+09	2.6444
8027.3325	0.000						
288.000	-0.001476	40.6235	-85.7069	2.189E-05	0.9282	8.091E+09	2.5255
8211.6576	0.000						
292.800	-0.001371	-341.6763	-73.8900	2.180E-05	7.8071	8.091E+09	2.3982
8395.9822	0.000						
297.600	-0.001267	-668.7204	-62.6990	2.150E-05	15.2799	8.091E+09	2.2647
8580.3062	0.000						
302.400	-0.001165	-943.5862	-52.1599	2.103E-05	21.5604	8.091E+09	2.1266
8764.6297	0.000						
307.200	-0.001065	-1169.4553	-42.2905	2.040E-05	26.7214	8.091E+09	1.9857
8948.9527	0.000						
312.000	-0.000969	-1349.5747	-33.1007	1.965E-05	30.8371	8.091E+09	1.8434
9133.2749	0.000						
316.800	-0.000876	-1487.2219	-24.5935	1.881E-05	33.9822	8.091E+09	1.7012
9317.5968	0.000						
321.600	-0.000788	-1585.6725	-16.7657	1.790E-05	36.2318	8.091E+09	1.5603
9501.9184	0.000						
326.400	-0.000705	-1648.1727	-9.6086	1.694E-05	37.6599	8.091E+09	1.4218
9686.2398	0.000						
331.200	-0.000626	-1677.9147	-3.1087	1.595E-05	38.3394	8.091E+09	1.2865
9870.5611	0.000						
336.000	-0.000551	-1678.0163	1.4690	1.496E-05	38.3418	8.091E+09	0.6209
5404.8129	0.000						
340.800	-0.000482	-1663.8125	4.2884	1.397E-05	38.0172	8.091E+09	0.5538
5515.4050	0.000						
345.600	-0.000417	-1636.8480	6.7916	1.299E-05	37.4011	8.091E+09	0.4892
5625.9972	0.000						
350.400	-0.000357	-1598.6133	8.9905	1.203E-05	36.5275	8.091E+09	0.4271
5736.5893	0.000						
355.200	-0.000302	-1550.5392	10.8980	1.109E-05	35.4290	8.091E+09	0.3677
5847.1814	0.000						
360.000	-0.000251	-1493.9927	12.5277	1.019E-05	34.1369	8.091E+09	0.3113
5957.7734	0.000						
364.800	-0.000204	-1430.2730	13.8940	9.323E-06	32.6810	8.091E+09	0.2580
6068.3655	0.000						
369.600	-0.000161	-1360.6099	15.0116	8.495E-06	31.0892	8.091E+09	0.2077
6178.9575	0.000						
374.400	-0.000122	-1286.1620	15.8952	7.710E-06	29.3881	8.091E+09	0.1605
6289.5496	0.000						
379.200	-8.731E-05	-1208.0161	16.5598	6.970E-06	27.6025	8.091E+09	0.1164
6400.1416	0.000						
384.000	-5.557E-05	-1127.1879	17.0201	6.278E-06	25.7556	8.091E+09	0.0754
6510.7336	0.000						
388.800	-2.705E-05	-1044.6228	17.2906	5.633E-06	23.8691	8.091E+09	0.0373
6621.3256	0.000						
393.600	-1.494E-06	-961.1982	17.3852	5.038E-06	21.9629	8.091E+09	0.002095
6731.9176	0.000						
398.400	2.132E-05	-877.7253	17.3172	4.493E-06	20.0556	8.091E+09	-0.0304
6842.5096	0.000						
403.200	4.164E-05	-794.9528	17.0995	3.997E-06	18.1642	8.091E+09	-0.0603
6953.1016	0.000						
408.000	5.969E-05	-713.5699	16.7439	3.549E-06	16.3047	8.091E+09	-0.0878
7063.6936	0.000						
412.800	7.571E-05	-634.2109	16.2615	3.150E-06	14.4914	8.091E+09	-0.1132
7174.2856	0.000						
417.600	8.993E-05	-557.4591	15.6624	2.796E-06	12.7376	8.091E+09	-0.1365
7284.8776	0.000						
422.400	0.000103	-483.8519	14.9556	2.487E-06	11.0558	8.091E+09	-0.1580
7395.4696	0.000						
427.200	0.000114	-413.8852	14.1493	2.221E-06	9.4571	8.091E+09	-0.1780
7506.0615	0.000						
432.000	0.000124	-348.0188	13.2504	1.995E-06	7.9520	8.091E+09	-0.1966
7616.6535	0.000						
436.800	0.000133	-286.6813	12.2650	1.807E-06	6.5505	8.091E+09	-0.2140
7727.2455	0.000						
441.600	0.000141	-230.2752	11.1978	1.653E-06	5.2617	8.091E+09	-0.2306
7837.8375	0.000						
446.400	0.000149	-179.1820	10.0529	1.532E-06	4.0942	8.091E+09	-0.2464
7948.4295	0.000						
451.200	0.000156	-133.7669	8.8332	1.439E-06	3.0565	8.091E+09	-0.2618
8059.0215	0.000						

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   456.000     0.000163     -94.3836       7.5405   1.371E-06       2.1566   8.091E+09      -0.2768
8169.6135      0.000
   460.800     0.000169     -61.3781       6.1761   1.325E-06       1.4025   8.091E+09      -0.2917
8280.2055      0.000
   465.600     0.000175     -35.0930       4.7403   1.297E-06       0.8019   8.091E+09      -0.3065
8390.7974      0.000
   470.400     0.000182     -15.8709       3.2330   1.281E-06       0.3626   8.091E+09      -0.3215
8501.3894      0.000
   475.200     0.000188      -4.0566       1.6532   1.275E-06       0.0927   8.091E+09      -0.3367
8611.9814      0.000
   480.000     0.000194         0.000        0.000   1.274E-06        0.000   8.091E+09      -0.3521
4361.2867      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 1:

Pile-head deflection             =      0.0787818 inches
Computed slope at pile head      =     -0.0007005 radians
Maximum bending moment           =         36879. inch-lbs
Maximum shear force              =    572.0000000 lbs
Depth of maximum bending moment  =    100.8000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =              6
Number of zero deflection points =              2


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 2
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        1602.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth     Deflect.     Bending     Shear        Slope       Total     Bending    Soil Res.   Soil Spr.
Distrib.
      X          y         Moment      Force           S        Stress    Stiffness       p          Es*h
Lat. Load
   inches     inches      in-lbs       lbs        radians      psi*       lb-in^2     lb/in       lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
- ----------
      0.00       0.2329  -5.848E-08   1602.0000   -0.002046   1.336E-09   8.091E+09          0.000
0.000       0.000
     4.800       0.2231   7689.6000   1602.0000   -0.002044     175.7032   8.091E+09          0.000
0.000       0.000
     9.600       0.2133       15379.   1602.0000   -0.002037     351.4065   8.091E+09          0.000
0.000       0.000
    14.400       0.2035       23069.   1598.2664   -0.002025     527.1097   8.091E+09       -1.5557
36.6910       0.000
    19.200       0.1938       30723.   1583.1847   -0.002009     701.9939   8.091E+09       -4.7284
117.0947      0.000
    24.000       0.1842       38267.   1553.2143   -0.001989     874.3889   8.091E+09       -7.7593
202.1683      0.000
    28.800       0.1747       45633.   1509.4158   -0.001964    1042.6990   8.091E+09      -10.4901
288.1671      0.000
    33.600       0.1654       52758.   1453.4829   -0.001935    1205.4866   8.091E+09      -12.8153
371.9740      0.000
    38.400       0.1562       59587.   1387.6262   -0.001902    1361.5275   8.091E+09      -14.6249
449.5416      0.000
    43.200       0.1471       66079.   1314.7746   -0.001864    1509.8691   8.091E+09      -15.7299
513.2252      0.000
    48.000       0.1383       72209.   1235.9855   -0.001823    1649.9297   8.091E+09      -17.0989
593.6214      0.000
    52.800       0.1296       77944.   1149.0293   -0.001779    1780.9885   8.091E+09      -19.1329
708.5569      0.000
    57.600       0.1212       83239.   1053.1503   -0.001731    1901.9748   8.091E+09      -20.8167
824.5235      0.000
    62.400       0.1130       88055.    950.0640   -0.001680    2012.0021   8.091E+09      -22.1359
940.3250      0.000
    67.200       0.1051       92360.    841.5094   -0.001627    2110.3759   8.091E+09      -23.0951
1055.2112     0.000
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72.000	0.0974	96133.	729.1738	-0.001571	2196.5913	8.091E+09	-23.7113
1168.7627	0.000						
76.800	0.0900	99360.	614.6453	-0.001513	2270.3237	8.091E+09	-24.0089
1280.7902	0.000						
81.600	0.0829	102034.	499.3853	-0.001453	2331.4167	8.091E+09	-24.0161
1391.2553	0.000						
86.400	0.0760	104154.	384.7164	-0.001392	2379.8663	8.091E+09	-23.7626
1500.2133	0.000						
91.200	0.0695	105727.	271.8183	-0.001330	2415.8061	8.091E+09	-23.2783
1607.7727	0.000						
96.000	0.0633	106764.	161.7294	-0.001267	2439.4910	8.091E+09	-22.5921
1714.0684	0.000						
100.800	0.0573	107280.	55.3516	-0.001203	2451.2822	8.091E+09	-21.7319
1819.2445	0.000						
105.600	0.0517	107295.	-46.5424	-0.001139	2451.6326	8.091E+09	-20.7239
1923.4438	0.000						
110.400	0.0464	106833.	-143.3025	-0.001076	2441.0729	8.091E+09	-19.5928
2026.8012	0.000						
115.200	0.0414	105919.	-234.3927	-0.001013	2420.1985	8.091E+09	-18.3615
2129.4407	0.000						
120.000	0.0367	104583.	-319.3839	-0.000950	2389.6577	8.091E+09	-17.0515
2231.4735	0.000						
124.800	0.0323	102853.	-397.9458	-0.000889	2350.1401	8.091E+09	-15.6826
2332.9982	0.000						
129.600	0.0281	100762.	-469.8395	-0.000828	2302.3664	8.091E+09	-14.2731
2434.1011	0.000						
134.400	0.0243	98343.	-534.9108	-0.000769	2247.0786	8.091E+09	-12.8399
2534.8567	0.000						
139.200	0.0208	95627.	-593.0825	-0.000712	2185.0311	8.091E+09	-11.3983
2635.3288	0.000						
144.000	0.0175	92649.	-644.3481	-0.000656	2116.9830	8.091E+09	-9.9624
2735.5717	0.000						
148.800	0.0145	89442.	-688.7650	-0.000602	2043.6903	8.091E+09	-8.5447
2835.6312	0.000						
153.600	0.0117	86037.	-726.4484	-0.000550	1965.8991	8.091E+09	-7.1567
2935.5456	0.000						
158.400	0.009185	82468.	-757.5648	-0.000500	1884.3403	8.091E+09	-5.8085
3035.3467	0.000						
163.200	0.006903	78764.	-782.3262	-0.000452	1799.7236	8.091E+09	-4.5088
3135.0608	0.000						
168.000	0.004846	74957.	-800.9843	-0.000406	1712.7333	8.091E+09	-3.2654
3234.7090	0.000						
172.800	0.003001	71075.	-813.8249	-0.000363	1624.0238	8.091E+09	-2.0848
3334.3085	0.000						
177.600	0.001359	67145.	-821.1625	-0.000322	1534.2168	8.091E+09	-0.9725
3433.8731	0.000						
182.400	-9.129E-05	63192.	-823.3352	-0.000283	1443.8979	8.091E+09	0.0672
3533.4144	0.000						
187.200	-0.001362	59241.	-820.6998	-0.000247	1353.6143	8.091E+09	1.0309
3632.9382	0.000						
192.000	-0.002464	55313.	-813.6272	-0.000213	1263.8734	8.091E+09	1.9160
3732.4496	0.000						
196.800	-0.003409	51430.	-802.4979	-0.000182	1175.1412	8.091E+09	2.7212
3831.9531	0.000						
201.600	-0.004207	47609.	-787.6979	-0.000152	1087.8416	8.091E+09	3.4455
3931.4523	0.000						
206.400	-0.004869	43868.	-769.6150	-0.000125	1002.3559	8.091E+09	4.0891
4030.9502	0.000						
211.200	-0.005407	40221.	-748.6350	-0.000100	919.0228	8.091E+09	4.6526
4130.4492	0.000						
216.000	-0.005830	36681.	-725.1388	-7.726E-05	838.1391	8.091E+09	5.1375
4229.9512	0.000						
220.800	-0.006148	33259.	-699.4991	-5.651E-05	759.9601	8.091E+09	5.5457
4329.4573	0.000						
225.600	-0.006372	29966.	-672.0779	-3.776E-05	684.7006	8.091E+09	5.8798
4428.9684	0.000						
230.400	-0.006511	26807.	-643.2242	-2.092E-05	612.5366	8.091E+09	6.1426
4528.4849	0.000						
235.200	-0.006573	23791.	-613.2716	-5.907E-06	543.6063	8.091E+09	6.3376
4628.0070	0.000						
240.000	-0.006568	20920.	-582.5370	7.355E-06	478.0125	8.091E+09	6.4685
4727.5345	0.000						
244.800	-0.006503	18198.	-551.3186	1.896E-05	415.8240	8.091E+09	6.5392
4827.0670	0.000						
249.600	-0.006386	15627.	-519.8948	2.899E-05	357.0781	8.091E+09	6.5540
4926.6041	0.000						
254.400	-0.006224	13207.	-488.5232	3.755E-05	301.7825	8.091E+09	6.5174
5026.1452	0.000						
259.200	-0.006025	10938.	-457.4398	4.471E-05	249.9181	8.091E+09	6.4340
5125.6896	0.000						

264.000	-0.005795	8816.0020	-426.8580	5.057E-05	201.4409	8.091E+09	6.3084
5225.2366	0.000						
268.800	-0.005540	6839.7564	-396.9689	5.521E-05	156.2848	8.091E+09	6.1454
5324.7856	0.000						
273.600	-0.005265	5005.1007	-367.9404	5.872E-05	114.3639	8.091E+09	5.9498
5424.3359	0.000						
278.400	-0.004976	3307.5286	-334.1483	6.119E-05	75.5753	8.091E+09	8.1302
7842.7031	0.000						
283.200	-0.004678	1797.2774	-295.8621	6.270E-05	41.0668	8.091E+09	7.8223
8027.0712	0.000						
288.000	-0.004374	467.2523	-259.1300	6.338E-05	10.6765	8.091E+09	7.4827
8211.4350	0.000						
292.800	-0.004069	-690.3710	-224.0896	6.331E-05	15.7746	8.091E+09	7.1175
8395.7944	0.000						
297.600	-0.003766	-1684.0082	-190.8503	6.261E-05	38.4787	8.091E+09	6.7323
8580.1494	0.000						
302.400	-0.003468	-2522.5335	-159.4945	6.136E-05	57.6385	8.091E+09	6.3326
8764.4999	0.000						
307.200	-0.003177	-3215.1555	-130.0800	5.966E-05	73.4646	8.091E+09	5.9234
8948.8464	0.000						
312.000	-0.002895	-3771.3019	-102.6415	5.758E-05	86.1722	8.091E+09	5.5093
9133.1854	0.000						
316.800	-0.002624	-4200.5141	-77.1927	5.522E-05	95.9795	8.091E+09	5.0944
9317.5216	0.000						
321.600	-0.002365	-4512.3517	-53.7286	5.263E-05	103.1048	8.091E+09	4.6823
9501.8559	0.000						
326.400	-0.002119	-4716.3085	-32.2279	4.990E-05	107.7651	8.091E+09	4.2763
9686.1886	0.000						
331.200	-0.001886	-4821.7395	-12.6552	4.707E-05	110.1742	8.091E+09	3.8790
9870.5196	0.000						
336.000	-0.001667	-4837.7987	1.1600	4.420E-05	110.5411	8.091E+09	1.8774
5404.8068	0.000						
340.800	-0.001462	-4810.6037	9.6974	4.134E-05	109.9197	8.091E+09	1.6799
5515.4004	0.000						
345.600	-0.001270	-4744.7040	17.3027	3.851E-05	108.4139	8.091E+09	1.4890
5625.9937	0.000						
350.400	-0.001092	-4644.4973	24.0095	3.572E-05	106.1243	8.091E+09	1.3055
5736.5867	0.000						
355.200	-0.000927	-4514.2126	29.8542	3.300E-05	103.1473	8.091E+09	1.1298
5847.1795	0.000						
360.000	-0.000775	-4357.8966	34.8759	3.037E-05	99.5756	8.091E+09	0.9625
5957.7721	0.000						
364.800	-0.000636	-4179.4036	39.1155	2.784E-05	95.4971	8.091E+09	0.8039
6068.3645	0.000						
369.600	-0.000508	-3982.3878	42.6151	2.542E-05	90.9954	8.091E+09	0.6542
6178.9569	0.000						
374.400	-0.000392	-3770.2985	45.4177	2.312E-05	86.1493	8.091E+09	0.5135
6289.5492	0.000						
379.200	-0.000286	-3546.3783	47.5662	2.095E-05	81.0328	8.091E+09	0.3817
6400.1414	0.000						
384.000	-0.000191	-3313.6634	49.1033	1.891E-05	75.7154	8.091E+09	0.2588
6510.7335	0.000						
388.800	-0.000105	-3074.9866	50.0710	1.702E-05	70.2618	8.091E+09	0.1444
6621.3256	0.000						
393.600	-2.739E-05	-2832.9822	50.5098	1.527E-05	64.7321	8.091E+09	0.0384
6731.9176	0.000						
398.400	4.186E-05	-2590.0929	50.4587	1.366E-05	59.1822	8.091E+09	-0.0597
6842.5096	0.000						
403.200	0.000104	-2348.5784	49.9549	1.219E-05	53.6638	8.091E+09	-0.1503
6953.1016	0.000						
408.000	0.000159	-2110.5260	49.0330	1.087E-05	48.2244	8.091E+09	-0.2339
7063.6935	0.000						
412.800	0.000208	-1877.8619	47.7252	9.688E-06	42.9081	8.091E+09	-0.3110
7174.2854	0.000						
417.600	0.000252	-1652.3637	46.0612	8.640E-06	37.7556	8.091E+09	-0.3823
7284.8774	0.000						
422.400	0.000291	-1435.6743	44.0674	7.724E-06	32.8044	8.091E+09	-0.4484
7395.4693	0.000						
427.200	0.000326	-1229.3164	41.7675	6.934E-06	28.0892	8.091E+09	-0.5099
7506.0612	0.000						
432.000	0.000358	-1034.7066	39.1818	6.262E-06	23.6425	8.091E+09	-0.5674
7616.6530	0.000						
436.800	0.000386	-853.1707	36.3279	5.702E-06	19.4945	8.091E+09	-0.6217
7727.2449	0.000						
441.600	0.000412	-685.9590	33.2198	5.246E-06	15.6738	8.091E+09	-0.6733
7837.8368	0.000						
446.400	0.000437	-534.2604	29.8689	4.884E-06	12.2076	8.091E+09	-0.7229
7948.4287	0.000						
451.200	0.000459	-399.2173	26.2835	4.607E-06	9.1219	8.091E+09	-0.7710
8059.0206	0.000						

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   456.000     0.000481   -281.9388      22.4691   4.405E-06       6.4422   8.091E+09      -0.8183
8169.6124      0.000
   460.800     0.000502   -183.5136      18.4289   4.267E-06       4.1932   8.091E+09      -0.8651
8280.2043      0.000
   465.600     0.000522   -105.0213      14.1637   4.181E-06       2.3997   8.091E+09      -0.9120
8390.7961      0.000
   470.400     0.000542    -47.5424       9.6723   4.136E-06       1.0863   8.091E+09      -0.9593
8501.3880      0.000
   475.200     0.000561    -12.1668       4.9523   4.118E-06       0.2780   8.091E+09      -1.0073
8611.9798      0.000
   480.000     0.000581       0.000       0.000   4.115E-06        0.000   8.091E+09      -1.0561
4361.2858      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 2:

Pile-head deflection             =      0.2328897 inches
Computed slope at pile head      =     -0.0020459 radians
Maximum bending moment           =        107295. inch-lbs
Maximum shear force              =   1602.0000000 lbs
Depth of maximum bending moment  =    105.6000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =              7
Number of zero deflection points =              2


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 3
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        2213.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
      X          y        Moment     Force          S       Stress   Stiffness       p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       0.3386   5.848E-08   2213.0000   -0.002940   1.336E-09   8.091E+09         0.000
0.000      0.000
     4.800       0.3245       10622.   2213.0000   -0.002937    242.7161   8.091E+09         0.000
0.000      0.000
     9.600       0.3104       21245.   2213.0000   -0.002928    485.4323   8.091E+09         0.000
0.000      0.000
    14.400       0.2964       31867.   2208.6734   -0.002912    728.1484   8.091E+09      -1.8028
29.1920      0.000
    19.200       0.2825       42448.   2190.7631   -0.002890    969.9155   8.091E+09      -5.6598
96.1694      0.000
    24.000       0.2687       52899.   2154.4091   -0.002862   1208.7029   8.091E+09      -9.4877
169.4976     0.000
    28.800       0.2550       63130.   2100.4873   -0.002827   1442.4955   8.091E+09     -12.9797
244.3033     0.000
    33.600       0.2415       73063.   2031.1663   -0.002787   1669.4549   8.091E+09     -15.9041
316.0531     0.000
    38.400       0.2283       82630.   1949.7432   -0.002741   1888.0417   8.091E+09     -18.0222
378.9699     0.000
    43.200       0.2152       91781.   1860.9388   -0.002689   2097.1406   8.091E+09     -18.9797
423.2796     0.000
    48.000       0.2025      100495.   1765.7841   -0.002632   2296.2476   8.091E+09     -20.6681
490.0230     0.000
    52.800       0.1900      108732.   1658.7762   -0.002570   2484.4738   8.091E+09     -23.9185
604.3717     0.000
    57.600       0.1778      116419.   1537.0122   -0.002503   2660.1082   8.091E+09     -26.8165
724.0239     0.000
    62.400       0.1659      123488.   1402.4094   -0.002432   2821.6249   8.091E+09     -29.2680
846.6371     0.000
    67.200       0.1544      129882.   1257.2409   -0.002357   2967.7335   8.091E+09     -31.2189
970.3027     0.000
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72.000	0.1433	135557.	1103.9539	-0.002278	3097.4068	8.091E+09	-32.6507
1093.5985	0.000						
76.800	0.1326	140480.	945.0199	-0.002196	3209.8911	8.091E+09	-33.5718
1215.5590	0.000						
81.600	0.1222	144629.	782.8243	-0.002112	3304.7015	8.091E+09	-34.0097
1335.6005	0.000						
86.400	0.1123	147995.	619.5926	-0.002025	3381.6074	8.091E+09	-34.0035
1453.4327	0.000						
91.200	0.1028	150577.	457.3471	-0.001936	3440.6121	8.091E+09	-33.5988
1568.9754	0.000						
96.000	0.0937	152386.	297.8862	-0.001846	3481.9287	8.091E+09	-32.8432
1682.2886	0.000						
100.800	0.0851	153437.	142.7797	-0.001756	3505.9549	8.091E+09	-31.7844
1793.5184	0.000						
105.600	0.0769	153756.	-6.6263	-0.001664	3513.2481	8.091E+09	-30.4681
1902.8578	0.000						
110.400	0.0691	153373.	-149.1990	-0.001573	3504.5014	8.091E+09	-28.9372
2010.5194	0.000						
115.200	0.0618	152324.	-284.0040	-0.001483	3480.5206	8.091E+09	-27.2316
2116.7180	0.000						
120.000	0.0549	150647.	-410.2909	-0.001393	3442.2037	8.091E+09	-25.3880
2221.6591	0.000						
124.800	0.0484	148385.	-527.4776	-0.001304	3390.5213	8.091E+09	-23.4398
2325.5327	0.000						
129.600	0.0423	145583.	-635.1354	-0.001217	3326.4989	8.091E+09	-21.4176
2428.5101	0.000						
134.400	0.0367	142288.	-732.9746	-0.001132	3251.2013	8.091E+09	-19.3487
2530.7431	0.000						
139.200	0.0315	138547.	-820.8311	-0.001048	3165.7174	8.091E+09	-17.2582
2632.3639	0.000						
144.000	0.0266	134408.	-898.6542	-0.000967	3071.1480	8.091E+09	-15.1681
2733.4865	0.000						
148.800	0.0222	129920.	-966.4943	-0.000889	2968.5933	8.091E+09	-13.0986
2834.2079	0.000						
153.600	0.0181	125130.	-1024.4922	-0.000813	2859.1428	8.091E+09	-11.0672
2934.6102	0.000						
158.400	0.0144	120084.	-1072.8687	-0.000740	2743.8659	8.091E+09	-9.0896
3034.7618	0.000						
163.200	0.0110	114830.	-1111.9147	-0.000671	2623.8038	8.091E+09	-7.1795
3134.7193	0.000						
168.000	0.007937	109410.	-1141.9821	-0.000604	2499.9621	8.091E+09	-5.3486
3234.5291	0.000						
172.800	0.005192	103867.	-1163.4752	-0.000541	2373.3045	8.091E+09	-3.6069
3334.2282	0.000						
177.600	0.002743	98241.	-1176.8420	-0.000481	2244.7482	8.091E+09	-1.9627
3433.8469	0.000						
182.400	0.000574	92569.	-1182.5670	-0.000424	2115.1585	8.091E+09	-0.4227
3533.4128	0.000						
187.200	-0.001331	86888.	-1181.1632	-0.000371	1985.3464	8.091E+09	1.0077
3632.9386	0.000						
192.000	-0.002990	81230.	-1173.1656	-0.000321	1856.0647	8.091E+09	2.3247
3732.4352	0.000						
196.800	-0.004416	75626.	-1159.1247	-0.000275	1728.0068	8.091E+09	3.5257
3831.9125	0.000						
201.600	-0.005628	70103.	-1139.6000	-0.000232	1601.8051	8.091E+09	4.6095
3931.3786	0.000						
206.400	-0.006640	64686.	-1115.1548	-0.000192	1478.0301	8.091E+09	5.5759
4030.8400	0.000						
211.200	-0.007468	59397.	-1086.3508	-0.000155	1357.1905	8.091E+09	6.4258
4130.3022	0.000						
216.000	-0.008126	54257.	-1053.7430	-0.000121	1239.7337	8.091E+09	7.1608
4229.7693	0.000						
220.800	-0.008630	49281.	-1017.8756	-9.040E-05	1126.0469	8.091E+09	7.7839
4329.2443	0.000						
225.600	-0.008994	44485.	-979.2781	-6.258E-05	1016.4578	8.091E+09	8.2984
4428.7291	0.000						
230.400	-0.009231	39880.	-938.4618	-3.756E-05	911.2375	8.091E+09	8.7085
4528.2248	0.000						
235.200	-0.009355	35476.	-895.9162	-1.521E-05	810.6017	8.091E+09	9.0189
4627.7320	0.000						
240.000	-0.009377	31279.	-852.1068	4.594E-06	714.7139	8.091E+09	9.2350
4727.2505	0.000						
244.800	-0.009311	27296.	-807.4730	2.197E-05	623.6879	8.091E+09	9.3625
4826.7796	0.000						
249.600	-0.009166	23528.	-762.4252	3.704E-05	537.5908	8.091E+09	9.4074
4926.3184	0.000						
254.400	-0.008955	19976.	-717.3444	4.995E-05	456.4463	8.091E+09	9.3763
5025.8658	0.000						
259.200	-0.008687	16641.	-672.5798	6.081E-05	380.2379	8.091E+09	9.2756
5125.4204	0.000						

264.000	-0.008371	13519.	-628.4488	6.976E-05	308.9126	8.091E+09	9.1123
5224.9809	0.000						
268.800	-0.008017	10608.	-585.2358	7.691E-05	242.3846	8.091E+09	8.8931
5324.5458	0.000						
273.600	-0.007633	7901.2065	-543.1918	8.240E-05	180.5383	8.091E+09	8.6252
5424.1138	0.000						
278.400	-0.007226	5393.2481	-494.1571	8.635E-05	123.2328	8.091E+09	11.8059
7842.3226	0.000						
283.200	-0.006804	3157.2979	-438.5167	8.888E-05	72.1426	8.091E+09	11.3776
8026.7421	0.000						
288.000	-0.006373	1183.4878	-385.0469	9.017E-05	27.0421	8.091E+09	10.9015
8211.1531	0.000						
292.800	-0.005938	-539.1521	-333.9561	9.036E-05	12.3193	8.091E+09	10.3863
8395.5553	0.000						
297.600	-0.005505	-2022.4911	-285.4117	8.960E-05	46.2128	8.091E+09	9.8405
8579.9484	0.000						
302.400	-0.005078	-3279.1049	-239.5419	8.803E-05	74.9258	8.091E+09	9.2719
8764.3327	0.000						
307.200	-0.004660	-4322.0931	-196.4382	8.577E-05	98.7575	8.091E+09	8.6879
8948.7085	0.000						
312.000	-0.004255	-5164.9111	-156.1585	8.296E-05	118.0154	8.091E+09	8.0953
9133.0687	0.000						
316.800	-0.003864	-5821.2145	-118.7300	7.970E-05	133.0116	8.091E+09	7.5000
9317.4228	0.000						
321.600	-0.003489	-6304.7188	-84.1522	7.611E-05	144.0594	8.091E+09	6.9074
9501.7733	0.000						
326.400	-0.003133	-6629.0757	-52.4006	7.227E-05	151.4708	8.091E+09	6.3224
9686.1203	0.000						
331.200	-0.002796	-6807.7643	-23.4296	6.828E-05	155.5538	8.091E+09	5.7488
9870.4638	0.000						
336.000	-0.002478	-6854.0001	-2.9370	6.423E-05	156.6102	8.091E+09	2.7898
5404.7985	0.000						
340.800	-0.002179	-6835.9599	9.7675	6.017E-05	156.1980	8.091E+09	2.5038
5515.3939	0.000						
345.600	-0.001900	-6760.2322	21.1212	5.614E-05	154.4677	8.091E+09	2.2269
5625.9888	0.000						
350.400	-0.001640	-6633.1968	31.1701	5.216E-05	151.5650	8.091E+09	1.9601
5736.5830	0.000						
355.200	-0.001399	-6460.9996	39.9650	4.828E-05	147.6304	8.091E+09	1.7044
5847.1768	0.000						
360.000	-0.001177	-6249.5324	47.5607	4.451E-05	142.7985	8.091E+09	1.4604
5957.7700	0.000						
364.800	-0.000972	-6004.4166	54.0147	4.087E-05	137.1977	8.091E+09	1.2287
6068.3631	0.000						
369.600	-0.000784	-5730.9915	59.3865	3.739E-05	130.9501	8.091E+09	1.0095
6178.9559	0.000						
374.400	-0.000613	-5434.3066	63.7368	3.408E-05	124.1710	8.091E+09	0.8031
6289.5485	0.000						
379.200	-0.000457	-5119.1180	67.1269	3.095E-05	116.9691	8.091E+09	0.6094
6400.1410	0.000						
384.000	-0.000316	-4789.8884	69.6175	2.801E-05	109.4464	8.091E+09	0.4283
6510.7333	0.000						
388.800	-0.000188	-4450.7903	71.2683	2.527E-05	101.6982	8.091E+09	0.2595
6621.3255	0.000						
393.600	-7.318E-05	-4105.7127	72.1375	2.273E-05	93.8133	8.091E+09	0.1026
6731.9176	0.000						
398.400	3.010E-05	-3758.2704	72.2808	2.040E-05	85.8745	8.091E+09	-0.0429
6842.5096	0.000						
403.200	0.000123	-3411.8167	71.7514	1.827E-05	77.9582	8.091E+09	-0.1777
6953.1016	0.000						
408.000	0.000206	-3069.4569	70.5991	1.635E-05	70.1354	8.091E+09	-0.3024
7063.6934	0.000						
412.800	0.000280	-2734.0655	68.8701	1.463E-05	62.4719	8.091E+09	-0.4180
7174.2853	0.000						
417.600	0.000346	-2408.3037	66.6069	1.310E-05	55.0284	8.091E+09	-0.5251
7284.8771	0.000						
422.400	0.000405	-2094.6394	63.8475	1.177E-05	47.8614	8.091E+09	-0.6247
7395.4689	0.000						
427.200	0.000459	-1795.3673	60.6259	1.061E-05	41.0232	8.091E+09	-0.7177
7506.0607	0.000						
432.000	0.000507	-1512.6303	56.9714	9.633E-06	34.5628	8.091E+09	-0.8050
7616.6525	0.000						
436.800	0.000551	-1248.4415	52.9089	8.814E-06	28.5262	8.091E+09	-0.8877
7727.2442	0.000						
441.600	0.000592	-1004.7052	48.4586	8.146E-06	22.9570	8.091E+09	-0.9666
7837.8360	0.000						
446.400	0.000630	-783.2390	43.6365	7.616E-06	17.8966	8.091E+09	-1.0426
7948.4277	0.000						
451.200	0.000665	-585.7944	38.4544	7.209E-06	13.3851	8.091E+09	-1.1166
8059.0194	0.000						

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   456.000     0.000699   -414.0765      32.9200   6.913E-06        9.4614   8.091E+09      -1.1894
8169.6111      0.000
   460.800     0.000731   -269.7627      27.0372   6.710E-06        6.1639   8.091E+09      -1.2617
8280.2028      0.000
   465.600     0.000763   -154.5193      20.8069   6.584E-06        3.5307   8.091E+09      -1.3342
8390.7945      0.000
   470.400     0.000795    -70.0163      14.2271   6.518E-06        1.5998   8.091E+09      -1.4074
8501.3861      0.000
   475.200     0.000826    -17.9395       7.2934   6.492E-06        0.4099   8.091E+09      -1.4816
8611.9777      0.000
   480.000     0.000857       0.000       0.000   6.486E-06         0.000   8.091E+09      -1.5573
4361.2847      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 3:

Pile-head deflection             =      0.3386455 inches
Computed slope at pile head      =     -0.0029404 radians
Maximum bending moment           =        153756. inch-lbs
Maximum shear force              =   2213.0000000 lbs
Depth of maximum bending moment  =    105.6000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =              8
Number of zero deflection points =              2


--------------------------------------------------------------------------------
                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 4
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        3442.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth     Deflect.     Bending     Shear        Slope       Total     Bending    Soil Res.   Soil Spr.
Distrib.
      X          y         Moment      Force           S        Stress    Stiffness       p          Es*h
Lat. Load
   inches     inches      in-lbs       lbs         radians      psi*      lb-in^2     lb/in       lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
- ----------
      0.00       0.5959  -6.238E-07   3442.0000   -0.005025   1.425E-08   8.091E+09          0.000
0.000       0.000
     4.800       0.5718       16522.   3442.0000   -0.005020    377.5097   8.091E+09          0.000
0.000       0.000
     9.600       0.5477       33043.   3442.0000   -0.005005    755.0194   8.091E+09          0.000
0.000       0.000
    14.400       0.5237       49565.   3437.3123   -0.004981   1132.5290   8.091E+09       -1.9532
17.9021       0.000
    19.200       0.4999       66041.   3417.3778   -0.004946   1509.0104   8.091E+09       -6.3528
61.0027       0.000
    24.000       0.4762       82372.   3375.8680   -0.004902   1882.1474   8.091E+09      -10.9430
110.2978      0.000
    28.800       0.4528       98450.   3313.0794   -0.004849   2249.5234   8.091E+09      -15.2189
161.3289      0.000
    33.600       0.4297      114177.   3231.6237   -0.004786   2608.8874   8.091E+09      -18.7209
209.1365      0.000
    38.400       0.4069      129473.   3136.3308   -0.004713   2958.3957   8.091E+09      -20.9844
247.5640      0.000
    43.200       0.3844      144286.   3034.4387   -0.004632   3296.8567   8.091E+09      -21.4706
268.0856      0.000
    48.000       0.3624      158604.   2926.6977   -0.004542   3624.0145   8.091E+09      -23.4215
310.2212      0.000
    52.800       0.3408      172382.   2802.3231   -0.004444   3938.8420   8.091E+09      -28.4013
399.9950      0.000
    57.600       0.3197      185506.   2653.8193   -0.004338   4238.7177   8.091E+09      -33.4753
502.5498      0.000
    62.400       0.2992      197859.   2481.2251   -0.004224   4520.9701   8.091E+09      -38.4389
616.7193      0.000
    67.200       0.2792      209326.   2285.5859   -0.004103   4782.9864   8.091E+09      -43.0774
740.6393      0.000
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72.000	0.2598	219801.	2068.9405	-0.003976	5022.3245	8.091E+09	-47.1915
871.9617	0.000						
76.800	0.2410	229188.	1834.1956	-0.003843	5236.8185	8.091E+09	-50.6189
1008.1415	0.000						
81.600	0.2229	237409.	1584.9148	-0.003705	5424.6641	8.091E+09	-53.2481
1146.7230	0.000						
86.400	0.2054	244403.	1325.0633	-0.003562	5584.4772	8.091E+09	-55.0233
1285.5655	0.000						
91.200	0.1887	250129.	1058.7525	-0.003415	5715.3232	8.091E+09	-55.9395
1422.9760	0.000						
96.000	0.1727	254567.	790.0169	-0.003265	5816.7197	8.091E+09	-56.0336
1557.7500	0.000						
100.800	0.1573	257714.	522.6439	-0.003113	5888.6172	8.091E+09	-55.3718
1689.1407	0.000						
105.600	0.1428	259584.	260.0583	-0.002960	5931.3642	8.091E+09	-54.0388
1816.7862	0.000						
110.400	0.1289	260210.	5.2592	-0.002806	5945.6623	8.091E+09	-52.1275
1940.6198	0.000						
115.200	0.1158	259635.	-239.2045	-0.002652	5932.5178	8.091E+09	-49.7323
2060.7822	0.000						
120.000	0.1035	257914.	-471.2280	-0.002498	5893.1916	8.091E+09	-46.9441
2177.5465	0.000						
124.800	0.0919	255111.	-689.1273	-0.002346	5829.1517	8.091E+09	-43.8473
2291.2585	0.000						
129.600	0.0810	251298.	-891.6053	-0.002196	5742.0282	8.091E+09	-40.5186
2402.2933	0.000						
134.400	0.0708	246552.	-1077.7133	-0.002048	5633.5737	8.091E+09	-37.0265
2511.0254	0.000						
139.200	0.0613	240952.	-1246.8123	-0.001903	5505.6266	8.091E+09	-33.4314
2617.8101	0.000						
144.000	0.0525	234582.	-1398.5350	-0.001762	5360.0794	8.091E+09	-29.7864
2722.9723	0.000						
148.800	0.0444	227526.	-1532.7517	-0.001625	5198.8512	8.091E+09	-26.1373
2826.8015	0.000						
153.600	0.0369	219868.	-1649.5385	-0.001492	5023.8629	8.091E+09	-22.5239
2929.5503	0.000						
158.400	0.0301	211691.	-1749.1494	-0.001364	4837.0169	8.091E+09	-18.9806
3031.4356	0.000						
163.200	0.0238	203076.	-1831.9907	-0.001241	4640.1785	8.091E+09	-15.5366
3132.6407	0.000						
168.000	0.0181	194104.	-1898.5986	-0.001124	4435.1609	8.091E+09	-12.2167
3233.3185	0.000						
172.800	0.0130	184850.	-1949.6190	-0.001011	4223.7117	8.091E+09	-9.0418
3333.5910	0.000						
177.600	0.008428	175387.	-1985.7891	-0.000904	4007.5025	8.091E+09	-6.0291
3433.5545	0.000						
182.400	0.004337	165786.	-2007.9215	-0.000803	3788.1193	8.091E+09	-3.1927
3533.3253	0.000						
187.200	0.000718	156111.	-2016.8884	-0.000708	3567.0552	8.091E+09	-0.5435
3632.9447	0.000						
192.000	-0.002456	146424.	-2013.6085	-0.000618	3345.7050	8.091E+09	1.9101
3732.4498	0.000						
196.800	-0.005214	136780.	-1999.0342	-0.000534	3125.3605	8.091E+09	4.1625
3831.8731	0.000						
201.600	-0.007582	127233.	-1974.1404	-0.000456	2907.2072	8.091E+09	6.2099
3931.2424	0.000						
206.400	-0.009588	117829.	-1939.9137	-0.000383	2692.3232	8.091E+09	8.0512
4030.5814	0.000						
211.200	-0.0113	108610.	-1897.3427	-0.000316	2481.6778	8.091E+09	9.6867
4129.9091	0.000						
216.000	-0.0126	99614.	-1847.4093	-0.000254	2276.1319	8.091E+09	11.1189
4229.2406	0.000						
220.800	-0.0137	90875.	-1791.0801	-0.000197	2076.4396	8.091E+09	12.3516
4328.5876	0.000						
225.600	-0.0145	82420.	-1729.2994	-0.000146	1883.2498	8.091E+09	13.3903
4427.9582	0.000						
230.400	-0.0151	74273.	-1662.9827	-9.961E-05	1697.1094	8.091E+09	14.2416
4527.3580	0.000						
235.200	-0.0155	66455.	-1593.0107	-5.787E-05	1518.4665	8.091E+09	14.9134
4626.7897	0.000						
240.000	-0.0157	58981.	-1520.2243	-2.066E-05	1347.6748	8.091E+09	15.4143
4726.2545	0.000						
244.800	-0.0157	51861.	-1445.4202	1.222E-05	1184.9980	8.091E+09	15.7541
4825.7515	0.000						
249.600	-0.0155	45105.	-1369.3470	4.098E-05	1030.6149	8.091E+09	15.9431
4925.2788	0.000						
254.400	-0.0153	38715.	-1292.7025	6.584E-05	884.6251	8.091E+09	15.9922
5024.8336	0.000						
259.200	-0.0149	32695.	-1216.1305	8.703E-05	747.0544	8.091E+09	15.9128
5124.4122	0.000						

264.000	-0.0144	27041.	-1140.2193	0.000105	617.8610	8.091E+09	15.7168
5224.0108	0.000						
268.800	-0.0139	21749.	-1065.5001	0.000119	496.9417	8.091E+09	15.4162
5323.6252	0.000						
273.600	-0.0133	16812.	-992.4455	0.000131	384.1384	8.091E+09	15.0232
5423.2515	0.000						
278.400	-0.0126	12221.	-906.8139	0.000139	279.2440	8.091E+09	20.6567
7840.8307	0.000						
283.200	-0.0120	8106.2895	-809.2469	0.000145	185.2244	8.091E+09	19.9963
8025.4381	0.000						
288.000	-0.0113	4452.2615	-715.0713	0.000149	101.7318	8.091E+09	19.2436
8210.0249	0.000						
292.800	-0.0105	1241.6049	-624.6929	0.000151	28.3700	8.091E+09	18.4141
8394.5886	0.000						
297.600	-0.009804	-1544.7908	-538.4445	0.000151	35.2976	8.091E+09	17.5228
8579.1281	0.000						
302.400	-0.009083	-3927.4618	-456.5890	0.000149	89.7404	8.091E+09	16.5837
8763.6431	0.000						
307.200	-0.008374	-5928.0449	-379.3242	0.000146	135.4526	8.091E+09	15.6100
8948.1342	0.000						
312.000	-0.007681	-7568.9740	-306.7872	0.000142	172.9470	8.091E+09	14.6138
9132.5772	0.000						
316.800	-0.007010	-8873.2018	-239.0594	0.000137	202.7479	8.091E+09	13.6061
9317.0024	0.000						
321.600	-0.006364	-9863.9443	-176.1720	0.000132	225.3858	8.091E+09	12.5969
9501.4176	0.000						
326.400	-0.005746	-10564.	-118.1120	0.000126	241.3921	8.091E+09	11.5948
9685.8227	0.000						
331.200	-0.005158	-10998.	-64.8278	0.000119	251.2943	8.091E+09	10.6070
9870.2177	0.000						
336.000	-0.004602	-11187.	-26.9350	0.000113	255.6124	8.091E+09	5.1817
5404.7614	0.000						
340.800	-0.004077	-11256.	-3.2549	0.000106	257.2026	8.091E+09	4.6850
5515.3648	0.000						
345.600	-0.003585	-11218.	18.0732	9.928E-05	256.3264	8.091E+09	4.2017
5625.9661	0.000						
350.400	-0.003124	-11083.	37.1187	9.266E-05	253.2381	8.091E+09	3.7339
5736.5658	0.000						
355.200	-0.002695	-10862.	53.9601	8.615E-05	248.1842	8.091E+09	3.2833
5847.1636	0.000						
360.000	-0.002297	-10565.	68.6833	7.979E-05	241.4017	8.091E+09	2.8514
5957.7600	0.000						
364.800	-0.001929	-10202.	81.3804	7.363E-05	233.1182	8.091E+09	2.4391
6068.3556	0.000						
369.600	-0.001590	-9783.6239	92.1476	6.771E-05	223.5505	8.091E+09	2.0472
6178.9505	0.000						
374.400	-0.001279	-9317.7313	101.0841	6.204E-05	212.9052	8.091E+09	1.6763
6289.5448	0.000						
379.200	-0.000995	-8813.2168	108.2905	5.666E-05	201.3773	8.091E+09	1.3264
6400.1386	0.000						
384.000	-0.000735	-8278.1421	113.8677	5.159E-05	189.1511	8.091E+09	0.9974
6510.7319	0.000						
388.800	-0.000499	-7720.0869	117.9151	4.685E-05	176.3998	8.091E+09	0.6890
6621.3248	0.000						
393.600	-0.000286	-7146.1569	120.5301	4.244E-05	163.2858	8.091E+09	0.4006
6731.9173	0.000						
398.400	-9.208E-05	-6562.9980	121.8065	3.837E-05	149.9610	8.091E+09	0.1313
6842.5096	0.000						
403.200	8.275E-05	-5976.8146	121.8338	3.465E-05	136.5670	8.091E+09	-0.1199
6953.1016	0.000						
408.000	0.000241	-5393.3931	120.6965	3.128E-05	123.2361	8.091E+09	-0.3540
7063.6934	0.000						
412.800	0.000383	-4818.1283	118.4729	2.825E-05	110.0916	8.091E+09	-0.5725
7174.2850	0.000						
417.600	0.000512	-4256.0536	115.2348	2.556E-05	97.2485	8.091E+09	-0.7767
7284.8766	0.000						
422.400	0.000628	-3711.8741	111.0471	2.319E-05	84.8143	8.091E+09	-0.9682
7395.4680	0.000						
427.200	0.000734	-3190.0012	105.9672	2.115E-05	72.8898	8.091E+09	-1.1485
7506.0593	0.000						
432.000	0.000831	-2694.5893	100.0446	1.940E-05	61.5699	8.091E+09	-1.3193
7616.6506	0.000						
436.800	0.000921	-2229.5733	93.3211	1.794E-05	50.9446	8.091E+09	-1.4822
7727.2418	0.000						
441.600	0.001004	-1798.7064	85.8308	1.675E-05	41.0995	8.091E+09	-1.6388
7837.8329	0.000						
446.400	0.001081	-1405.5978	77.5997	1.580E-05	32.1172	8.091E+09	-1.7908
7948.4240	0.000						
451.200	0.001155	-1053.7494	68.6466	1.507E-05	24.0776	8.091E+09	-1.9397
8059.0150	0.000						

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   456.000     0.001226   -746.5907      58.9830   1.453E-05      17.0592   8.091E+09      -2.0868
8169.6060      0.000
   460.800     0.001295   -487.5121      48.6142   1.417E-05      11.1394   8.091E+09      -2.2336
8280.1969      0.000
   465.600     0.001362   -279.8946      37.5392   1.394E-05       6.3954   8.091E+09      -2.3810
8390.7876      0.000
   470.400     0.001429   -127.1362      25.7522   1.382E-05       2.9050   8.091E+09      -2.5302
8501.3784      0.000
   475.200     0.001495    -32.6738      13.2433   1.377E-05       0.7466   8.091E+09      -2.6818
8611.9690      0.000
   480.000     0.001561       0.000         0.000   1.376E-05        0.000   8.091E+09      -2.8363
4361.2797      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 4:

Pile-head deflection             =      0.5958754 inches
Computed slope at pile head      =     -0.0050248 radians
Maximum bending moment           =        260210. inch-lbs
Maximum shear force              =   3442.0000001 lbs
Depth of maximum bending moment  =    110.4000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             11
Number of zero deflection points =              2


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

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        4512.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       0.8702   6.238E-07   4512.0000   -0.007141   1.425E-08   8.091E+09         0.000
0.000      0.000
     4.800       0.8359       21658.   4512.0000   -0.007135    494.8645   8.091E+09         0.000
0.000      0.000
     9.600       0.8017       43315.   4512.0000   -0.007116    989.7290   8.091E+09         0.000
0.000      0.000
    14.400       0.7676       64973.   4507.2773   -0.007083   1484.5935   8.091E+09      -1.9678
12.3050      0.000
    19.200       0.7337       86585.   4487.0854   -0.007039   1978.4221   8.091E+09      -6.4455
42.1678      0.000
    24.000       0.7000      108049.   4444.7852   -0.006981   2468.8574   8.091E+09     -11.1796
76.6557      0.000
    28.800       0.6667      129255.   4380.4625   -0.006910   2953.4073   8.091E+09     -15.6216
112.4723      0.000
    33.600       0.6337      150101.   4296.8052   -0.006828   3429.7331   8.091E+09     -19.2357
145.7023      0.000
    38.400       0.6011      170504.   4199.0769   -0.006732   3895.9323   8.091E+09     -21.4845
171.5501      0.000
    43.200       0.5691      190412.   4095.1727   -0.006625   4350.8209   8.091E+09     -21.8089
183.9553      0.000
    48.000       0.5375      209818.   3985.7200   -0.006507   4794.2282   8.091E+09     -23.7964
212.4931      0.000
    52.800       0.5066      228675.   3858.4491   -0.006377   5225.1079   8.091E+09     -29.2332
276.9810      0.000
    57.600       0.4763      246859.   3704.0648   -0.006236   5640.5977   8.091E+09     -35.0936
353.6467      0.000
    62.400       0.4467      264234.   3520.8104   -0.006084   6037.6124   8.091E+09     -41.2624
443.3428      0.000
    67.200       0.4179      280659.   3307.6059   -0.005922   6412.9045   8.091E+09     -47.5728
546.4017      0.000
```

72.000	0.3899	295987.	3064.2895	-0.005751	6763.1518	8.091E+09	-53.8090
662.4563	0.000						
76.800	0.3627	310076.	2791.8165	-0.005571	7085.0712	8.091E+09	-59.7214
790.3510	0.000						
81.600	0.3364	322789.	2492.3642	-0.005384	7375.5503	8.091E+09	-65.0504
928.1828	0.000						
86.400	0.3110	334003.	2169.3071	-0.005189	7631.7834	8.091E+09	-69.5567
1073.4787	0.000						
91.200	0.2866	343614.	1827.0550	-0.004988	7851.3983	8.091E+09	-73.0483
1223.4714	0.000						
96.000	0.2631	351542.	1470.7799	-0.004782	8032.5568	8.091E+09	-75.3997
1375.4101	0.000						
100.800	0.2407	357734.	1106.0791	-0.004571	8174.0210	8.091E+09	-76.5590
1526.8341	0.000						
105.600	0.2193	362161.	738.6321	-0.004358	8275.1805	8.091E+09	-76.5439
1675.7603	0.000						
110.400	0.1988	364824.	373.8987	-0.004142	8336.0435	8.091E+09	-75.4284
1820.7665	0.000						
115.200	0.1795	365750.	16.8866	-0.003925	8357.1970	8.091E+09	-73.3266
1960.9824	0.000						
120.000	0.1612	364987.	-327.9986	-0.003709	8339.7476	8.091E+09	-70.3756
2096.0180	0.000						
124.800	0.1439	362601.	-657.0305	-0.003493	8285.2489	8.091E+09	-66.7211
2225.8592	0.000						
129.600	0.1276	358679.	-967.1777	-0.003279	8195.6248	8.091E+09	-62.5069
2350.7590	0.000						
134.400	0.1124	353317.	-1256.0778	-0.003068	8073.0938	8.091E+09	-57.8681
2471.1383	0.000						
139.200	0.0982	346621.	-1521.9850	-0.002860	7920.0981	8.091E+09	-52.9266
2587.5075	0.000						
144.000	0.0849	338706.	-1763.7051	-0.002657	7739.2391	8.091E+09	-47.7901
2700.4070	0.000						
148.800	0.0727	329689.	-1980.5259	-0.002459	7533.2208	8.091E+09	-42.5519
2810.3671	0.000						
153.600	0.0613	319692.	-2172.1495	-0.002266	7304.8011	8.091E+09	-37.2913
2917.8832	0.000						
158.400	0.0509	308837.	-2338.6306	-0.002079	7056.7493	8.091E+09	-32.0758
3023.4018	0.000						
163.200	0.0414	297242.	-2480.3201	-0.001900	6791.8112	8.091E+09	-26.9615
3127.3145	0.000						
168.000	0.0327	285025.	-2597.8161	-0.001727	6512.6791	8.091E+09	-21.9952
3229.9576	0.000						
172.800	0.0248	272303.	-2691.9213	-0.001562	6221.9677	8.091E+09	-17.2154
3331.6002	0.000						
177.600	0.0177	259183.	-2763.6061	-0.001404	5922.1931	8.091E+09	-12.6533
3432.4402	0.000						
182.400	0.0113	245772.	-2813.9774	-0.001254	5615.7573	8.091E+09	-8.3347
3532.8068	0.000						
187.200	0.005654	232169.	-2844.2504	-0.001112	5304.9336	8.091E+09	-4.2790
3632.7915	0.000						
192.000	0.000645	218467.	-2855.7231	-0.000979	4991.8572	8.091E+09	-0.5012
3732.4779	0.000						
196.800	-0.003743	204754.	-2849.7552	-0.000853	4678.5169	8.091E+09	2.9878
3831.9408	0.000						
201.600	-0.007547	191110.	-2827.7503	-0.000736	4366.7496	8.091E+09	6.1809
3931.2453	0.000						
206.400	-0.0108	177608.	-2791.1382	-0.000626	4058.2362	8.091E+09	9.0742
4030.4470	0.000						
211.200	-0.0136	164315.	-2741.3597	-0.000525	3754.4999	8.091E+09	11.6669
4129.5926	0.000						
216.000	-0.0158	151290.	-2679.8525	-0.000431	3456.9057	8.091E+09	13.9611
4228.7196	0.000						
220.800	-0.0177	138588.	-2608.0386	-0.000345	3166.6613	8.091E+09	15.9614
4327.8577	0.000						
225.600	-0.0192	126253.	-2527.3126	-0.000267	2884.8198	8.091E+09	17.6744
4427.0291	0.000						
230.400	-0.0203	114326.	-2439.0321	-0.000196	2612.2831	8.091E+09	19.1091
4526.2494	0.000						
235.200	-0.0210	102839.	-2344.5086	-0.000131	2349.8063	8.091E+09	20.2758
4625.5288	0.000						
240.000	-0.0215	91819.	-2244.9990	-7.337E-05	2098.0038	8.091E+09	21.1866
4724.8724	0.000						
244.800	-0.0217	81287.	-2141.6995	-2.202E-05	1857.3549	8.091E+09	21.8549
4824.2814	0.000						
249.600	-0.0217	71258.	-2035.7392	2.323E-05	1628.2116	8.091E+09	22.2952
4923.7540	0.000						
254.400	-0.0215	61743.	-1928.1752	6.268E-05	1410.8057	8.091E+09	22.5231
5023.2858	0.000						
259.200	-0.0211	52748.	-1819.9887	9.664E-05	1205.2571	8.091E+09	22.5547
5122.8707	0.000						

264.000	-0.0206	44272.	-1712.0809	0.000125	1011.5824	8.091E+09	22.4069
5222.5013	0.000						
268.800	-0.0199	36312.	-1605.2713	0.000149	829.7038	8.091E+09	22.0971
5322.1698	0.000						
273.600	-0.0192	28861.	-1500.2948	0.000169	659.4583	8.091E+09	21.6431
5421.8679	0.000						
278.400	-0.0183	21909.	-1376.5905	0.000184	500.6069	8.091E+09	29.9004
7838.4031	0.000						
283.200	-0.0174	15646.	-1235.0389	0.000195	357.4965	8.091E+09	29.0795
8023.2876	0.000						
288.000	-0.0164	10053.	-1097.7793	0.000202	229.6951	8.091E+09	28.1120
8208.1401	0.000						
292.800	-0.0155	5107.0497	-965.4612	0.000207	116.6933	8.091E+09	27.0206
8392.9534	0.000						
297.600	-0.0145	784.1131	-838.6268	0.000209	17.9166	8.091E+09	25.8271
8577.7231	0.000						
302.400	-0.0134	-2943.7674	-717.7161	0.000208	67.2635	8.091E+09	24.5524
8762.4472	0.000						
307.200	-0.0125	-6105.9617	-603.0723	0.000205	139.5179	8.091E+09	23.2159
8947.1257	0.000						
312.000	-0.0115	-8733.2611	-494.9481	0.000201	199.5503	8.091E+09	21.8358
9131.7032	0.000						
316.800	-0.0105	-10857.	-393.5132	0.000195	248.0872	8.091E+09	20.4287
9316.2450	0.000						
321.600	-0.009604	-12511.	-298.8613	0.000188	285.8694	8.091E+09	19.0096
9500.7680	0.000						
326.400	-0.008718	-13727.	-211.0189	0.000180	313.6439	8.091E+09	17.5914
9685.2712	0.000						
331.200	-0.007872	-14537.	-129.9543	0.000172	332.1574	8.091E+09	16.1855
9869.7547	0.000						
336.000	-0.007066	-14974.	-72.0135	0.000163	342.1500	8.091E+09	7.9565
5404.6906	0.000						
340.800	-0.006304	-15228.	-35.5348	0.000154	347.9539	8.091E+09	7.2430
5515.3080	0.000						
345.600	-0.005584	-15315.	-2.4432	0.000145	349.9447	8.091E+09	6.5452
5625.9213	0.000						
350.400	-0.004909	-15252.	27.3445	0.000136	348.4898	8.091E+09	5.8663
5736.5308	0.000						
355.200	-0.004276	-15053.	53.9259	0.000127	343.9466	8.091E+09	5.2093
5847.1363	0.000						
360.000	-0.003687	-14734.	77.4112	0.000118	336.6609	8.091E+09	4.5763
5957.7385	0.000						
364.800	-0.003140	-14310.	97.9201	0.000110	326.9661	8.091E+09	3.9691
6068.3391	0.000						
369.600	-0.002633	-13794.	115.5801	0.000101	315.1817	8.091E+09	3.3892
6178.9382	0.000						
374.400	-0.002165	-13200.	130.5240	9.346E-05	301.6130	8.091E+09	2.8374
6289.5360	0.000						
379.200	-0.001736	-12541.	142.8879	8.583E-05	286.5506	8.091E+09	2.3142
6400.1325	0.000						
384.000	-0.001342	-11828.	152.8091	7.860E-05	270.2699	8.091E+09	1.8196
6510.7280	0.000						
388.800	-0.000981	-11074.	160.4242	7.180E-05	253.0312	8.091E+09	1.3533
6621.3225	0.000						
393.600	-0.000652	-10288.	165.8675	6.547E-05	235.0800	8.091E+09	0.9147
6731.9162	0.000						
398.400	-0.000353	-9481.5069	169.2691	5.960E-05	216.6473	8.091E+09	0.5026
6842.5092	0.000						
403.200	-8.000E-05	-8663.2250	170.7535	5.422E-05	197.9500	8.091E+09	0.1159
6953.1016	0.000						
408.000	0.000168	-7842.2730	170.4386	4.933E-05	179.1917	8.091E+09	-0.2471
7063.6935	0.000						
412.800	0.000394	-7027.0149	168.4338	4.491E-05	160.5635	8.091E+09	-0.5882
7174.2850	0.000						
417.600	0.000599	-6225.3083	164.8400	4.098E-05	142.2449	8.091E+09	-0.9093
7284.8762	0.000						
422.400	0.000787	-5444.5510	159.7478	3.752E-05	124.4051	8.091E+09	-1.2125
7395.4670	0.000						
427.200	0.000959	-4691.7295	153.2374	3.452E-05	107.2035	8.091E+09	-1.5001
7506.0577	0.000						
432.000	0.001118	-3973.4715	145.3782	3.195E-05	90.7917	8.091E+09	-1.7745
7616.6481	0.000						
436.800	0.001266	-3296.0990	136.2280	2.979E-05	75.3141	8.091E+09	-2.0380
7727.2384	0.000						
441.600	0.001404	-2665.6830	125.8334	2.802E-05	60.9094	8.091E+09	-2.2930
7837.8284	0.000						
446.400	0.001535	-2088.0984	114.2298	2.661E-05	47.7119	8.091E+09	-2.5418
7948.4183	0.000						
451.200	0.001660	-1569.0773	101.4415	2.553E-05	35.8526	8.091E+09	-2.7866
8059.0080	0.000						

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   456.000     0.001780  -1114.2604      87.4825   2.473E-05      25.4603   8.091E+09      -3.0296
8169.5975      0.000
   460.800     0.001897   -729.2457      72.3570   2.418E-05      16.6629   8.091E+09      -3.2726
8280.1868      0.000
   465.600     0.002012   -419.6328      56.0608   2.384E-05       9.5884   8.091E+09      -3.5175
8390.7759      0.000
   470.400     0.002126   -191.0621      38.5818   2.366E-05       4.3657   8.091E+09      -3.7654
8501.3647      0.000
   475.200     0.002239    -49.2471      19.9023   2.359E-05       1.1253   8.091E+09      -4.0177
8611.9532      0.000
   480.000     0.002352        0.000        0.000   2.357E-05        0.000   8.091E+09      -4.2749
4361.2707      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 5:

Pile-head deflection             =      0.8701950 inches
Computed slope at pile head      =     -0.0071413 radians
Maximum bending moment           =        365750. inch-lbs
Maximum shear force              =   4512.0000000 lbs
Depth of maximum bending moment  =    115.2000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =             13
Number of zero deflection points =              2


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 6
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        5298.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       1.1007   2.339E-07   5298.0000   -0.008857   5.345E-09   8.091E+09         0.000
0.000      0.000
     4.800       1.0582       25430.   5298.0000   -0.008850    581.0710   8.091E+09         0.000
0.000      0.000
     9.600       1.0157       50861.   5298.0000   -0.008827   1162.1419   8.091E+09         0.000
0.000      0.000
    14.400       0.9734       76291.   5293.2747   -0.008789   1743.2129   8.091E+09      -1.9689
9.7086     0.000
    19.200       0.9313      101676.   5273.0578   -0.008737   2323.2474   8.091E+09      -6.4549
33.2674      0.000
    24.000       0.8896      126913.   5230.6665   -0.008669   2899.8836   8.091E+09     -11.2082
60.4790      0.000
    28.800       0.8481      151891.   5166.1473   -0.008586   3470.6194   8.091E+09     -15.6749
88.7128      0.000
    33.600       0.8071      176508.   5082.1970   -0.008489   4033.1031   8.091E+09     -19.3044
114.8042      0.000
    38.400       0.7666      200680.   4984.1560   -0.008377   4585.4239   8.091E+09     -21.5460
134.9028      0.000
    43.200       0.7267      224355.   4880.0242   -0.008251   5126.4018   8.091E+09     -21.8423
144.2713      0.000
    48.000       0.6874      247528.   4770.4030   -0.008111   5655.8808   8.091E+09     -23.8332
166.4174      0.000
    52.800       0.6488      270151.   4642.7807   -0.007957   6172.8128   8.091E+09     -29.3428
217.0711      0.000
    57.600       0.6110      292099.   4487.4743   -0.007790   6674.2972   8.091E+09     -35.3682
277.8361      0.000
    62.400       0.5741      313231.   4302.1256   -0.007611   7157.1620   8.091E+09     -41.8604
350.0174      0.000
    67.200       0.5380      333399.   4084.7063   -0.007419   7617.9893   8.091E+09     -48.7310
434.7989      0.000
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72.000	0.5028	352444.	3833.7343	-0.007216	8053.1621	8.091E+09	-55.8407
533.0494	0.000						
76.800	0.4687	370203.	3548.5359	-0.007001	8458.9374	8.091E+09	-62.9920
645.1063	0.000						
81.600	0.4356	386510.	3229.5135	-0.006777	8831.5506	8.091E+09	-69.9340
770.5844	0.000						
86.400	0.4036	401206.	2878.3637	-0.006543	9167.3469	8.091E+09	-76.3784
908.2687	0.000						
91.200	0.3728	414143.	2498.1875	-0.006301	9462.9336	8.091E+09	-82.0283
1056.1376	0.000						
96.000	0.3432	425189.	2093.4505	-0.006052	9715.3364	8.091E+09	-86.6121
1211.5320	0.000						
100.800	0.3147	434240.	1669.7814	-0.005797	9922.1421	8.091E+09	-89.9166
1371.4424	0.000						
105.600	0.2875	441219.	1233.6378	-0.005538	10082.	8.091E+09	-91.8099
1532.8477	0.000						
110.400	0.2615	446083.	791.8942	-0.005275	10193.	8.091E+09	-92.2499
1693.0279	0.000						
115.200	0.2369	448821.	351.4233	-0.005009	10255.	8.091E+09	-91.2796
1849.7887	0.000						
120.000	0.2135	449456.	-81.2713	-0.004743	10270.	8.091E+09	-89.0099
2001.5696	0.000						
124.800	0.1913	448041.	-500.3318	-0.004476	10237.	8.091E+09	-85.5987
2147.4435	0.000						
129.600	0.1705	444653.	-900.7190	-0.004212	10160.	8.091E+09	-81.2293
2287.0378	0.000						
134.400	0.1509	439394.	-1278.2899	-0.003949	10040.	8.091E+09	-76.0919
2420.4145	0.000						
139.200	0.1326	432381.	-1629.7994	-0.003691	9879.6836	8.091E+09	-70.3704
2547.9409	0.000						
144.000	0.1155	423748.	-1952.8493	-0.003437	9682.4081	8.091E+09	-64.2337
2670.1727	0.000						
148.800	0.0996	413634.	-2245.8065	-0.003188	9451.3167	8.091E+09	-57.8318
2787.7587	0.000						
153.600	0.0849	402188.	-2507.7079	-0.002946	9189.7796	8.091E+09	-51.2938
2901.3720	0.000						
158.400	0.0713	389560.	-2738.1634	-0.002712	8901.2388	8.091E+09	-44.7293
3011.6625	0.000						
163.200	0.0588	375902.	-2937.2639	-0.002485	8589.1502	8.091E+09	-38.2293
3119.2288	0.000						
168.000	0.0474	361362.	-3105.4989	-0.002266	8256.9358	8.091E+09	-31.8687
3224.6033	0.000						
172.800	0.0371	346089.	-3243.6835	-0.002056	7907.9440	8.091E+09	-25.7082
3328.2143	0.000						
177.600	0.0277	330223.	-3352.8949	-0.001855	7545.4181	8.091E+09	-19.7966
3430.3517	0.000						
182.400	0.0193	313901.	-3434.4257	-0.001664	7172.4703	8.091E+09	-14.1746
3531.6565	0.000						
187.200	0.0117	297253.	-3489.7360	-0.001483	6792.0602	8.091E+09	-8.8714
3632.2777	0.000						
192.000	0.005028	280400.	-3520.4107	-0.001312	6406.9798	8.091E+09	-3.9097
3732.3534	0.000						
196.800	-0.000869	263457.	-3528.1296	-0.001150	6019.8411	8.091E+09	0.6935
3832.0089	0.000						
201.600	-0.006015	246530.	-3514.6410	-0.000999	5633.0675	8.091E+09	4.9267
3931.3548	0.000						
206.400	-0.0105	229716.	-3481.7375	-0.000858	5248.8876	8.091E+09	8.7830
4030.4869	0.000						
211.200	-0.0143	213105.	-3431.2349	-0.000726	4869.3315	8.091E+09	12.2597
4129.4864	0.000						
216.000	-0.0174	196776.	-3364.9524	-0.000605	4496.2296	8.091E+09	15.3580
4228.4202	0.000						
220.800	-0.0201	180801.	-3284.6961	-0.000493	4131.2129	8.091E+09	18.0822
4327.3419	0.000						
225.600	-0.0222	165243.	-3192.2429	-0.000390	3775.7156	8.091E+09	20.4399
4426.2929	0.000						
230.400	-0.0238	150156.	-3089.3279	-0.000297	3430.9790	8.091E+09	22.4413
4525.3036	0.000						
235.200	-0.0250	135586.	-2977.6319	-0.000212	3098.0566	8.091E+09	24.0987
4624.3947	0.000						
240.000	-0.0258	121571.	-2858.7711	-0.000136	2777.8210	8.091E+09	25.4266
4723.5788	0.000						
244.800	-0.0263	108141.	-2734.2879	-6.751E-05	2470.9713	8.091E+09	26.4414
4822.8615	0.000						
249.600	-0.0265	95321.	-2605.6432	-7.155E-06	2178.0417	8.091E+09	27.1606
4922.2428	0.000						
254.400	-0.0264	83127.	-2474.2094	4.578E-05	1899.4109	8.091E+09	27.6034
5021.7181	0.000						
259.200	-0.0260	71569.	-2341.2652	9.166E-05	1635.3119	8.091E+09	27.7900
5121.2797	0.000						

264.000	-0.0255	60651.	-2207.9902	0.000131	1385.8431	8.091E+09	27.7413
5220.9174	0.000						
268.800	-0.0248	50372.	-2075.4617	0.000164	1150.9786	8.091E+09	27.4789
5320.6196	0.000						
273.600	-0.0239	40727.	-1944.6519	0.000191	930.5805	8.091E+09	27.0252
5420.3741	0.000						
278.400	-0.0230	31704.	-1789.8447	0.000212	724.4098	8.091E+09	37.4778
7835.7496	0.000						
283.200	-0.0219	23544.	-1612.0938	0.000229	537.9694	8.091E+09	36.5850
8020.9090	0.000						
288.000	-0.0208	16227.	-1439.1013	0.000241	370.7892	8.091E+09	35.4953
8206.0317	0.000						
292.800	-0.0196	9728.7005	-1271.7432	0.000248	222.2956	8.091E+09	34.2373
8391.1041	0.000						
297.600	-0.0184	4018.7461	-1110.7609	0.000252	91.8262	8.091E+09	32.8387
8576.1171	0.000						
302.400	-0.0172	-934.6039	-956.7651	0.000253	21.3552	8.091E+09	31.3262
8761.0660	0.000						
307.200	-0.0159	-5166.1987	-810.2432	0.000251	118.0449	8.091E+09	29.7246
8945.9487	0.000						
312.000	-0.0147	-8712.9385	-671.5673	0.000247	199.0860	8.091E+09	28.0570
9130.6724	0.000						
316.800	-0.0136	-11613.	-541.0023	0.000241	265.3564	8.091E+09	26.3451
9315.3423	0.000						
321.600	-0.0124	-13907.	-418.7144	0.000234	317.7574	8.091E+09	24.6082
9499.9852	0.000						
326.400	-0.0113	-15633.	-304.7828	0.000225	357.2034	8.091E+09	22.8633
9684.5992	0.000						
331.200	-0.0103	-16832.	-199.2105	0.000215	384.6130	8.091E+09	21.1251
9869.1837	0.000						
336.000	-0.009265	-17545.	-123.4732	0.000205	400.9012	8.091E+09	10.4321
5404.6022	0.000						
340.800	-0.008306	-18018.	-75.5324	0.000195	411.6975	8.091E+09	9.5432
5515.2362	0.000						
345.600	-0.007398	-18270.	-31.8199	0.000184	417.4696	8.091E+09	8.6703
5625.8637	0.000						
350.400	-0.006541	-18323.	7.7513	0.000173	418.6773	8.091E+09	7.8177
5736.4852	0.000						
355.200	-0.005738	-18196.	43.2876	0.000162	415.7693	8.091E+09	6.9891
5847.1000	0.000						
360.000	-0.004985	-17908.	74.9123	0.000151	409.1820	8.091E+09	6.1878
5957.7094	0.000						
364.800	-0.004284	-17477.	102.7623	0.000141	399.3370	8.091E+09	5.4164
6068.3162	0.000						
369.600	-0.003633	-16921.	126.9855	0.000131	386.6405	8.091E+09	4.6766
6178.9207	0.000						
374.400	-0.003030	-16258.	147.7374	0.000121	371.4821	8.091E+09	3.9700
6289.5229	0.000						
379.200	-0.002473	-15503.	165.1789	0.000111	354.2336	8.091E+09	3.2973
6400.1231	0.000						
384.000	-0.001960	-14672.	179.4738	0.000102	335.2493	8.091E+09	2.6589
6510.7215	0.000						
388.800	-0.001489	-13780.	190.7856	9.402E-05	314.8652	8.091E+09	2.0544
6621.3184	0.000						
393.600	-0.001058	-12841.	199.2759	8.613E-05	293.3996	8.091E+09	1.4833
6731.9138	0.000						
398.400	-0.000662	-11867.	205.1023	7.880E-05	271.1531	8.091E+09	0.9444
6842.5081	0.000						
403.200	-0.000301	-10872.	208.4157	7.205E-05	248.4094	8.091E+09	0.4362
6953.1013	0.000						
408.000	2.924E-05	-9866.1430	209.3593	6.590E-05	225.4361	8.091E+09	-0.0430
7063.6936	0.000						
412.800	0.000332	-8861.7139	208.0668	6.035E-05	202.4854	8.091E+09	-0.4955
7174.2852	0.000						
417.600	0.000609	-7868.7015	204.6609	5.538E-05	179.7956	8.091E+09	-0.9236
7284.8761	0.000						
422.400	0.000863	-6896.9692	199.2523	5.100E-05	157.5920	8.091E+09	-1.3300
7395.4665	0.000						
427.200	0.001098	-5955.8796	191.9387	4.719E-05	136.0886	8.091E+09	-1.7174
7506.0565	0.000						
432.000	0.001316	-5054.3577	182.8043	4.393E-05	115.4894	8.091E+09	-2.0886
7616.6460	0.000						
436.800	0.001520	-4200.9582	171.9192	4.118E-05	95.9896	8.091E+09	-2.4468
7727.2352	0.000						
441.600	0.001712	-3403.9331	159.3393	3.892E-05	77.7780	8.091E+09	-2.7948
7837.8240	0.000						
446.400	0.001894	-2671.3009	145.1062	3.712E-05	61.0378	8.091E+09	-3.1356
7948.4124	0.000						
451.200	0.002068	-2010.9136	129.2478	3.573E-05	45.9483	8.091E+09	-3.4720
8059.0005	0.000						

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   456.000     0.002237  -1430.5221     111.7787   3.471E-05       32.6867   8.091E+09       -3.8067
8169.5882      0.000
   460.800     0.002401   -937.8381      92.7012   3.401E-05       21.4291   8.091E+09       -4.1422
8280.1755      0.000
   465.600     0.002563   -540.5903      72.0066   3.357E-05       12.3522   8.091E+09       -4.4806
8390.7623      0.000
   470.400     0.002724   -246.5745      49.6765   3.334E-05        5.6341   8.091E+09       -4.8237
8501.3487      0.000
   475.200     0.002883    -63.6956      25.6848   3.325E-05        1.4554   8.091E+09       -5.1729
8611.9346      0.000
   480.000     0.003043        0.000         0.000   3.323E-05        0.000   8.091E+09       -5.5291
4361.2599      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 6:

Pile-head deflection             =      1.1006781 inches
Computed slope at pile head      =     -0.0088573 radians
Maximum bending moment           =        449456. inch-lbs
Maximum shear force              =   5298.0000000 lbs
Depth of maximum bending moment  =    120.0000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             14
Number of zero deflection points =              2


---------------------------------------------------------------------------
                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 7
---------------------------------------------------------------------------

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        6424.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       1.4732   4.679E-07   6424.0000      -0.0115   1.069E-08   8.091E+09         0.000
0.000      0.000
     4.800       1.4178       30835.   6424.0000      -0.0115    704.5677   8.091E+09         0.000
0.000      0.000
     9.600       1.3625       61670.   6424.0000      -0.0115   1409.1355   8.091E+09         0.000
0.000      0.000
    14.400       1.3074       92506.   6419.2744      -0.0115   2113.7032   8.091E+09      -1.9690
7.2290      0.000
    19.200       1.2525      123295.   6399.0535      -0.0114   2817.2344   8.091E+09      -6.4564
24.7423      0.000
    24.000       1.1980      153937.   6356.6450      -0.0113   3517.3666   8.091E+09     -11.2138
44.9288      0.000
    28.800       1.1440      184319.   6292.0849      -0.0112   4211.5952   8.091E+09     -15.6863
65.8184      0.000
    33.600       1.0904      214341.   6208.0717      -0.0111   4897.5658   8.091E+09     -19.3192
85.0424      0.000
    38.400       1.0375      243917.   6109.9661      -0.0110   5573.3658   8.091E+09     -21.5581
99.7393      0.000
    43.200       0.9853      272996.   6005.7924      -0.0108   6237.8165   8.091E+09     -21.8476
106.4377      0.000
    48.000       0.9338      301572.   5896.1448      -0.0106   6890.7654   8.091E+09     -23.8389
122.5394      0.000
    52.800       0.8832      329599.   5768.4541      -0.0104   7531.1644   8.091E+09     -29.3656
159.5964      0.000
    57.600       0.8335      356949.   5612.9184      -0.0102   8156.1037   8.091E+09     -35.4410
204.0911      0.000
    62.400       0.7849      383483.   5426.9255      -0.0100   8762.3852   8.091E+09     -42.0561
257.1955      0.000
    67.200       0.7373      409048.   5207.9371   -0.009786   9346.5261   8.091E+09     -49.1891
320.2185      0.000
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72.000	0.6909	433479.	4953.5784	-0.009536	9904.7714	8.091E+09	-56.7938
394.5477	0.000						
76.800	0.6458	456602.	4661.7876	-0.009272	10433.	8.091E+09	-64.7857
481.5379	0.000						
81.600	0.6019	478233.	4331.0375	-0.008995	10927.	8.091E+09	-73.0268
582.3378	0.000						
86.400	0.5594	498180.	3960.6204	-0.008705	11383.	8.091E+09	-81.3136
697.6706	0.000						
91.200	0.5184	516255.	3550.9677	-0.008404	11796.	8.091E+09	-89.3750
827.5996	0.000						
96.000	0.4788	532270.	3103.9477	-0.008093	12162.	8.091E+09	-96.8833
971.3376	0.000						
100.800	0.4407	546052.	2623.0725	-0.007773	12477.	8.091E+09	-103.4814
1127.1607	0.000						
105.600	0.4041	557451.	2113.5454	-0.007446	12737.	8.091E+09	-108.8216
1292.4797	0.000						
110.400	0.3692	566342.	1582.1095	-0.007112	12941.	8.091E+09	-112.6101
1464.0747	0.000						
115.200	0.3359	572639.	1036.6987	-0.006775	13085.	8.091E+09	-114.6444
1638.4539	0.000						
120.000	0.3042	576295.	485.9463	-0.006434	13168.	8.091E+09	-114.8358
1812.2514	0.000						
124.800	0.2741	577304.	-61.3680	-0.006092	13191.	8.091E+09	-113.2118
1982.5722	0.000						
129.600	0.2457	575706.	-596.8398	-0.005750	13155.	8.091E+09	-109.9014
2147.2176	0.000						
134.400	0.2189	571575.	-1112.8609	-0.005409	13060.	8.091E+09	-105.1074
2304.7673	0.000						
139.200	0.1938	565022.	-1602.9022	-0.005072	12910.	8.091E+09	-99.0765
2454.5370	0.000						
144.000	0.1702	556187.	-2061.6550	-0.004740	12709.	8.091E+09	-92.0705
2596.4537	0.000						
148.800	0.1483	545230.	-2485.0526	-0.004413	12458.	8.091E+09	-84.3452
2730.8955	0.000						
153.600	0.1278	532330.	-2870.2058	-0.004093	12163.	8.091E+09	-76.1354
2858.5324	0.000						
158.400	0.1090	517676.	-3215.2852	-0.003782	11829.	8.091E+09	-67.6477
2980.1902	0.000						
163.200	0.0915	501464.	-3519.3785	-0.003479	11458.	8.091E+09	-59.0578
3096.7468	0.000						
168.000	0.0756	483890.	-3782.3446	-0.003187	11057.	8.091E+09	-50.5114
3209.0601	0.000						
172.800	0.0609	465153.	-4004.6725	-0.002906	10628.	8.091E+09	-42.1253
3317.8362	0.000						
177.600	0.0477	445445.	-4187.3522	-0.002636	10178.	8.091E+09	-33.9913
3423.4579	0.000						
182.400	0.0356	424955.	-4331.7940	-0.002377	9709.9829	8.091E+09	-26.1928
3527.4058	0.000						
187.200	0.0248	403860.	-4439.7339	-0.002132	9227.9883	8.091E+09	-18.7821
3629.9444	0.000						
192.000	0.0152	382333.	-4513.1316	-0.001898	8736.1058	8.091E+09	-11.8003
3731.3268	0.000						
196.800	0.006612	360534.	-4554.1211	-0.001678	8238.0110	8.091E+09	-5.2787
3831.7881	0.000						
201.600	-0.000928	338614.	-4564.9649	-0.001471	7737.1373	8.091E+09	0.7604
3931.5411	0.000						
206.400	-0.007505	316710.	-4548.0145	-0.001276	7236.6639	8.091E+09	6.3023
4030.7739	0.000						
211.200	-0.0132	294953.	-4505.6752	-0.001095	6739.5083	8.091E+09	11.3391
4129.6490	0.000						
216.000	-0.0180	273456.	-4440.3759	-0.000926	6248.3222	8.091E+09	15.8690
4228.3035	0.000						
220.800	-0.0221	252325.	-4354.5421	-0.000770	5765.4904	8.091E+09	19.8951
4326.8500	0.000						
225.600	-0.0254	231652.	-4250.5731	-0.000627	5293.1323	8.091E+09	23.4253
4425.3781	0.000						
230.400	-0.0281	211519.	-4130.8219	-0.000495	4833.1066	8.091E+09	26.4711
4523.9565	0.000						
235.200	-0.0302	191996.	-3997.5776	-0.000375	4387.0166	8.091E+09	29.0474
4622.6356	0.000						
240.000	-0.0317	173143.	-3853.0506	-0.000267	3956.2186	8.091E+09	31.1722
4721.4493	0.000						
244.800	-0.0327	155007.	-3699.3592	-0.000170	3541.8313	8.091E+09	32.8659
4820.4176	0.000						
249.600	-0.0333	137629.	-3538.5187	-8.302E-05	3144.7463	8.091E+09	34.1510
4919.5491	0.000						
254.400	-0.0335	121037.	-3372.4312	-6.294E-06	2765.6401	8.091E+09	35.0521
5018.8430	0.000						
259.200	-0.0334	105254.	-3202.8779	6.083E-05	2404.9872	8.091E+09	35.5951
5118.2912	0.000						

264.000	-0.0329	90290.	-3031.5119	0.000119	2063.0733	8.091E+09	35.8074
5217.8801	0.000						
268.800	-0.0322	76151.	-2859.8526	0.000168	1740.0104	8.091E+09	35.7173
5317.5926	0.000						
273.600	-0.0313	62835.	-2689.2809	0.000209	1435.7508	8.091E+09	35.3542
5417.4091	0.000						
278.400	-0.0302	50334.	-2486.0734	0.000243	1150.1036	8.091E+09	49.3156
7830.4052	0.000						
283.200	-0.0290	38969.	-2251.5145	0.000269	890.4186	8.091E+09	48.4172
8016.0514	0.000						
288.000	-0.0276	28719.	-2021.9532	0.000290	656.2230	8.091E+09	47.2333
8201.6693	0.000						
292.800	-0.0262	19558.	-1798.6688	0.000304	446.8934	8.091E+09	45.8018
8387.2298	0.000						
297.600	-0.0247	11452.	-1582.7607	0.000313	261.6763	8.091E+09	44.1599
8572.7123	0.000						
302.400	-0.0232	4363.6550	-1375.1536	0.000318	99.7072	8.091E+09	42.3431
8758.1031	0.000						
307.200	-0.0217	-1749.2902	-1176.6055	0.000319	39.9703	8.091E+09	40.3853
8943.3948	0.000						
312.000	-0.0201	-6931.7575	-987.7183	0.000316	158.3869	8.091E+09	38.3177
9128.4100	0.000						
316.800	-0.0186	-11231.	-808.9473	0.000311	256.6311	8.091E+09	36.1703
9313.3380	0.000						
321.600	-0.0172	-14698.	-640.6109	0.000303	335.8334	8.091E+09	33.9699
9498.2268	0.000						
326.400	-0.0157	-17381.	-482.9066	0.000293	397.1522	8.091E+09	31.7402
9683.0716	0.000						
331.200	-0.0144	-19334.	-335.9258	0.000282	441.7613	8.091E+09	29.5018
9867.8696	0.000						
336.000	-0.0130	-20606.	-229.9334	0.000271	470.8392	8.091E+09	14.6617
5404.3960	0.000						
340.800	-0.0118	-21541.	-162.3380	0.000258	492.1983	8.091E+09	13.5030
5515.0665	0.000						
345.600	-0.0105	-22165.	-100.2723	0.000245	506.4488	8.091E+09	12.3577
5625.7255	0.000						
350.400	-0.009399	-22504.	-43.6571	0.000232	514.1936	8.091E+09	11.2320
5736.3741	0.000						
355.200	-0.008317	-22584.	7.6155	0.000219	516.0252	8.091E+09	10.1316
5847.0102	0.000						
360.000	-0.007300	-22430.	53.6779	0.000205	512.5231	8.091E+09	9.0611
5957.6359	0.000						
364.800	-0.006347	-22068.	94.6833	0.000192	504.2507	8.091E+09	8.0245
6068.2572	0.000						
369.600	-0.005457	-21521.	130.8017	0.000179	491.7538	8.091E+09	7.0248
6178.8742	0.000						
374.400	-0.004628	-20813.	162.2161	0.000167	475.5587	8.091E+09	6.0645
6289.4872	0.000						
379.200	-0.003859	-19964.	189.1186	0.000154	456.1709	8.091E+09	5.1449
6400.0966	0.000						
384.000	-0.003146	-18997.	211.7072	0.000143	434.0746	8.091E+09	4.2670
6510.7025	0.000						
388.800	-0.002487	-17932.	230.1820	0.000132	409.7319	8.091E+09	3.4309
6621.3055	0.000						
393.600	-0.001879	-16787.	244.7424	0.000122	383.5831	8.091E+09	2.6360
6731.9057	0.000						
398.400	-0.001320	-15582.	255.5836	0.000112	356.0465	8.091E+09	1.8812
6842.5035	0.000						
403.200	-0.000804	-14334.	262.8944	0.000103	327.5196	8.091E+09	1.1649
6953.0993	0.000						
408.000	-0.000330	-13058.	266.8542	9.501E-05	298.3794	8.091E+09	0.4850
7063.6932	0.000						
412.800	0.000108	-11772.	267.6312	8.765E-05	268.9838	8.091E+09	-0.1613
7174.2856	0.000						
417.600	0.000512	-10489.	265.3798	8.104E-05	239.6732	8.091E+09	-0.7768
7284.8766	0.000						
422.400	0.000886	-9224.3520	260.2397	7.519E-05	210.7715	8.091E+09	-1.3649
7395.4664	0.000						
427.200	0.001234	-7990.9252	252.3338	7.009E-05	182.5883	8.091E+09	-1.9292
7506.0551	0.000						
432.000	0.001559	-6801.9471	241.7676	6.570E-05	155.4208	8.091E+09	-2.4734
7616.6429	0.000						
436.800	0.001864	-5669.9563	228.6281	6.200E-05	129.5555	8.091E+09	-3.0014
7727.2299	0.000						
441.600	0.002154	-4607.1178	212.9836	5.895E-05	105.2702	8.091E+09	-3.5171
7837.8160	0.000						
446.400	0.002430	-3625.3137	194.8838	5.651E-05	82.8365	8.091E+09	-4.0245
7948.4013	0.000						
451.200	0.002696	-2736.2331	174.3599	5.462E-05	62.5215	8.091E+09	-4.5272
8058.9857	0.000						

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   456.000     0.002955  -1951.4590     151.4252   5.323E-05      44.5898   8.091E+09      -5.0289
8169.5693      0.000
   460.800     0.003207  -1282.5514     126.0766   5.227E-05      29.3056   8.091E+09      -5.5330
8280.1519      0.000
   465.600     0.003457   -741.1236      98.2960   5.167E-05      16.9343   8.091E+09      -6.0423
8390.7335      0.000
   470.400     0.003704   -338.9102      68.0520   5.135E-05       7.7439   8.091E+09      -6.5593
8501.3140      0.000
   475.200     0.003950    -87.8240      35.3031   5.123E-05       2.0067   8.091E+09      -7.0860
8611.8933      0.000
   480.000     0.004195       0.000       0.000   5.120E-05        0.000   8.091E+09      -7.6236
4361.2357      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 7:

Pile-head deflection             =      1.4731948 inches
Computed slope at pile head      =     -0.0115382 radians
Maximum bending moment           =        577304. inch-lbs
Maximum shear force              =   6424.0000000 lbs
Depth of maximum bending moment  =    124.8000000 inches below pile head
Depth of maximum shear force     =      0.000000 inches below pile head
Number of iterations             =             16
Number of zero deflection points =              2


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 8
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        8236.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y        Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       2.1781 -1.560E-07   8236.0000      -0.0164   3.563E-09   8.091E+09         0.000
0.000      0.000
     4.800       2.0995       39533.   8236.0000      -0.0164    903.3032   8.091E+09         0.000
0.000      0.000
     9.600       2.0210       79066.   8236.0000      -0.0163   1806.6065   8.091E+09         0.000
0.000      0.000
    14.400       1.9428      118598.   8231.2744      -0.0163   2709.9097   8.091E+09      -1.9690
4.8648      0.000
    19.200       1.8648      158086.   8211.0533      -0.0162   3612.1763   8.091E+09      -6.4565
16.6188      0.000
    24.000       1.7873      197425.   8168.6438      -0.0161   4511.0439   8.091E+09     -11.2141
30.1163      0.000
    28.800       1.7104      236505.   8104.0810      -0.0160   5404.0079   8.091E+09     -15.6870
44.0233      0.000
    33.600       1.6342      275224.   8020.0635      -0.0158   6288.7133   8.091E+09     -19.3203
56.7492      0.000
    38.400       1.5587      313497.   7921.9537      -0.0156   7163.2476   8.091E+09     -21.5588
66.3905      0.000
    43.200       1.4841      351274.   7817.7778      -0.0154   8026.4322   8.091E+09     -21.8478
70.6611      0.000
    48.000       1.4105      388548.   7708.1291      -0.0152   8878.1150   8.091E+09     -23.8392
81.1233      0.000
    52.800       1.3381      425272.   7580.4343      -0.0150   9717.2476   8.091E+09     -29.3670
105.3465      0.000
    57.600       1.2668      461320.   7424.8792      -0.0147       10541.   8.091E+09     -35.4476
134.3115      0.000
    62.400       1.1969      496551.   7238.8113      -0.0144       11346.   8.091E+09     -42.0807
168.7621      0.000
    67.200       1.1283      530813.   7019.5804      -0.0141       12129.   8.091E+09     -49.2655
209.5758      0.000
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72.000	1.0613	563939.	6764.5459	-0.0138	12886.	8.091E+09	-56.9989
257.7847	0.000						
76.800	0.9959	595752.	6471.0947	-0.0135	13613.	8.091E+09	-65.2724
314.5917	0.000						
81.600	0.9322	626062.	6136.6839	-0.0131	14305.	8.091E+09	-74.0654
381.3693	0.000						
86.400	0.8703	654665.	5758.9261	-0.0127	14959.	8.091E+09	-83.3337
459.6288	0.000						
91.200	0.8102	681347.	5335.7390	-0.0123	15568.	8.091E+09	-92.9942
550.9387	0.000						
96.000	0.7521	705888.	4865.5793	-0.0119	16129.	8.091E+09	-102.9057
656.7787	0.000						
100.800	0.6960	728057.	4347.7655	-0.0115	16636.	8.091E+09	-112.8501
778.3235	0.000						
105.600	0.6419	747626.	3782.8735	-0.0110	17083.	8.091E+09	-122.5216
916.1730	0.000						
110.400	0.5900	764373.	3173.1512	-0.0106	17466.	8.091E+09	-131.5293
1070.0732	0.000						
115.200	0.5403	778089.	2522.8715	-0.0101	17779.	8.091E+09	-139.4205
1238.6999	0.000						
120.000	0.4927	788592.	1838.5216	-0.009667	18019.	8.091E+09	-145.7252
1419.5872	0.000						
124.800	0.4475	795738.	1128.7425	-0.009197	18182.	8.091E+09	-150.0160
1609.2616	0.000						
129.600	0.4044	799428.	403.9769	-0.008724	18267.	8.091E+09	-151.9696
1803.5872	0.000						
134.400	0.3637	799617.	-324.1438	-0.008249	18271.	8.091E+09	-151.4140
1998.2545	0.000						
139.200	0.3253	796316.	-1043.5747	-0.007776	18195.	8.091E+09	-148.3488
2189.2944	0.000						
144.000	0.2891	789598.	-1742.6556	-0.007305	18042.	8.091E+09	-142.9349
2373.4939	0.000						
148.800	0.2551	779587.	-2410.8026	-0.006840	17813.	8.091E+09	-135.4597
2548.6298	0.000						
153.600	0.2234	766455.	-3039.0019	-0.006381	17513.	8.091E+09	-126.2900
2713.5072	0.000						
158.400	0.1939	750412.	-3620.0751	-0.005931	17147.	8.091E+09	-115.8239
2867.8415	0.000						
163.200	0.1665	731702.	-4148.7387	-0.005492	16719.	8.091E+09	-104.4526
3012.0511	0.000						
168.000	0.1411	710585.	-4621.5048	-0.005064	16236.	8.091E+09	-92.5333
3147.0259	0.000						
172.800	0.1178	687335.	-5036.4662	-0.004649	15705.	8.091E+09	-80.3673
3273.5997	0.000						
177.600	0.0965	662234.	-5392.9972	-0.004249	15132.	8.091E+09	-68.1873
3391.6210	0.000						
182.400	0.0770	635563.	-5691.6970	-0.003864	14522.	8.091E+09	-56.2710
3505.5442	0.000						
187.200	0.0594	607594.	-5934.1502	-0.003495	13883.	8.091E+09	-44.7512
3615.8469	0.000						
192.000	0.0435	578595.	-6122.5183	-0.003144	13221.	8.091E+09	-33.7355
3723.0379	0.000						
196.800	0.0292	548818.	-6259.4225	-0.002809	12540.	8.091E+09	-23.3080
3827.6276	0.000						
201.600	0.0165	518504.	-6347.8379	-0.002492	11848.	8.091E+09	-13.5318
3930.1059	0.000						
206.400	0.005301	487879.	-6390.9987	-0.002194	11148.	8.091E+09	-4.4519
4030.9265	0.000						
211.200	-0.004535	457151.	-6392.3169	-0.001914	10446.	8.091E+09	3.9026
4130.4972	0.000						
216.000	-0.0131	426513.	-6355.3135	-0.001652	9745.5819	8.091E+09	11.5155
4229.1750	0.000						
220.800	-0.0204	396140.	-6283.5601	-0.001408	9051.5787	8.091E+09	18.3817
4327.2639	0.000						
225.600	-0.0266	366190.	-6180.6313	-0.001181	8367.2526	8.091E+09	24.5053
4425.0163	0.000						
230.400	-0.0317	336806.	-6050.0644	-0.000973	7695.8273	8.091E+09	29.8976
4522.6359	0.000						
235.200	-0.0359	308110.	-5895.3268	-0.000782	7040.1417	8.091E+09	34.5764
4620.2811	0.000						
240.000	-0.0392	280210.	-5719.7888	-0.000607	6402.6588	8.091E+09	38.5644
4718.0703	0.000						
244.800	-0.0417	253200.	-5526.7008	-0.000449	5785.4783	8.091E+09	41.8889
4816.0863	0.000						
249.600	-0.0435	227154.	-5319.1744	-0.000306	5190.3503	8.091E+09	44.5804
4914.3818	0.000						
254.400	-0.0447	202136.	-5100.1665	-0.000179	4618.6917	8.091E+09	46.6728
5012.9842	0.000						
259.200	-0.0453	178193.	-4872.4663	-6.619E-05	4071.6041	8.091E+09	48.2023
5111.9001	0.000						

264.000	-0.0453	155360.	-4638.6832	3.275E-05	3549.8926	8.091E+09	49.2073
5211.1199	0.000						
268.800	-0.0449	133661.	-4401.2378	0.000118	3054.0865	8.091E+09	49.7282
5310.6218	0.000						
273.600	-0.0442	113108.	-4162.3539	0.000192	2584.4598	8.091E+09	49.8067
5410.3749	0.000						
278.400	-0.0431	93703.	-3874.3269	0.000253	2141.0540	8.091E+09	70.2045
7817.3943	0.000						
283.200	-0.0418	75915.	-3538.7192	0.000303	1734.6075	8.091E+09	69.6320
8003.9351	0.000						
288.000	-0.0402	59731.	-3206.9947	0.000344	1364.8188	8.091E+09	68.5865
8190.5422	0.000						
292.800	-0.0385	45127.	-2881.2933	0.000375	1031.1376	8.091E+09	67.1224
8377.1391	0.000						
297.600	-0.0366	32070.	-2563.4947	0.000398	732.7932	8.091E+09	65.2937
8563.6667	0.000						
302.400	-0.0346	20518.	-2255.2228	0.000413	468.8227	8.091E+09	63.1529
8750.0808	0.000						
307.200	-0.0326	10420.	-1957.8544	0.000422	238.0991	8.091E+09	60.7506
8936.3511	0.000						
312.000	-0.0306	1722.4846	-1672.5360	0.000426	39.3578	8.091E+09	58.1321
9122.0569	0.000						
316.800	-0.0285	-5636.0066	-1400.1907	0.000425	128.7797	8.091E+09	55.3451
9307.6082	0.000						
321.600	-0.0265	-11719.	-1141.5271	0.000420	267.7808	8.091E+09	52.4314
9493.1094	0.000						
326.400	-0.0245	-16595.	-897.0655	0.000411	379.1792	8.091E+09	49.4276
9678.5448	0.000						
331.200	-0.0226	-20331.	-667.1603	0.000400	464.5564	8.091E+09	46.3662
9863.9032	0.000						
336.000	-0.0207	-22999.	-500.0324	0.000387	525.5240	8.091E+09	23.2704
5403.7614	0.000						
340.800	-0.0188	-25131.	-392.2273	0.000373	574.2410	8.091E+09	21.6484
5514.5339	0.000						
345.600	-0.0171	-26765.	-292.2087	0.000358	611.5610	8.091E+09	20.0260
5625.2830	0.000						
350.400	-0.0154	-27937.	-199.9540	0.000342	638.3383	8.091E+09	18.4135
5736.0103	0.000						
355.200	-0.0138	-28684.	-115.3927	0.000325	655.4219	8.091E+09	16.8204
5846.7092	0.000						
360.000	-0.0123	-29044.	-38.4123	0.000308	663.6503	8.091E+09	15.2548
5957.3834	0.000						
364.800	-0.0109	-29053.	31.1361	0.000290	663.8478	8.091E+09	13.7237
6068.0486	0.000						
369.600	-0.009503	-28746.	93.4321	0.000273	656.8205	8.091E+09	12.2330
6178.7048	0.000						
374.400	-0.008233	-28156.	148.6802	0.000256	643.3530	8.091E+09	10.7871
6289.3523	0.000						
379.200	-0.007042	-27318.	197.1040	0.000240	624.2067	8.091E+09	9.3895
6399.9916	0.000						
384.000	-0.005929	-26264.	238.9410	0.000224	600.1173	8.091E+09	8.0426
6510.6232	0.000						
388.800	-0.004892	-25024.	274.4371	0.000209	571.7939	8.091E+09	6.7475
6621.2477	0.000						
393.600	-0.003925	-23629.	303.8418	0.000194	539.9182	8.091E+09	5.5045
6731.8656	0.000						
398.400	-0.003025	-22108.	327.4034	0.000181	505.1447	8.091E+09	4.3129
6842.4776	0.000						
403.200	-0.002189	-20486.	345.3646	0.000168	468.1007	8.091E+09	3.1710
6953.0843	0.000						
408.000	-0.001411	-18792.	357.9583	0.000157	429.3873	8.091E+09	2.0764
7063.6862	0.000						
412.800	-0.000686	-17050.	365.4038	0.000146	389.5808	8.091E+09	1.0259
7174.2838	0.000						
417.600	-1.038E-05	-15284.	367.9038	0.000136	349.2342	8.091E+09	0.0158
7284.8776	0.000						
422.400	0.000622	-13518.	365.6412	0.000128	308.8793	8.091E+09	-0.9585
7395.4680	0.000						
427.200	0.001216	-11774.	358.7766	0.000120	269.0290	8.091E+09	-1.9017
7506.0553	0.000						
432.000	0.001777	-10074.	347.4466	0.000114	230.1799	8.091E+09	-2.8191
7616.6397	0.000						
436.800	0.002308	-8438.4894	331.7621	0.000108	192.8149	8.091E+09	-3.7161
7727.2215	0.000						
441.600	0.002816	-6888.8410	311.8072	0.000104	157.4063	8.091E+09	-4.5984
7837.8006	0.000						
446.400	0.003304	-5445.1401	287.6392	0.000100	124.4185	8.091E+09	-5.4716
7948.3772	0.000						
451.200	0.003777	-4127.5050	259.2883	9.724E-05	94.3113	8.091E+09	-6.3413
8058.9512	0.000						

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   456.000     0.004238  -2955.9725     226.7588   9.514E-05       67.5424   8.091E+09       -7.2127
8169.5224      0.000
   460.800     0.004690  -1950.6201     190.0305   9.369E-05       44.5706   8.091E+09       -8.0908
8280.0907      0.000
   465.600     0.005137  -1131.6800     149.0604   9.277E-05       25.8583   8.091E+09       -8.9801
8390.6560      0.000
   470.400     0.005581   -519.6407     103.7861   9.228E-05       11.8735   8.091E+09       -9.8842
8501.2179      0.000
   475.200     0.006023   -135.3337      54.1292   9.209E-05        3.0923   8.091E+09      -10.8061
8611.7763      0.000
   480.000     0.006465      0.000        0.000   9.205E-05        0.000    8.091E+09      -11.7477
4361.1654      0.000

* The above values of total stress are combined axial and bending stress.


Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 8:

Pile-head deflection             =      2.1781427 inches
Computed slope at pile head      =     -0.0163775 radians
Maximum bending moment           =        799617. inch-lbs
Maximum shear force              =   8236.0000000 lbs
Depth of maximum bending moment  =    134.4000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =             18
Number of zero deflection points =              2


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                Computed Values of Pile Loading and Deflection
                  for Lateral Loading for Load Case Number 9
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Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head                                =        9780.000 lbs
Applied moment at pile head                             =           0.000 in-lbs
Axial thrust load on pile head                          =           0.000 lbs

   Depth    Deflect.    Bending    Shear       Slope      Total    Bending   Soil Res.  Soil Spr.
Distrib.
     X          y         Moment     Force          S       Stress   Stiffness      p          Es*h
Lat. Load
   inches    inches     in-lbs      lbs       radians     psi*      lb-in^2    lb/in      lb/inch
lb/inch
---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ----------
      0.00       2.8828   4.679E-07   9780.0000      -0.0210   1.069E-08   8.091E+09         0.000
0.000      0.000
     4.800       2.7821       46944.   9780.0000      -0.0210   1072.6452   8.091E+09         0.000
0.000      0.000
     9.600       2.6814       93888.   9780.0000      -0.0209   2145.2903   8.091E+09         0.000
0.000      0.000
    14.400       2.5811      140832.   9775.2744      -0.0209   3217.9355   8.091E+09        -1.9690
3.6617      0.000
    19.200       2.4811      187731.   9755.0533      -0.0208   4289.5441   8.091E+09        -6.4565
12.4907      0.000
    24.000       2.3817      234481.   9712.6439      -0.0206   5357.7536   8.091E+09       -11.2141
22.6004      0.000
    28.800       2.2830      280972.   9648.0811      -0.0205   6420.0595   8.091E+09       -15.6870
32.9824      0.000
    33.600       2.1850      327102.   9564.0637      -0.0203   7474.1069   8.091E+09       -19.3202
42.4423      0.000
    38.400       2.0880      372787.   9465.9540      -0.0201   8517.9831   8.091E+09       -21.5588
49.5606      0.000
    43.200       1.9920      417975.   9361.7782      -0.0199   9550.5097   8.091E+09       -21.8478
52.6443      0.000
    48.000       1.8973      462660.   9252.1296      -0.0196       10572.   8.091E+09       -23.8391
60.3118      0.000
    52.800       1.8038      506796.   9124.4349      -0.0193       11580.   8.091E+09       -29.3670
78.1461      0.000
    57.600       1.7118      550255.   8968.8799      -0.0190       12573.   8.091E+09       -35.4476
99.3967      0.000
    62.400       1.6214      592897.   8782.8112      -0.0187       13547.   8.091E+09       -42.0810
124.5790      0.000
    67.200       1.5326      634570.   8563.5756      -0.0183       14500.   8.091E+09       -49.2672
154.2995      0.000
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72.000	1.4457	675107.	8308.5201	-0.0179	15426.	8.091E+09	-57.0059
189.2739	0.000						
76.800	1.3607	714331.	8014.9936	-0.0175	16322.	8.091E+09	-65.2968
230.3488	0.000						
81.600	1.2777	752051.	7680.3507	-0.0171	17184.	8.091E+09	-74.1377
278.5248	0.000						
86.400	1.1968	788063.	7301.9650	-0.0166	18007.	8.091E+09	-83.5230
334.9805	0.000						
91.200	1.1182	822150.	6877.2594	-0.0161	18786.	8.091E+09	-93.4377
401.0865	0.000						
96.000	1.0420	854085.	6403.7733	-0.0156	19515.	8.091E+09	-103.8482
478.4011	0.000						
100.800	0.9681	883626.	5879.2878	-0.0151	20190.	8.091E+09	-114.6874
568.6254	0.000						
105.600	0.8968	910526.	5302.0372	-0.0146	20805.	8.091E+09	-125.8337
673.4999	0.000						
110.400	0.8281	934526.	4671.0271	-0.0140	21353.	8.091E+09	-137.0872
794.6223	0.000						
115.200	0.7620	955368.	3986.4605	-0.0135	21830.	8.091E+09	-148.1489
933.1838	0.000						
120.000	0.6987	972796.	3250.2405	-0.0129	22228.	8.091E+09	-158.6095
1089.6442	0.000						
124.800	0.6381	986570.	2466.4738	-0.0123	22543.	8.091E+09	-167.9600
1263.4047	0.000						
129.600	0.5804	996474.	1641.8598	-0.0117	22769.	8.091E+09	-175.6292
1452.5712	0.000						
134.400	0.5254	1002332.	785.8327	-0.0111	22903.	8.091E+09	-181.0487
1653.9091	0.000						
139.200	0.4734	1004018.	-89.6477	-0.0105	22941.	8.091E+09	-183.7348
1863.0620	0.000						
144.000	0.4242	1001471.	-970.6897	-0.009955	22883.	8.091E+09	-183.3660
2075.0265	0.000						
148.800	0.3778	994699.	-1842.3749	-0.009363	22728.	8.091E+09	-179.8362
2284.7816	0.000						
153.600	0.3343	983784.	-2689.8187	-0.008776	22479.	8.091E+09	-173.2654
2487.9114	0.000						
158.400	0.2936	968877.	-3499.1872	-0.008196	22138.	8.091E+09	-163.9714
2681.0657	0.000						
163.200	0.2556	950192.	-4258.5038	-0.007627	21711.	8.091E+09	-152.4105
2862.1711	0.000						
168.000	0.2203	927995.	-4958.1507	-0.007070	21204.	8.091E+09	-139.1090
3030.3960	0.000						
172.800	0.1877	902594.	-5590.9848	-0.006527	20624.	8.091E+09	-124.5718
3185.1875	0.000						
177.600	0.1577	874322.	-6152.0055	-0.006000	19978.	8.091E+09	-109.1868
3323.7651	0.000						
182.400	0.1301	843535.	-6638.8659	-0.005490	19274.	8.091E+09	-93.6717
3455.2896	0.000						
187.200	0.1050	810589.	-7051.5894	-0.005000	18522.	8.091E+09	-78.2965
3580.1855	0.000						
192.000	0.0821	775839.	-7391.3998	-0.004529	17728.	8.091E+09	-63.2912
3699.0737	0.000						
196.800	0.0615	739631.	-7660.5242	-0.004080	16900.	8.091E+09	-48.8440
3812.6945	0.000						
201.600	0.0430	702298.	-7861.9964	-0.003652	16047.	8.091E+09	-35.1027
3921.8407	0.000						
206.400	0.0264	664156.	-7999.4698	-0.003247	15176.	8.091E+09	-22.1779
4027.3048	0.000						
211.200	0.0118	625503.	-8077.0518	-0.002864	14292.	8.091E+09	-10.1479
4129.8406	0.000						
216.000	-0.001063	586617.	-8099.1592	-0.002505	13404.	8.091E+09	0.9365
4230.1376	0.000						
220.800	-0.0122	547751.	-8070.3990	-0.002168	12516.	8.091E+09	11.0469
4328.8055	0.000						
225.600	-0.0219	509141.	-7995.4698	-0.001855	11634.	8.091E+09	20.1736
4426.3684	0.000						
230.400	-0.0301	470995.	-7879.0832	-0.001564	10762.	8.091E+09	28.3209
4523.2636	0.000						
235.200	-0.0369	433502.	-7725.9010	-0.001296	9905.2785	8.091E+09	35.5050
4619.8453	0.000						
240.000	-0.0425	396826.	-7540.4868	-0.001049	9067.2674	8.091E+09	41.7509
4716.3913	0.000						
244.800	-0.0470	361113.	-7327.2665	-0.000824	8251.2362	8.091E+09	47.0908
4813.1104	0.000						
249.600	-0.0504	326485.	-7090.4985	-0.000620	7459.9961	8.091E+09	51.5625
4910.1510	0.000						
254.400	-0.0529	293044.	-6834.2489	-0.000437	6695.9011	8.091E+09	55.2082
5007.6099	0.000						
259.200	-0.0546	260876.	-6562.3724	-0.000272	5960.8705	8.091E+09	58.0737
5105.5408	0.000						

264.000	-0.0555	230045.	-6278.4958	-0.000127	5256.4129	8.091E+09	60.2082
5203.9618	0.000						
268.800	-0.0558	200602.	-5986.0051	9.458E-07	4583.6521	8.091E+09	61.6630
5302.8636	0.000						
273.600	-0.0555	172580.	-5688.0339	0.000112	3943.3538	8.091E+09	62.4917
5402.2153	0.000						
278.400	-0.0547	145997.	-5324.5045	0.000206	3335.9543	8.091E+09	88.9789
7801.7739	0.000						
283.200	-0.0535	121464.	-4897.0658	0.000285	2775.3979	8.091E+09	89.1206
7988.9263	0.000						
288.000	-0.0520	98985.	-4470.5777	0.000351	2261.7592	8.091E+09	88.5828
8176.3670	0.000						
292.800	-0.0502	78547.	-4048.1352	0.000404	1794.7551	8.091E+09	87.4349
8363.9519	0.000						
297.600	-0.0481	60123.	-3632.5008	0.000445	1373.7812	8.091E+09	85.7461
8551.5627	0.000						
302.400	-0.0459	43675.	-3226.1066	0.000475	997.9485	8.091E+09	83.5848
8739.1058	0.000						
307.200	-0.0436	29153.	-2831.0611	0.000497	666.1191	8.091E+09	81.0175
8926.5103	0.000						
312.000	-0.0411	16497.	-2449.1752	0.000511	376.9415	8.091E+09	78.1016
9113.0006	0.000						
316.800	-0.0387	5640.4240	-2081.9605	0.000517	128.8807	8.091E+09	74.9045
9299.2796	0.000						
321.600	-0.0362	-3490.0870	-1730.6299	0.000518	79.7466	8.091E+09	71.4833
9485.5273	0.000						
326.400	-0.0337	-10974.	-1396.1380	0.000514	250.7414	8.091E+09	67.8884
9671.7094	0.000						
331.200	-0.0312	-16893.	-1079.2107	0.000505	385.9962	8.091E+09	64.1646
9857.7997	0.000						
336.000	-0.0288	-21334.	-847.3018	0.000494	487.4715	8.091E+09	32.4641
5402.7655	0.000						
340.800	-0.0265	-25027.	-696.3265	0.000480	571.8560	8.091E+09	30.4422
5513.6817	0.000						
345.600	-0.0242	-28019.	-555.1158	0.000464	640.2141	8.091E+09	28.3956
5624.5606	0.000						
350.400	-0.0220	-30356.	-423.7523	0.000447	693.6233	8.091E+09	26.3392
5735.4042	0.000						
355.200	-0.0199	-32087.	-302.2499	0.000429	733.1662	8.091E+09	24.2868
5846.1966	0.000						
360.000	-0.0179	-33258.	-190.5601	0.000409	759.9233	8.091E+09	22.2506
5956.9434	0.000						
364.800	-0.0160	-33916.	-88.5798	0.000389	774.9665	8.091E+09	20.2412
6067.6759	0.000						
369.600	-0.0142	-34108.	3.8415	0.000369	779.3537	8.091E+09	18.2676
6178.3937	0.000						
374.400	-0.0125	-33879.	86.8934	0.000349	774.1238	8.091E+09	16.3373
6289.0970	0.000						
379.200	-0.0108	-33274.	160.7978	0.000329	760.2932	8.091E+09	14.4562
6399.7861	0.000						
384.000	-0.009311	-32336.	225.8009	0.000310	738.8521	8.091E+09	12.6284
6510.4615	0.000						
388.800	-0.007871	-31106.	282.1662	0.000291	710.7627	8.091E+09	10.8571
6621.1239	0.000						
393.600	-0.006520	-29627.	330.1677	0.000273	676.9576	8.091E+09	9.1435
6731.7741	0.000						
398.400	-0.005253	-27937.	370.0833	0.000256	638.3388	8.091E+09	7.4880
6842.4132	0.000						
403.200	-0.004066	-26074.	402.1885	0.000240	595.7780	8.091E+09	5.8892
6953.0418	0.000						
408.000	-0.002953	-24076.	426.7505	0.000225	550.1168	8.091E+09	4.3450
7063.6610	0.000						
412.800	-0.001908	-21977.	444.0231	0.000211	502.1682	8.091E+09	2.8519
7174.2715	0.000						
417.600	-0.000926	-19813.	454.2415	0.000199	452.7182	8.091E+09	1.4057
7284.8742	0.000						
422.400	-7.617E-07	-17617.	457.6180	0.000188	402.5281	8.091E+09	0.001174
7395.4696	0.000						
427.200	0.000875	-15420.	454.3386	0.000178	352.3375	8.091E+09	-1.3676
7506.0583	0.000						
432.000	0.001706	-13255.	444.5598	0.000169	302.8668	8.091E+09	-2.7070
7616.6408	0.000						
436.800	0.002500	-11152.	428.4058	0.000162	254.8211	8.091E+09	-4.0239
7727.2173	0.000						
441.600	0.003261	-9142.1788	405.9672	0.000156	208.8939	8.091E+09	-5.3255
7837.7880	0.000						
446.400	0.003997	-7254.8862	377.3000	0.000151	165.7702	8.091E+09	-6.6191
7948.3529	0.000						
451.200	0.004712	-5520.0988	342.4253	0.000147	126.1313	8.091E+09	-7.9120
8058.9119	0.000						

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   456.000     0.005412  -3967.6035     301.3301     0.000145       90.6576    8.091E+09      -9.2110
8169.4648      0.000
   460.800     0.006100  -2627.3296     253.9691     0.000143       60.0331    8.091E+09     -10.5227
8280.0113      0.000
   465.600     0.006781  -1529.4999     200.2671     0.000141       34.9483    8.091E+09     -11.8531
8390.5509      0.000
   470.400     0.007457   -704.7655     140.1227     0.000141       16.1035    8.091E+09     -13.2071
8501.0831      0.000
   475.200     0.008131   -184.3222      73.4131     0.000140        4.2117    8.091E+09     -14.5886
8611.6074      0.000
   480.000     0.008805         0.000         0.000     0.000140         0.000    8.091E+09     -16.0002
4361.0616      0.000

* The above values of total stress are combined axial and bending stress.

Output Verification: Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No. 9:

Pile-head deflection             =      2.8828211 inches
Computed slope at pile head      =     -0.0209907 radians
Maximum bending moment           =       1004018. inch-lbs
Maximum shear force              =   9780.0000001 lbs
Depth of maximum bending moment  =    139.2000000 inches below pile head
Depth of maximum shear force     =      9.6000000 inches below pile head
Number of iterations             =             20
Number of zero deflection points =              2



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                           Summary of Pile Response(s)
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Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, lbs, and Load 2 = Moment, in-lbs
Load Type 2: Load 1 = Shear, lbs, and Load 2 = Slope, radians
Load Type 3: Load 1 = Shear, lbs, and Load 2 = Rotational Stiffness, in-lbs/radian
Load Type 4: Load 1 = Top Deflection, inches, and Load 2 = Moment, in-lbs
Load Type 5: Load 1 = Top Deflection, inches, and Load 2 = Slope, radians


               Pile-head      Pile-head
Load   Load      Condition 1     Condition 2           Axial           Pile-head          Maximum
Maximum       Pile-head
Case   Type      V(lbs) or       in-lb, rad.,          Loading         Deflection          Moment
Shear        Rotation
 No.    No.     y(inches)     or in-lb/rad.        lbs          inches          in-lbs           lbs
radians
----  ----  --------------  --------------  -------------  -------------  -------------  --------
-----  -------------
  1      1    V =    572.0000   M =       0.000        0.0000000      0.07878183           36879.
572.0000    -0.00070053
  2      1    V =   1602.0000   M =       0.000        0.0000000      0.23288973          107295.
1602.0000    -0.00204591
  3      1    V =   2213.0000   M =       0.000        0.0000000      0.33864548          153756.
2213.0000    -0.00294035
  4      1    V =   3442.0000   M =       0.000        0.0000000      0.59587538          260210.
3442.0000    -0.00502477
  5      1    V =   4512.0000   M =       0.000        0.0000000      0.87019496          365750.
4512.0000    -0.00714129
  6      1    V =   5298.0000   M =       0.000        0.0000000      1.10067813          449456.
5298.0000    -0.00885728
  7      1    V =   6424.0000   M =       0.000        0.0000000      1.47319478          577304.
6424.0000    -0.01153819
  8      1    V =   8236.0000   M =       0.000        0.0000000      2.17814267          799617.
8236.0000    -0.01637751
  9      1    V =   9780.0000   M =       0.000        0.0000000      2.88282105         1004018.
9780.0000    -0.02099073

The analysis ended normally.
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