CORNERSTONE EARTH GROUP

TYPE OF SERVICES	Geotechnical Investigation
PROJECT NAME	Dupont Village Residential Development
LOCATION	Dupont Street and McEvoy Street San Jose, California
CLIENT	Salvatore Caruso Design Corporation
PROJECT NUMBER	908-2-1
DATE	July 12, 2018

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Location	**Dupont Street and McEvoy Street** **San Jose, California**
Client	**Salvatore Caruso Design Corporation**
Client Address	**980 El Camino Real, Suite 200** **Santa Clara, California**
Project Number	**908-2-1**
Date	**July 12, 2018**

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SECTION 1: INTRODUCTION

This geotechnical report was prepared for the sole use of Salvatore Caruso Design Corporation for the Dupont Village Residential Development project in San Jose, California. The location of the site is shown on the Vicinity Map, Figure 1. For our use, we were provided with the following documents:

- A Proposed Ground Floor plan, Sheet A2.1, titled "Proposed Ground Floor, DuPont Village, 214, 214D, 205 Dupont Street, 226 McEvoy Street, San Jose, CA 95126," prepared by Salvatore Caruso Design Corporation, dated December 13, 2017.

- A geotechnical investigation report titled "Geotechnical Investigation, Two-Story Warehouse and Office Addition, 236 McEvoy Street, San Jose, California," prepared by Berlogar Geotechnical Consultants, dated October 30, 2007.

- A geotechnical response to City review comments letter titled "Response to City's Review Comments, Proposed Industrial Building, 240 McEvoy Street, Project No. 3-18139 (08-028270-GC)," prepared by Berlogar Geotechnical Consultants, dated September 25, 2008.

1.1 PROJECT DESCRIPTION

The project will include redeveloping the approximately eight-acre site for a new residential development. The new development will include a two-level podium structure with 5 stories above. The new structure will be at-grade. The podium will likely consist of concrete construction and the 5 stories above consist of wood-framed construction. A children's garden, flatwork, driveways, landscaping, utilities, and other improvements necessary for site development will also be included as part of the proposed project. The existing Dupont Street will also be realigned to accommodate the new development.

Structural loads are not available for review at the time of this report. We estimate structural loads will be similar for this type of structure and construction. We anticipate generally minor cuts and fills on the order of 2 to 5 feet for general site grading.

1.2 SCOPE OF SERVICES

Our scope of services was presented in our proposal dated February 13, 2018, and consisted of field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis to prepare recommendations for site work and grading, building foundations, flatwork, retaining walls, and pavements, and preparation of this report. Brief descriptions of our exploration and laboratory programs are presented below.

1.3 EXPLORATION PROGRAM

Field exploration consisted of five borings drilled on March 7 to 9, 2018, with truck-mounted and track-mounted, hollow-stem auger drilling equipment and six Cone Penetration Tests (CPTs) advanced on February 27, 2018. The borings were drilled to depths of 30 to 45 feet; the CPTs were advanced to depths of about 50 to 95 feet. Seismic shear wave velocity measurements were collected from CPT-1. All five borings (Boring EB-1 to EB-5) were advanced adjacent to CPT-1 to CPT-5 for direct evaluation of physical samples to correlated soil behavior.

The borings and CPTs were backfilled with cement grout in accordance with local requirements; exploration permits were obtained as required by local jurisdictions.

The approximate locations of our exploratory borings and CPTs are shown on the Site Plan, Figure 2. Details regarding our field program are included in Appendix A.

1.4 PREVIOUS EXPLORATION

Berlogar Geotechnical Consultants previously performed two Cone Penetration Tests (CPTs) and one hollow-stem auger boring in 2007 and 2008. They also performed two shallow hand-auger borings adjacent to their two CPT explorations. The CPTs were advanced to depths of about 40 and 48 feet at the time of their explorations. The hollow-stem auger boring was drilled to a depth of 45 feet and the hand-auger borings extended to a depth of 4 and 5 feet. The approximate locations of the previous exploratory borings and CPTs are shown on the Site Plan, Figure 2. Previous boring and CPT logs and lab data are provided in Appendix D.

1.5 LABORATORY TESTING PROGRAM

In addition to visual classification of samples, the laboratory program focused on obtaining data for foundation design and seismic ground deformation estimates. Testing included moisture contents, dry densities, washed sieve analyses, Plasticity Index tests, and consolidation tests. Details regarding our laboratory program are included in Appendix B.

1.6 ENVIRONMENTAL SERVICES

Environmental services were not requested for this project. If environmental concerns are determined to be present during future evaluations, the project environmental consultant should review our geotechnical recommendations for compatibility with the environmental concerns.

SECTION 2: REGIONAL SETTING

2.1 GEOLOGICAL SETTING

The site is located within the Santa Clara Valley, which is a broad alluvial plane between the Santa Cruz Mountains to the southwest and west, and the Diablo Range to the northeast. The San Andreas Fault system, including the Monte Vista-Shannon Fault, exists within the Santa Cruz Mountains and the Hayward and Calaveras Fault systems exist within the Diablo Range. Alluvium in the area of the site is mapped to be greater than 500 feet thick (Rogers & Williams, 1974).

2.2 REGIONAL SEISMICITY

The San Francisco Bay area region is one of the most seismically active areas in the Country. While seismologists cannot predict earthquake events, geologists from the U.S. Geological Survey have recently updated earlier estimates from their 2015 Uniform California Earthquake Rupture Forecast (Version 3) publication. The estimated probability of one or more magnitude 6.7 earthquakes (the size of the destructive 1994 Northridge earthquake) expected to occur somewhere in the San Francisco Bay Area has been revised (increased) to 72 percent for the period 2014 to 2043 (Aagaard et al., 2016). The faults in the region with the highest estimated probability of generating damaging earthquakes between 2014 and 2043 are the Hayward (33%), Rodgers Creek (33%), Calaveras (26%), and San Andreas Faults (22%). In this 30-year period, the probability of an earthquake of magnitude 6.7 or larger occurring is 22 percent along the San Andreas Fault and 33 percent for the Hayward or Rodgers Creek Faults.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The table below presents the State-considered active faults within 25 kilometers of the site.

Table 1: Approximate Fault Distances

Fault Name	Distance	
	(miles)	(kilometers)
Monte Vista-Shannon	6.5	10.4
Hayward (Southeast Extension)	6.5	10.5
Calaveras	9.3	15.0
Hayward (Total Length)	9.7	15.6
San Andreas (1906)	11.0	17.7
San Gregorio	12.6	20.2

A regional fault map is presented as Figure 3, illustrating the relative distances of the site to significant fault zones.

SECTION 3: SITE CONDITIONS

3.1 SURFACE DESCRIPTION

The site is located at 205, 214, and 214D Dupont Street and 226 McEvoy Street in San Jose, and is bounded by Park Avenue to the north, railroad tracks to the east, West San Carlos Street and shop buildings with parking area to the south, and McEvoy Street to the west. The site is currently occupied by various structures, asphalt concrete and Portland cement concrete pavements, sidewalks, and Dupont Street running east-west in the northern portion of the site and then turning north-south through the middle of the site. The existing buildings are one and two stories. Some buildings appear to be used as office space while others are industrial/commercial/warehouse type buildings with large access doors and some surrounding loading docks. The site is relatively level with elevations generally ranging from about Elevation 99 to 103 feet (Google Earth, 2018). The northern boundary of the site slopes down at approximately 2:1 (horizontal:vertical) to Park Avenue to the north of the site. The slope height is at its greatest (about 20 to 22 feet high based on-site observations and Google Earth®) near the northeast corner of the site where Park Avenue crosses under the railroad tracks and decreases in height toward the west (to less than about 2 feet high) where McEvoy Street and Park Avenue meet at the northwest corner of the site.

Surface pavements at Borings EB-2 and EB-4 consisted of 4 and 3 inches of asphalt concrete over 8 and 5 inches of aggregate base, respectively. Surface pavements at Borings EB-1, EB-3, and EB-5 consisted of 5 to 6 ½ inches of Portland Cement concrete over 5 to 6 inches of aggregate base. Based on visual observations, the existing pavements are in generally good condition.

3.2 SUBSURFACE CONDITIONS

Below the surface pavements, our Borings EB-2 to EB-5 encountered undocumented fills to depths of approximately 1¾ to 3½ feet. The fills consisted of very stiff to hard lean clays with

sand and sandy lean clays. Beneath the fills in Borings EB-2 to EB-4 and the surface pavements in Boring EB-1, stiff to hard, highly expansive clay was encountered to depths of about 2¾ to 4 feet. Beneath the highly expansive clay in Borings EB-1 to EB-4 and the undocumented fills in Boring EB-5, very stiff to hard lean clay with sand was encountered to depths of about 5¾ to 8 feet. Beneath the near surface clays, our borings generally encountered loose to very dense poorly graded sands with varying amounts of silt and gravel, poorly graded gravel with sand and silt, silty sands, and clayey sands to depths of about 17½ to 24½ feet. A thin, one-foot layer of sandy silt was encountered in EB-4 at a depth of 18½ feet. The sands were generally underlain by medium stiff to stiff lean clays with varying amounts of sand to the maximum depths explored within the borings of 30 to 45 feet. Some layers of medium dense to dense silty sand and poorly graded sand with silt were encountered interbedded within the clays and EB-1, EB-2, and EB-5 encountered a layer of stiff silt with sand or dense to very dense poorly graded sand with silt and gravel at the bottom of boring.

Our CPT explorations encountered similar soil conditions to the depths of our borings. Beneath the depths of our borings, our CPTs generally encountered stiff to very stiff clays and silts with interbedded layers of medium dense to very dense sands and gravels to the maximum depth explored of about 95 feet.

Previous explorations by Berlogar in 2007 and 2008 encountered similar conditions as our explorations with undocumented clay fills to depths of 2½ feet followed by native clays to a depth of about 8 feet. The native clays were underlain by sands to depths of 18 to 28 feet underlain by generally clays to depths of 38 to 46 feet followed by sands and gravels to the maximum depths of about 40 to 48 feet.

3.2.1 Plasticity/Expansion Potential

We performed one Plasticity Index (PI) test on a representative near surface sample. Berlogar in 2007 also performed a PI test on a near surface soil sample. The test results indicated PIs of 31 and 33, indicating high expansion potential to wetting and drying cycles.

3.2.2 In-Situ Moisture Contents

Laboratory testing indicated that the in-situ moisture contents within the upper 10 feet range from about 5 to 7 percent below optimum moisture to about 6 to 8 percent over the estimated laboratory optimum moisture.

3.3 GROUNDWATER

Groundwater was encountered in our borings at depths of approximately 20 to 29½ feet below existing grades at the time of drilling. At the completion of drilling, groundwater was measured at depths of 17¼ to 29 feet below existing grades. Ground water was inferred at depths of approximately 19½ to 21½ feet below current grades in CPT-1, CPT-4, and CPT-5, based on pore pressure dissipation tests. All measurements were taken during our site exploration and may not represent the stabilized levels.

Previous pore pressure dissipation tests by Berloger in 2007, inferred groundwater at about 22 feet. Groundwater was also encountered at a depth of 36½ in Berloger's 2008 boring. They indicated the groundwater level may not have stabilized at the time when the measurement was performed in the boring.

Historic high ground water maps prepared by the California Geologic Survey (CGS, 2002) indicate the high ground water to be at approximately 22 feet below the existing ground surface. Fluctuations in the level of the ground water may occur due to variations in rainfall, underground drainage patterns, as well as numerous other factors.

As discussed above, ground water was initially encountered at the time of drilling at depths of 20 feet or greater. Although ground water was measured shallower than 20 feet at about 17¼ feet in one of our borings at the completion of drilling, it is our opinion that the groundwater had not stabilized and would be around the depth initially encountered during drilling. As such, we anticipate a high ground water level of 20 feet below existing grades and recommend a ground water level of 20 feet be used for design.

SECTION 4: GEOLOGIC HAZARDS

4.1 FAULT RUPTURE

As discussed above several significant faults are located within 25 kilometers of the site. The site is not located within a State-designated Alquist Priolo Earthquake Fault Zone, or a Santa Clara County Fault Hazard Zone, or a City of San Jose Potential Hazard Zone. As shown in Figure 3, no known surface expression of fault traces is thought to cross the site; therefore, fault rupture hazard is not a significant geologic hazard at the site.

4.2 ESTIMATED GROUND SHAKING

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area. A peak ground acceleration (PGA) was estimated for analysis using a value equal to $F_{PGA} \times$ PGA, as allowed in the 2016 edition of the California Building Code. For our liquefaction analysis we used a PGA_M of 0.500g.

4.3 LIQUEFACTION POTENTIAL

The site is within a State-designated Liquefaction Hazard Zone (CGS, San Jose West 7.5-Minute Quadrangle, 2002) as well as a Santa Clara County Liquefaction Hazard Zone (Santa Clara County, 2002). Our field and laboratory programs addressed this issue by testing and sampling potentially liquefiable layers to depths of at least 50 feet, performing visual classification on sampled materials, evaluating CPT data, and performing various tests to further classify soil properties.

4.3.1 Background

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 4 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

4.3.2 Analysis

As discussed in the "Subsurface" section above, some sand layers were encountered below the design ground water depth of 20 feet. Following the liquefaction analysis framework in the 2008 monograph, *Soil Liquefaction During Earthquakes* (Idriss and Boulanger, 2008), incorporating updates in *CPT and SPT Based Liquefaction Triggering Procedures* (Boulanger and Idriss, 2014), and in accordance with CDMG Special Publication 117A guidelines (CDMG, 2008) for quantitative analysis, these layers were analyzed for liquefaction triggering and potential post-liquefaction settlement. These methods compare the ratio of the estimated cyclic shaking (Cyclic Stress Ratio - CSR) to the soil's estimated resistance to cyclic shaking (Cyclic Resistance Ratio - CRR), providing a factor of safety against liquefaction triggering. Factors of safety less than or equal to 1.3 are considered to be potentially liquefiable and capable of post-liquefaction re-consolidation (i.e. settlement).

The CSR for each layer quantifies the stresses anticipated to be generated due to a design-level seismic event, is based on the peak horizontal acceleration generated at the ground surface discussed in the "Estimated Ground Shaking" section above, and is corrected for overburden and stress reduction factors as discussed in the procedure developed by Seed and Idriss (1971) and updated in the 2008 Idriss and Boulanger monograph.

The soil's CRR is estimated from the in-situ measurements from CPTs and laboratory testing on samples retrieved from our borings. SPT "N" values obtained from hollow-stem auger borings were not used in our analyses, as the "N" values obtained are less reliable in sands below ground water. The tip pressures are corrected for effective overburden stresses, taking into consideration both the ground water level at the time of exploration and the design ground water level, and stress reduction versus depth factors. The CPT method utilizes the soil behavior type index (I_C) to estimate the plasticity of the layers. Selected soil samples collected from our borings adjacent to our CPTs were tested to evaluate grain size, as well as visually observed for confirmation of CPT soil behavior types.

In estimating post-liquefaction settlement at the site, we have implemented a depth weighting factor proposed by Cetin (2009). Following evaluation of 49 high-quality, cyclically induced, ground settlement case histories from seven different earthquakes, Cetin proposed the use of a weighting factor based on the depth of layers. The weighting procedure was used to tune the

surface observations at liquefaction sites to produce a better model fit with measured data. Aside from the better model fit it produced, the rationale behind the use of a depth weighting factor is based on the following: 1) upward seepage, triggering void ratio redistribution, and resulting in unfavorably higher void ratios for the shallower sublayers of soil layers; 2) reduced induced shear stresses and number of shear stress cycles transmitted to deeper soil layers due to initial liquefaction of surficial layers; and 3) possible arching effects due to nonliquefied soil layers. All these may significantly reduce the contribution of volumetric settlement of deeper soil layers to the overall ground surface settlement (Cetin, 2009).

The results of our CPT analyses (CPT-1 to CPT-6) are presented on Figures 4A to 4F of this report. Calculations for these CPTs are attached as Appendix C.

4.3.3 Summary

Our analyses indicate that several layers could potentially experience liquefaction triggering that could result in post-liquefaction total settlement at the ground surface up to ¼ inch based on the Yoshimine (2006) method. As discussed in Special Publication 117A, differential movement for level ground sites over deep soil sites will be up to about two-thirds of the total settlement between independent foundation elements. In our opinion, differential settlements are anticipated to be on the order of ¼-inch between independent foundation elements.

4.3.4 Ground Rupture Potential

The methods used to estimate liquefaction settlements assume that there is a sufficient cap of non-liquefiable material to prevent ground rupture or sand boils. For ground rupture to occur, the pore water pressure within the liquefiable soil layer will need to be great enough to break through the overlying non-liquefiable layer, which could cause significant ground deformation and settlement. The work of Youd and Garris (1995) indicates that the 20 feet thick non-liquefiable cap is sufficient to prevent ground rupture; therefore the above total settlement estimates are reasonable.

4.4 LATERAL SPREADING

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

Los Gatos Creek is located to the south and southeast of the site and is about 200 feet away from the site at its closest point. Based on site observations and elevations provided by Google Earth®, the depth of creek below site grades is estimated to be up to about 18 to 20 feet. In general, lateral spreading is considered when an open face (Height = D) is within about 40D of a site. Since the project site is within this criteria, we analyzed the site for lateral spreading using analytical methods outlined in the 2008 monograph, *Soil Liquefaction During Earthquakes* (Idriss and Boulanger, 2008) and *CPT and SPT Based Liquefaction Triggering Procedures*

(Boulanger and Idriss, 2014) by calculating Lateral Displacement Index (LDI) values at each CPT location. The LDI is calculated by integrating maximum shear strains versus depth, representing a measure of the potential maximum displacement (Zhang et al., 2004).

Our analyses indicates potential for lateral displacement at the site with LDI values ranging from 0.03 to 0.17, and potential lateral displacements ranging from 0.0 to 0.3 feet. The above lateral displacement estimates are assuming soil conditions remain similar from the exploration location to the free face. While some deformation is estimated, due to the heterogeneity of the on-site soils, various existing improvements located between the site and Los Gatos Creek, and the estimated lateral displacements to be less than 0.5 feet, it is our opinion that the potential for lateral spreading to affect the site is low.

4.5 SEISMIC SETTLEMENT/UNSATURATED SAND SHAKING

Loose to medium dense unsaturated sandy soils can settle during strong seismic shaking. We evaluated the potential for seismic compaction of the unsaturated soils above the design groundwater level based on the work by Robertson and Shao (2010). Based on our analysis, the potential for significant differential seismic settlement to affect the proposed improvements is low.

4.6 LANDSLIDING

The site is not located within a California Seismic Hazard Zone for landsliding (CGS, 2002) or a Santa Clara County Landslide Hazard Zone (Santa Clara County, 2002). However, as mentioned, there is a descending slope along the northern side of the site ranging in height from zero at the intersection of McEvoy Street and Park Avenue (northwest corner of the site) up to about 20 to 22 feet in height at the northeast corner of the site. Therefore, we screened this slope for slope stability.

4.6.1 Slope Stability

To screen the slope adjacent to the north side of the proposed development, we performed a stability analysis of a cross section of the slope at its highest point at the northeast corner of the site. The cross section was prepared based on the existing topography and typical properties for the underlying soil based on our review of our field exploration data, EB-4 and CPT-4, adjacent to the slope and laboratory data.

4.6.1.1 Method of Analysis

The stability of a slope is influenced by many factors including but not limited to the geologic structure and composition, inclination, and height of a slope, ground water, climatic factors such as rainfall, and irrigation. In geotechnical engineering, “stability” is expressed as a ratio of resisting moments and forces divided by driving moments and forces termed the factor of safety (FS). Factors of safety can be calculated for static and seismic conditions. In performing the slope stability analysis, we followed the guidelines set forth by CGS in special publications 117A (2008).

Because the site is underlain by alluvial soils, we judged using slope stability analysis based on limit equilibrium methods and rotational failure modes appropriate based on the site conditions encountered.

The stability of a cross sections taken through the primary site location of interest at the northeast corner of the site was evaluated using the computer program SLIDE, and circular modes of failure. Input parameters for the analyses include slope geometry, soil layers or zones, total and saturated unit weights and strength parameters, and ground water conditions.

In evaluating the stability of slopes under seismic conditions, SLIDE uses a "pseudo-static" method of analysis. The pseudo-static method models the effects of transient or pulsating earthquake loading on a potential slide mass by using an “equivalent” static horizontal acceleration acting on the mass of the potential landslide in a limit-equilibrium analysis. The ground motion parameter used in a pseudo-static analysis is referred to as the seismic coefficient “k”. CGS (2008) has published recommendations for the selection of the “k” value in a publication titled, “Guidelines for Evaluation and Mitigation of Seismic Hazards in California, SP 117A.” The site is located in the Bay Area, and strong ground shaking can be expected during a seismic event near the site. In accordance with the CGS Guidelines, we have performed our pseudo-static analysis using simplified design procedures in accordance with Stewart and others (2003) to develop a “screen analysis procedure,” based on a pseudo-static approach that accounts for the anticipated seismicity at the site and allows for different levels of acceptable displacements. For the controlling earthquake magnitude, and limiting displacements to a 15 cm threshold, we obtained a “k” value of 0.25 for our analysis.

Based on current procedures recommended in SP 117A, the minimum allowable factor of safety with respect to slope stability is 1.5 for static conditions. Slopes that have a factor of safety greater than 1.0 for seismic conditions using a pseudo-static seismic coefficient derived from the screening analysis procedure of Stewart and others (2003) can be considered stable.

4.6.1.2 Selection of Soil Properties

To model the clay layers encountered, we assigned strength values based on pocket penetrometer testing on samples from our borings, laboratory testing, CPT correlation data, and published data for the alluvial soil types at the site. To model the sand and silty layers encountered, we assigned strength values based on SPT “N” values from our borings and laboratory testing. A summary of the soil parameters used in our analyses are presented in the table below.

Table 2: Summary of Soil Strength Properties

Material Description	Total Unit Weight (pcf)	Saturated Unit Weight (pcf)	Cohesion (psf) (short term)	Friction Angle (degrees) (short term)	Cohesion (psf) (long term)	Friction Angle (degrees) (long term)
Upper Clays (above 8 ft)	116	120	2500	0	550	24
Sands	120	130	0	36 to 40	0	36 to 40
Silt	116	120	0	30	0	30
Lower Clays (below 22.5 ft)	120	123	1400	0	550	24

4.6.1.3 Selection of Ground Water Depth for Slope Stability Screening Analysis

As discussed, groundwater was encountered in our borings at the time of drilling at depths ranging from 20 to 29½ feet and we anticipate a high groundwater depth of 20 feet. For this reason, we modeled the slope under static conditions with a piezometric surface at a depth of 20 feet below the site grades.

4.6.1.4 Selection of Surficial Loads

We modeled anticipated surficial loading from the proposed building as a spread footing with an allowable bearing pressure of 4,500 psf. The footing bearing pressure and size was selected based on the footing bearing capacities as discussed in the "Foundations" section of this report and estimated loading for the structure's columns.

4.6.1.5 Results of Slope Stability Screening

Static Conditions

Based on current procedures recommended in CGS Special Publication 117A, the minimum allowable factor of safety with respect to slope stability is 1.5 for static conditions. Provided the face of building foundations are setback from the top of slope a minimum of 14 feet at the northeast corner of the site, our analyses indicate that the factor of safety with respect to slope movement for the northern slope at the northeast corner of the site is greater than a factor of safety of 1.5, implying global stability. Copies of the stability output for the section analyzed at the northeast corner of the site, also illustrating the assumed soil parameters and slope geometry, are attached in Appendix E. Our analysis was a review of global stability, and did not include local stability analysis of the existing slope.

Seismic Conditions

For the seismic case, we performed a pseudo-static analysis using methods described in CSG publication SP 117A. Our analyses indicate that the factor of safety with respect to slope movement under seismic conditions for the site development appear stable, with a factor of safety of greater than 1.0 with a foundation setback as discussed in the "Static Conditions"

section above. Copies of the stability output for the seismic case analyzed, also illustrating the assumed soil parameters and slope geometry, is attached in Appendix E.

4.6.1.6 Slope Stability Conclusions

Based on the assumed properties, geometry, and our analysis, it appears that slope stability at the site is adequate under post-construction static and seismic conditions provided the building and foundations are setback a minimum of 14 feet from the top of slope at the northeast corner of the site. Site Plan, Figure 2, depicts the minimum setback line for the face of footings from the top of slope along the entire northern side of the site. Care should be taken during construction to maintain stability. Any planned improvements or grading as part of any future development should be reviewed for potential impacts to slope stability once the final grading and building layout is determined. If the minimum setback for the building can not be achieved, additional mitigation will be required to stabilize the slope.

4.7 TSUNAMI/SEICHE

The terms tsunami or seiche are described as ocean waves or similar waves usually created by undersea fault movement or by a coastal or submerged landslide. Tsunamis may be generated at great distance from shore (far field events) or nearby (near field events). Waves are formed, as the displaced water moves to regain equilibrium, and radiates across the open water, similar to ripples from a rock being thrown into a pond. When the waveform reaches the coastline, it quickly raises the water level, with water velocities as high as 15 to 20 knots. The water mass, as well as vessels, vehicles, or other objects in its path create tremendous forces as they impact coastal structures.

Tsunamis have affected the coastline along the Pacific Northwest during historic times. The Fort Point tide gauge in San Francisco recorded approximately 21 tsunamis between 1854 and 1964. The 1964 Alaska earthquake generated a recorded wave height of 7.4 feet and drowned eleven people in Crescent City, California. For the case of a far-field event, the Bay area would have hours of warning; for a near field event, there may be only a few minutes of warning, if any.

A tsunami or seiche originating in the Pacific Ocean would lose much of its energy passing through San Francisco Bay. Based on the study of tsunami inundation potential for the San Francisco Bay Area (Ritter and Dupre, 1972), areas most likely to be inundated are marshlands, tidal flats, and former bay margin lands that are now artificially filled, but are still at or below sea level, and are generally within 1½ miles of the shoreline. The site is approximately 10 miles inland from the San Francisco Bay shoreline, and is approximately 93 to 103 feet above mean sea level. Therefore, the potential for inundation due to tsunami or seiche is considered low.

4.8 FLOODING

Based on our internet search of the Federal Emergency Management Agency (FEMA) flood map public database, the site is located within Zone D, an area of undetermined, but possible

flood hazard. We recommend the project civil engineer be retained to confirm this information and verify the base flood elevation, if appropriate.

SECTION 5: CONCLUSIONS

5.1 SUMMARY

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. Descriptions of each concern with brief outlines of our recommendations follow the listed concerns.

- Undocumented fills
- Re-development considerations
- Expansive soils
- Building setback from northern slope

5.1.1 Undocumented Fills

As discussed above, undocumented fill to a depth of 3½ feet below the surface was encountered in some of our borings. Additionally, based on past site history and review of a Phase I environmental site assessment (Cornerstone, 2018) we anticipate surficial fills from past site development and removed USTs to be present throughout the site. Undocumented fills are expected to vary in thickness, density, and consistency across the site. We recommend any fill be completely removed from within the building areas and replaced as engineered fill. Additional recommendations addressing this concern are presented in Section 6.3 below.

5.1.2 Re-Development Considerations

As discussed, the site is currently developed. The existing improvements will be demolished and the site redeveloped for the residential development. Potential issues that are often associated with redeveloping sites include demolition of existing improvements, abandonment of existing utilities, and undocumented fills. Please refer to the “Earthwork” section below for further recommendations.

5.1.3 Expansive Soils

Highly expansive surficial soils generally blanket the site. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. To reduce the potential for damage to the planned structures, slabs-on-grade should have sufficient reinforcement and be supported on a layer of select fill material; footings should extend below the zone of seasonal moisture fluctuation. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering. Detailed grading and foundation recommendations addressing this concern are presented in the following sections.

5.1.4 Building Setback from Northern Slope

The proposed building development is in early planning stages. As discussed, there is a descending slope along the north side of the site ranging up to about 20 to 22 feet in height at the northeast corner of the site. As previously discussed in the slope stability section above, the face of footings for the building should be setback from the northern slope at the northeast corner of the site a minimum of 14 feet. Figure 2 depicts the minimum building setback distance along the north side of the site. This setback distance should be verified by us once final grading and building plans are available.

5.2 PLANS AND SPECIFICATIONS REVIEW

We recommend that we be retained to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction.

5.3 CONSTRUCTION OBSERVATION AND TESTING

As site conditions may vary significantly between the small-diameter borings performed during this investigation, we also recommend that a Cornerstone representative be present to provide geotechnical observation and testing during earthwork and foundation construction. This will allow us to form an opinion and prepare a letter at the end of construction regarding contractor compliance with project plans and specifications, and with the recommendations in our report. We will also be allowed to evaluate any conditions differing from those encountered during our investigation, and provide supplemental recommendations as necessary. For these reasons, the recommendations in this report are contingent of Cornerstone providing observation and testing during construction. Contractors should provide at least a 48-hour notice when scheduling our field personnel.

SECTION 6: EARTHWORK

6.1 SITE DEMOLITION

All existing improvements not to be reused for the current development, including all foundations, flatwork, pavements, utilities, and other improvements should be demolished and removed from the site. Recommendations in this section apply to the removal of these improvements, which are and may be currently present on the site, prior to the start of mass grading or the construction of new improvements for the project.

Cornerstone should be notified prior to the start of demolition, and should be present on at least a part-time basis during all backfill and mass grading as a result of demolition. Occasionally, other types of buried structures (wells, cisterns, debris pits, etc.) can be found on sites with prior development. If encountered, Cornerstone should be contacted to address these types of structures on a case-by-case basis.

6.1.1 Demolition of Existing Slabs, Foundations and Pavements

All slabs, foundations, and pavements should be completely removed from within planned building areas.

As an owner value-engineered option, existing slabs, foundations, and pavements that extend into planned flatwork, pavement, or landscape areas may be left in place provided there is at least 3 feet of engineered fill overlying the remaining materials, they are shown not to conflict with new utilities, and that asphalt and concrete more than 10 feet square is broken up to allow subsurface drainage. Future distress and/or higher maintenance may result from leaving these prior improvements in place. A discussion of recycling existing improvements is provided later in this report.

Special care should be taken during the demolition and removal of existing floor slabs, foundations, utilities and pavements to minimize disturbance of the subgrade. Excessive disturbance of the subgrade, which includes either native or previously placed engineered fill, resulting from demolition activities can have serious detrimental effects on planned foundation and paving elements.

Existing foundations are typically mat-slabs, shallow footings, or piers/piles. If slab or shallow footings are encountered, they should be completely removed. If drilled piers are encountered, they should be cut off at an elevation at least 60-inches below proposed footings or the final subgrade elevation, whichever is deeper. The remainder of the drilled pier could remain in place. Foundation elements to remain in place should be surveyed and superimposed on the proposed development plans to determine the potential for conflicts or detrimental impacts to the planned construction. Following review, additional mitigation or planned foundation elements may need to be modified.

6.1.2 Abandonment of Existing Utilities

All utilities should be completely removed from within planned building areas. For any utility line to be considered acceptable to remain within building areas, the utility line must be completely backfilled with grout or sand-cement slurry (sand slurry is not acceptable), the ends outside the building area capped with concrete, and the trench fills either removed and replaced as engineered fill with the trench side slopes flattened to at least 1:1, or the trench fills are determined not to be a risk to the structure. The assessment of the level of risk posed by the particular utility line will determine whether the utility may be abandoned in place or needs to be completely removed. The contractor should assume that all utilities will be removed from within building areas unless provided written confirmation from both the owner and the geotechnical engineer.

Utilities extending beyond the building area may be abandoned in place provided the ends are plugged with concrete, they do not conflict with planned improvements, and that the trench fills do not pose significant risk to the planned surface improvements.

The risk for owners associated with abandoning utilities in place include the potential for future differential settlement of existing trench fills, and/or partial collapse and potential ground loss into utility lines that are not completely filled with grout.

6.2 SITE CLEARING AND PREPARATION

6.2.1 Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements to be removed within the proposed development area. Demolition of existing improvements is discussed in the prior paragraphs. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight.

6.2.2 Tree and Shrub Removal

Trees and shrubs designated for removal should have the root balls and any roots greater than ½-inch diameter removed completely. Mature trees are estimated to have root balls extending to depths of 2 to 4 feet, depending on the tree size. Significant root zones are anticipated to extend to the diameter of the tree canopy. Grade depressions resulting from root ball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the "Compaction" section of this report.

6.3 REMOVAL OF EXISTING FILLS

As previously discussed, undocumented fills were encountered in our borings up to 3½ feet below the surface. Additionally, based on our review of past site history, we anticipate surficial fills from the past site development and previously removed USTs. We have not been provided compaction documentation of any previously backfilled excavations.

All fills should be completely removed from within building areas and to a lateral distance of at least 5 feet beyond the building footprint or to a lateral distance equal to fill depth below the perimeter footing, whichever is greater. Provided the fills meet the "Material for Fill" requirements below, the fills may be reused when backfilling excavations that are not within the future building foundation locations. However, as to be discussed in the "Foundations" section, we have allowed higher allowable bearing capacities for the building foundations. As such, excavations beneath and within the influence zone of the future building foundations should be backfilled with select fill material (Class 2 aggregate base, quarry fines, etc.) compacted to a minimum 95 percent relative compaction.

Based on review of the fill samples collected from our borings, it appears that the undocumented fills may be reused within locations outside future building foundation locations as discussed above. However, if materials are encountered that do not meet the requirements, such as debris, wood, trash, those materials should be screened out of the remaining material and be removed from the site. Backfill of excavations should be placed in lifts and compacted in accordance with the "Compaction" section below.

Fills extending into planned pavement and flatwork areas may be left in place provided they are determined to be a low risk for future differential settlement and that the upper 12 to 18 inches of fill below pavement subgrade is re-worked and compacted as discussed in the “Compaction” section below.

6.4 TEMPORARY CUT AND FILL SLOPES

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 10 feet at the site may be classified as OSHA Soil Type C materials. A Cornerstone representative should be retained to confirm the preliminary site classification.

Excavations performed during site demolition and fill removal should be sloped at 3:1 (horizontal:vertical) within the upper 5 feet below building subgrade. Excavations extending more than 5 feet below building subgrade and excavations in pavement and flatwork areas should be sloped at a 1:1 inclination unless the OSHA soil classification indicates that slope should not exceed 1.5:1.

6.5 SUBGRADE PREPARATION

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of 6 inches, moisture conditioned, and compacted in accordance with the “Compaction” section below.

6.6 SUBGRADE STABILIZATION MEASURES

Soil subgrade and fill materials, especially soils with high fines contents such as clays and silty soils, can become unstable due to high moisture content, whether from high in-situ moisture contents or from winter rains. As the moisture content increases over the laboratory optimum, it becomes more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction.

As discussed in the “Subsurface” section in this report, the in-situ moisture contents range from about 7 percent below optimum to about 8 percent over the estimated laboratory optimum in the upper 10 of the soil profile. The contractor should anticipate drying some of the soils and moisture conditioning others prior to reusing them as fill. In addition, repetitive rubber-tire loading may de-stabilize the soils.

There are several methods to address potential unstable soil conditions and facilitate fill placement and trench backfill. Some of the methods are briefly discussed below. Implementation of the appropriate stabilization measures should be evaluated on a case-by-case basis according to the project construction goals and the particular site conditions.

6.6.1 Scarification and Drying

The subgrade may be scarified to a depth of 12 inches and allowed to dry to near optimum conditions, if sufficient dry weather is anticipated to allow sufficient drying. More than one round of scarification may be needed to break up the soil clods.

6.6.2 Removal and Replacement

As an alternative to scarification, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials. A Cornerstone representative should be present to provide recommendations regarding the appropriate depth of over-excavation, whether a geosynthethic (stabilization fabric or geogrid) is recommended, and what materials are recommended for backfill.

6.6.3 Chemical Treatment

Where the unstable area exceeds about 5,000 to 10,000 square feet and/or site winterization is desired, chemical treatment with quicklime (CaO), kiln-dust, or cement may be more cost-effective than removal and replacement. Recommended chemical treatment depths will typically range from 12 to 18 inches depending on the magnitude of the instability.

6.7 MATERIAL FOR FILL

6.7.1 Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversized material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

6.7.2 Re-Use of On-Site Site Improvements

We anticipate that asphalt concrete (AC) grindings, aggregate base (AB) and Portland Cement Concrete (PCC) will be generated during site demolition. If the AC grindings are mixed with the underlying AB to meet Class 2 AB specifications, they may be reused within the new pavement and flatwork structural sections. AC/AB grindings may not be reused beneath the habitable areas. Laboratory testing will be required to confirm the grindings meet project specifications.

6.7.3 Potential Import Sources

Imported and non-expansive material should be inorganic with a Plasticity Index (PI) of 15 or less, and not contain recycled asphalt concrete where it will be used within the habitable building areas. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be

delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 6 months from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant's review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

6.7.4 Non-Expansive Fill Using Lime Treatment

As discussed above, non-expansive fill should have a Plasticity Index (PI) of 15 or less. Due to the high clay content and PI of the on-site soil materials, it is not likely that sufficient quantities of non-expansive fill would be generated from cut materials. As an alternative to importing non-expansive fill, chemical treatment can be considered to create non-expansive fill. If this option is considered, additional laboratory tests should be performed during initial site grading to further evaluate the optimum percentage of quicklime required.

6.8 COMPACTION REQUIREMENTS

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches and consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the "Subgrade Stabilization Measures" section of this report. Where the soil's PI is 20 or greater, the expansive soil criteria should be used.

Table 3: Compaction Requirements

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill (within upper 5 feet)	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
General Fill (below a depth of 5 feet)	On-Site Expansive Soils	95	>3
	Low Expansion Soils	95	>1
Trench Backfill	On-Site Expansive Soils	87 – 92	>3
Trench Backfill	Low Expansion Soils	90	>1
Trench Backfill (upper 6 inches of subgrade)	On-Site Low Expansion Soils	95	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Expansive Soils	87 - 92	>3
Flatwork Subgrade	Low Expansion Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base[3]	90	Optimum
Pavement Subgrade	On-Site Expansive Soils	87 - 92	>3
Pavement Subgrade	Low Expansion Soils	95	>1
Pavement Aggregate Base	Class 2 Aggregate Base[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)

6.8.1 Construction Moisture Conditioning

Expansive soils can undergo significant volume change when dried then wetted. The contractor should keep all exposed expansive soil subgrade (and also trench excavation side walls) moist until protected by overlying improvements (or trenches are backfilled). If expansive soils are allowed to dry out significantly, re-moisture conditioning may require several days of re-wetting (flooding is not recommended), or deep scarification, moisture conditioning, and re-compaction.

6.9 TRENCH BACKFILL

Utility lines constructed within public right-of-way should be trenched, bedded and shaded, and backfilled in accordance with the local or governing jurisdictional requirements. Utility lines in private improvement areas should be constructed in accordance with the following requirements unless superseded by other governing requirements.

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with crushed rock (⅜-inch-diameter or greater) or well-graded sand and gravel materials conforming to the pipe manufacturer's requirements. Open-graded shading materials should be consolidated in place with vibratory equipment and well-graded materials should be compacted to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the "Material for Fill" section, and are moisture conditioned and compacted in accordance with the requirements in the "Compaction" section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

On expansive soils sites it is desirable to reduce the potential for water migration into building and pavement areas through the granular shading materials. We recommend that a plug of low-permeability clay soil, sand-cement slurry, or lean concrete be placed within trenches just outside where the trenches pass into building and pavement areas.

6.10 SITE DRAINAGE

Ponding should not be allowed adjacent to building foundations, slabs-on-grade, or pavements. Hardscape surfaces should slope at least 2 percent towards suitable discharge facilities; landscape areas should slope at least 3 percent towards suitable discharge facilities. Roof runoff should be directed away from building areas in closed conduits, to approved infiltration facilities, or on to hardscaped surfaces that drain to suitable facilities. Retention, detention or infiltration facilities should be spaced at least 10 feet from buildings, and preferably at least 5 feet from slabs-on-grade or pavements. However, if retention, detention or infiltration facilities are located within these zones, we recommend that these treatment facilities meet the requirements in the Storm Water Treatment Design Considerations section of this report.

6.11 LOW-IMPACT DEVELOPMENT (LID) IMPROVEMENTS

The Municipal Regional Permit (MRP) requires regulated projects to treat 100 percent of the amount of runoff identified in Provision C.3.d from a regulated project's drainage area with low impact development (LID) treatment measures onsite or at a joint stormwater treatment facility. LID treatment measures are defined as rainwater harvesting and use, infiltration, evapotranspiration, or biotreatment. A biotreatment system may only be used if it is infeasible to implement harvesting and use, infiltration, or evapotranspiration at a project site.

Technical infeasibility of infiltration may result from site conditions that restrict the operability of infiltration measures and devices. Various factors affecting the feasibility of infiltration treatment may create an environmental risk, structural stability risk, or physically restrict infiltration. The presence of any of these limiting factors may render infiltration technically infeasible for a proposed project. To aid in determining if infiltration may be feasible at the site, we provide the following site information regarding factors that may aid in determining the feasibility of infiltration facilities at the site.

- The near-surface soils at the site are clayey, and categorized as Hydrologic Soil Group D, and is expected to have infiltration rates of less than 0.2 inches per hour. In our opinion, these clayey soils will significantly limit the infiltration of stormwater.

- Locally, seasonal high groundwater is mapped at a depth of 22 feet and was encountered at the time of drilling at 20 feet. Therefore, groundwater is expected to be at least 10 feet below the base of the infiltration measure.

- In our opinion, infiltration locations within 10 feet of the building would create a geotechnical hazard.

- In our opinion, infiltration locations along the northern side of the site adjacent to the existing slope would create a geotechnical hazard.

- Infiltration measures, devices, or facilities may conflict with the location of existing or proposed underground utilities or easements. Infiltration measures, devices, or facilities should not be placed on top of or very near to underground utilities such that they discharge to the utility trench, restrict access, or cause stability concerns.

6.11.1 Storm Water Treatment Design Considerations

If storm water treatment improvements, such as shallow bio-retention swales, basins or pervious pavements, are required as part of the site improvements to satisfy Storm Water Quality (C.3) requirements, we recommend the following items be considered for design and construction.

6.11.1.1 GENERAL BIOSWALE DESIGN GUIDELINES

- If possible, avoid placing bioswales or basins within 10 feet of the building perimeter or within 5 feet of exterior flatwork or pavements. If bioswales must be constructed within these setbacks, the side(s) and bottom of the trench excavation should be lined with 10-mil visqueen to reduce water infiltration into the surrounding expansive clay.

- Bioswales constructed within 3 feet of proposed buildings may be within the foundation zone of influence for perimeter wall loads. Therefore, where bioswales will parallel foundations and will extend below the “foundation plane of influence,” an imaginary 1:1 plane projected down from the bottom edge of the foundation, the foundation will need to

be deepened so that the bottom edge of the bioswale filter material is above the foundation plane of influence.

- The bottom of bioswale or detention areas should include a perforated drain placed at a low point, such as a shallow trench or sloped bottom, to reduce water infiltration into the surrounding soils near structural improvements, and to address the low infiltration capacity of the on-site clay soils.

- Bioswales should not be constructed along the northern side of the site as additional water infiltrating the soils adjacent to the existing slope could decrease the stability of the slope.

6.11.1.2 BIOSWALE INFILTRATION MATERIAL

- Gradation specifications for bioswale filter material, if required, should be specified on the grading and improvement plans.

- Compaction requirements for bioswale filter material in non-landscaped areas or in pervious pavement areas, if any, should be indicated on the plans and specifications to satisfy the anticipated use of the infiltration area.

- If required, infiltration (percolation) testing should be performed on representative samples of potential bioswale materials prior to construction to check for general conformance with the specified infiltration rates.

- It should be noted that multiple laboratory tests may be required to evaluate the properties of the bioswale materials, including percolation, landscape suitability and possibly environmental analytical testing depending on the source of the material. We recommend that the landscape architect provide input on the required landscape suitability tests if bioswales are to be planted.

- If bioswales are to be vegetated, the landscape architect should select planting materials that do not reduce or inhibit the water infiltration rate, such as covering the bioswale with grass sod containing a clayey soil base.

- If required by governing agencies, field infiltration testing should be specified on the grading and improvement plans. The appropriate infiltration test method, duration and frequency of testing should be specified in accordance with local requirements.

- Due to the relatively loose consistency and/or high organic content of many bioswale filter materials, long-term settlement of the bioswale medium should be anticipated. To reduce initial volume loss, bioswale filter material should be wetted in 12 inch lifts during placement to pre-consolidate the material. Mechanical compaction should not be allowed, unless specified on the grading and improvement plans, since this could significantly decrease the infiltration rate of the bioswale materials.

- It should be noted that the volume of bioswale filter material may decrease over time depending on the organic content of the material. Additional filter material may need to be added to bioswales after the initial exposure to winter rains and periodically over the life of the bioswale areas, as needed.

6.11.1.3 BIOSWALE CONSTRUCTION ADJACENT TO PAVEMENTS

If bio-infiltration swales or basins are considered adjacent to proposed parking lots or exterior flatwork, we recommend that mitigative measures be considered in the design and construction of these facilities to reduce potential impacts to flatwork or pavements. Exterior flatwork, concrete curbs, and pavements located directly adjacent to bio-swales may be susceptible to settlement or lateral movement, depending on the configuration of the bioswale and the setback between the improvements and edge of the swale. To reduce the potential for distress to these improvements due to vertical or lateral movement, the following options should be considered by the project civil engineer:

- Improvements should be setback from the vertical edge of a bioswale such that there is at least 1 foot of horizontal distance between the edge of improvements and the top edge of the bioswale excavation for every 1 foot of vertical bioswale depth, or

- Concrete curbs for pavements, or lateral restraint for exterior flatwork, located directly adjacent to a vertical bioswale cut should be designed to resist lateral earth pressures in accordance with the recommendations in the “Retaining Walls” section of this report, or concrete curbs or edge restraint should be adequately keyed into the native soil or engineered to reduce the potential for rotation or lateral movement of the curbs.

6.12 LANDSCAPE CONSIDERATIONS

Since the near-surface soils are highly expansive, we recommend greatly reducing the amount of surface water infiltrating these soils near foundations and exterior slabs-on-grade. This can typically be achieved by:

- Using drip irrigation

- Avoiding open planting within 3 feet of the building perimeter or near the top of existing slopes

- Regulating the amount of water distributed to lawns or planter areas by using irrigation timers

- Selecting landscaping that requires little or no watering, especially near foundations.

We recommend that the landscape architect consider these items when developing landscaping plans.

6.13 BUILDING SETBACK FROM SLOPE ALONG NORTH SIDE OF SITE

The 2016 California Building Code (CBC) discusses foundation setback from ascending and descending slopes in Sections 1808.7.1 and 1808.7.2 and Figure 1808.7.1. As discussed, the slope along the north side of the site ranges from no slope at the intersection of McEvoy Street and Park Avenue at the northeast corner up to about 20 to 22 feet at the northeast corner of the site where the railroad tracks cross over Park Avenue. Based on these slope heights, the minimum setback from face of footing to face of slope would range from no setback at the northwest corner to up to about 7½ feet at the northeast corner of the site according to CBC requirements. As previously discussed, based on our screening level slope stability analysis, footings should be setback from the top of slope at the northeast corner of the site a minimum of 14 feet, which would also meet the CBC requirements. As previously mentioned, Figure 2 shows the minimum setback line from the top of slope along the north side of the site. We should be consulted to verify the above setback distance once final grading and building plans are available.

SECTION 7: FOUNDATIONS

7.1 SUMMARY OF RECOMMENDATIONS

In our opinion, the proposed structure may be supported on shallow foundations provided the recommendations in the "Earthwork" section and the sections below are followed.

7.2 SEISMIC DESIGN CRITERIA

The 2016 California Building Code (CBC) provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system. Shear wave velocity measurements performed for our investigation at CPT-1 to a depth of approximately 95 feet resulted in an average shear wave velocity of 811 feet per second (or 247 meters per second). Based on our review of the local geology, we anticipate the average shear wave velocity to remain consistent down to 100 feet with the value mentioned above. Therefore, we have classified the site as Soil Classification D. The mapped spectral acceleration parameters S_S and S_1 were calculated using the USGS computer program *U.S. Seismic Design Maps*, located at http://earthquake.usgs.gov/designmaps/us/application.php, based on the site coordinates presented below and the site classification. The table below lists the various factors used to determine the seismic coefficients and other parameters.

Table 4: CBC Site Categorization and Site Coefficients

Classification/Coefficient	Design Value
Site Class	D
Site Latitude	37.32531°
Site Longitude	-121.90368°
0.2-second Period Mapped Spectral Acceleration[1], S_S	1.500 g
1-second Period Mapped Spectral Acceleration[1], S_1	0.600 g
Short-Period Site Coefficient – Fa	1.0
Long-Period Site Coefficient – Fv	1.5
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	1.500 g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	0.900 g
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	1.000 g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	0.600 g
Mapped MCE Geometric Mean Peak Ground Acceleration – PGA_M	0.500g
Site Coefficient Based on PGA and Site Class - F_{PGA}	1.0

[1]For Site Class B, 5 percent damped.

7.3 SHALLOW FOUNDATIONS

7.3.1 Spread Footings

Provided the structure can tolerate the estimated static and seismic total and differential settlements, conventional spread footings can be considered for building support. Spread footings should bear entirely on natural, undisturbed soil or select engineered fill, be at least 18 inches wide, and extend at least 24 inches below the lowest adjacent grade. Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil.

Footings constructed to the above dimensions and in accordance with the “Earthwork” recommendations of this report are capable of supporting maximum allowable bearing pressures of 3,000 psf for dead loads, 4,500 psf for combined dead plus live loads, and 6,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

7.3.2 Footing Settlement

Structural loads were not provided to us at the time this report was prepared; therefore, we estimated the typical loading (dead + live) in the following table.

Table 5: Estimated Structural Loading for One-Story Retail Buildings

Foundation Area	Estimated Loads
Interior Isolated Column Footing	700 to 800 kips
Exterior Isolated Column Footing	350 to 400 kips

Based on the above loading and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be on the order of 1 inch, with up to about ½ inch of post-construction differential settlement between independent foundation elements. In addition, we estimate that differential seismic movement will be on the order of ¼ inch between independent foundation elements, resulting in a total estimated differential footing movement of ¾ inch between independent foundation elements, assumed to be on the order of 30 feet. As our footing loads were assumed, we recommend we be retained to review the final footing layout and loading, and verify the settlement estimates above.

7.3.3 Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.45 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining passive pressure capacity.

7.3.4 Spread Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a

significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations.

Additionally, we anticipate foundation depths will generally be less than about 5 feet in depth. Based on our borings, clayey soils were generally encountered in the upper 5 feet. However, if some footings extend to depths greater than about 5 feet, sandier soils with low cohesion and fines may be encountered, which may not stand vertical and may have a potential for sloughing. Excavation sidewalls may need to be sloped to a minimum 1:1 inclination where footings are located in sands or Stay-Form or similar may need to be placed within footing excavations. In addition, depending on how the excavations are cut, if the footing subgrade is in sandy soils and loosened, the sandy soils in the footing bottoms will need to be recompacted in place.

SECTION 8: CONCRETE SLABS AND PEDESTRIAN PAVEMENTS

8.1 INTERIOR SLABS-ON-GRADE – NON-GARAGE

As the Plasticity Index (PI) of the surficial soils ranges up to 33, the proposed slabs-on-grade in non-garage areas should be supported on at least 18 inches of non-expansive fill (NEF) to reduce the potential for slab damage due to soil heave. The NEF layer should be constructed over subgrade prepared in accordance with the recommendations in the "Earthwork" section of this report. If moisture-sensitive floor coverings are planned, the recommendations in the "Interior Slabs Moisture Protection Considerations" section below may be incorporated in the project design if desired. If significant time elapses between initial subgrade preparation and NEF construction, the subgrade should be proof-rolled to confirm subgrade stability, and if the soil has been allowed to dry out, the subgrade should be re-moisture conditioned in accordance with the recommendations in the "Compaction" section.

The structural engineer should determine the appropriate slab reinforcement for the loading requirements and considering the expansion potential of the underlying soils. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

8.2 PODIUM GARAGE SLABS-ON-GRADE

Garage slabs-on-grade should be at least 5 inches thick and if constructed with minimal reinforcement intended for shrinkage control only, should have a minimum compressive strength of 3,000 psi. If the slab will have heavier reinforcing because the slab will also serve as a structural diaphragm, the compressive strength may be reduced to 2,500 psi at the structural engineer's discretion. The garage slab should also be supported on at least 18 inches of non-expansive fill (NEF) constructed over subgrade prepared in accordance with the recommendations in the "Earthwork" section of this report. The upper 6 inches of NEF should consist of Class 2 aggregate base or ¾-inch clean, crushed rock compacted in accordance with the "Compaction" section of this report.

If there will be areas within the garage that are moisture sensitive, such as equipment and elevator rooms, the recommendations in the "Interior Slabs Moisture Protection Considerations"

section below may be incorporated in the project design if desired. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

8.3 INTERIOR SLABS MOISTURE PROTECTION CONSIDERATIONS

The following general guidelines for concrete slab-on-grade construction where floor coverings are planned are presented for the consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the slab-on-grade performance.

- Place a minimum 10-mil vapor retarder conforming to ASTM E 1745, Class C requirements or better directly below the concrete slab; the vapor retarder should extend to the slab edges and be sealed at all seams and penetrations in accordance with manufacturer's recommendations and ASTM E 1643 requirements. A 4-inch-thick capillary break, consisting of crushed rock should be placed below the vapor retarder and consolidated in place with vibratory equipment. The mineral aggregate shall be of such size that the percentage composition by dry weight as determined by laboratory sieves will conform to the following gradation:

Sieve Size	Percentage Passing Sieve
1"	100
¾"	90 – 100
No. 4	0 - 10

  The capillary break rock may be considered as the upper 4 inches of the non-expansive fill previously recommended.

- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.

- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.

- Polishing the concrete surface with metal trowels is not recommended.

- Where floor coverings are planned, all concrete surfaces should be properly cured.

- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

8.4 EXTERIOR FLATWORK

Exterior slabs-on-grade, such as pedestrian walkways, patios, driveways, and sidewalks, may experience seasonal movement due to the native expansive soils; therefore, some cracking or vertical movement of conventional slabs should be anticipated where imported fill is not planned in flatwork areas. There are several alternatives for mitigating the impacts of expansive soils beneath concrete flatwork. We are providing recommendations to reduce distress to concrete flatwork that includes moisture conditioning the subgrade soils, using non-expansive fill, and providing adequate construction and control joints to control cracks that do occur. It should be noted that minor slab movement or localized cracking and/or distress could still occur.

- The minimum recommendation for concrete flatwork constructed on highly expansive soils is to properly prepare the clayey soils prior to placing concrete. This is typically achieved by scarifying, moisture conditioning, and re-compacting the subgrade soil. Expansive subgrade soils should be moisture conditioned to at least 3 percent over the laboratory optimum and compacted using moderate compaction effort to a relative compaction of 87 to 92 percent (ASTM Test Method D1557).

- Concrete flatwork, excluding pavements that would be subject to wheel loads, should be at least 4 inches thick and underlain by at least 9 inches of non-expansive fill. The upper 4 inches of NEF should also meet Class 2 aggregate base requirements. Non-expansive fill should be compacted to at least 90 percent relative compaction. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the “Vehicular Pavements” section below.

- We recommend a maximum control joint spacing of about 2 feet in each direction for each inch of concrete thickness and a construction joint spacing of 10 to 12 feet. Construction joints that abut the foundations, garage slabs, or interior slabs-on-grade should include a felt strip, or approved equivalent, that extends the full depth of the exterior slab. This will help to reduce the potential for permanent vertical offset between the slabs due to friction between the concrete edges. We recommend that exterior slabs be isolated from adjacent foundations.

At the owner’s option, if desired to reduce the potential for vertical offset or widening of concrete cracks, consideration should be given to using reinforcing steel, such as No. 3 rebar spaced at 18 inches on center each direction.

8.4.2 Pedestrian Pavers

Concrete unit pavers subject to pedestrian and/or occasional light pick up loading should be at least 60 mm thick and supported on at least 9 inches of NEF overlying subgrade prepared in accordance with the “Earthwork” recommendations of this report. The upper 4 inches of NEF should consist of Class 2 aggregate base. A maximum 1-inch-thick layer of sand may be used as a leveling/setting bed over the aggregate base.

SECTION 9: VEHICULAR PAVEMENTS

9.1 ASPHALT CONCRETE

The following asphalt concrete pavement recommendations tabulated below are based on the Procedure 608 of the Caltrans Highway Design Manual, estimated traffic indices for various pavement-loading conditions, and on a design R-value of 5. The design R-value was chosen based on our engineering judgement considering the soil type and variable surface conditions.

Table 6: Asphalt Concrete Pavement Recommendations, Design R-value = 5

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base* (inches)	Total Pavement Section Thickness (inches)
4.0	2.5	7.5	10.0
4.5	2.5	9.5	12.0
5.0	3.0	10.0	13.0
5.5	3.0	12.0	15.0
6.0	3.5	13.0	16.5
6.5	4.0	14.0	18.0

*Caltrans Class 2 aggregate base; minimum R-value of 78

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic will be using the pavements.

Asphalt concrete pavements constructed on expansive subgrade where the adjacent areas will not be irrigated for several months after the pavements are constructed may experience longitudinal cracking parallel to the pavement edge. These cracks typically form within a few feet of the pavement edge and are due to seasonal wetting and drying of the adjacent soil. The cracking may also occur during construction where the adjacent grade is allowed to significantly dry during the summer, pulling moisture out of the pavement subgrade. Any cracks that form should be sealed with bituminous sealant prior to the start of winter rains. One alternative to reduce the potential for this type of cracking is to install a moisture barrier at least 24 inches deep behind the pavement curb.

9.2 PORTLAND CEMENT CONCRETE

The exterior Portland Cement Concrete (PCC) pavement recommendations tabulated below are based on methods presented in the Portland Cement Association (PCA) design manual (PCA, 1984). Recommendations for garage slabs-on-grade were provided in the “Concrete Slabs and

Pedestrian Pavements" section above. We have provided a few pavement alternatives as an anticipated Average Daily Truck Traffic (ADTT) was not provided. An allowable ADTT should be chosen that is greater than what is expected for the development.

Table 7: PCC Pavement Recommendations

Allowable ADTT	Minimum PCC Thickness (inches)
13	5.5
130	6.0

The PCC thicknesses above are based on a concrete compressive strength of at least 3,500 psi, supporting the PCC on at least 6 inches of Class 2 aggregate base compacted as recommended in the "Earthwork" section, and laterally restraining the PCC with curbs or concrete shoulders. Adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Due to the expansive surficial soils present, we recommend that the construction and expansion joints be dowelled.

9.3 TRASH ENCLOSURES

Trash enclosures and the associated stress pads should be supported on at least 8 inches of Portland cement concrete (PCC) over at least 8 inches of Class 2 aggregate base, where the aggregate base should be compacted to 95 percent relative compaction. The top 6 inches of the underlying subgrade should be moisture conditioned and compacted according to the "Compaction" section of this report. The compressive strength and construction details should be consistent with the above recommendations for PCC pavements.

9.4 PAVEMENT CUTOFF

Surface water penetration into the pavement section can significantly reduce the pavement life, due to the native expansive clays. While quantifying the life reduction is difficult, a normal 20-year pavement design could be reduced to less than 10 years; therefore, increased long-term maintenance may be required.

It would be beneficial to include a pavement cut-off, such as deepened curbs, redwood-headers, or "Deep-Root Moisture Barriers" that are keyed at least 4 inches into the pavement subgrade. This will help limit the additional long-term maintenance.

SECTION 10: RETAINING WALLS

10.1 STATIC LATERAL EARTH PRESSURES

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that the walls with level backfill be designed for the following pressures:

Table 8: Recommended Lateral Earth Pressures

Wall Condition	Lateral Earth Pressure*	Additional Surcharge Loads
Unrestrained – Cantilever Wall	45 pcf	⅓ of vertical loads at top of wall
Restrained – Braced Wall	45 pcf + 8H** psf	½ of vertical loads at top of wall

* Lateral earth pressures are based on an equivalent fluid pressure for level backfill conditions
** H is the distance in feet between the bottom of footing and top of retained soil

If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

10.2 SEISMIC LATERAL EARTH PRESSURES

The 2016 CBC states that lateral pressures from earthquakes should be considered in the design of basements and retaining walls greater than 6 feet in height. At this time, we are not aware of any retaining walls 6 feet or greater in height and have not provided seismic earth pressures with this report. If retaining walls greater than 6 feet in height are proposed, we should be retained to provide seismic earth pressures, if warranted. In our opinion, seismic earth pressures are not warranted for design of minor landscape retaining (i.e. walls 6 feet or less in height).

10.3 WALL DRAINAGE

Adequate drainage should be provided by a subdrain system behind all walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill should extend at least 12 inches out from the wall and to within 2 feet of outside finished grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump.

Miradrain, Geotech Drainage Panels, or equivalent drainage matting can be used for wall drainage as an alternative to the Class 2 Permeable Material or drain rock backfill. Horizontal strip drains connecting to the vertical drainage matting may be used in lieu of the perforated pipe and crushed rock section. The vertical drainage panel should be connected to the perforated pipe or horizontal drainage strip at the base of the wall, or to some other closed or through-wall system such as the TotalDrain system from AmerDrain. Sections of horizontal drainage strips should be connected with either the manufacturer's connector pieces or by pulling back the filter fabric, overlapping the panel dimples, and replacing the filter fabric over the connection. At corners, a corner guard, corner connection insert, or a section of crushed rock covered with filter fabric must be used to maintain the drainage path.

Drainage panels should terminate 18 to 24 inches from final exterior grade. The Miradrain panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil.

10.4 BACKFILL

Where surface improvements will be located over the retaining wall backfill, backfill placed behind the walls with a PI less than 20 should be compacted to at least 95 percent relative compaction using light compaction equipment. If the soil's PI is 20 or greater, expansive soil criteria should be used as discussed in the "Compaction" section of this report. Where no surface improvements are planned, backfill should be compacted to at least 90 percent for soils with a PI less than 20. Expansive soil criteria should be followed for soils with a PI of 20 or greater. If heavy compaction equipment is used, the walls should be temporarily braced.

10.5 FOUNDATIONS

Retaining walls may be supported on a continuous spread footing designed in accordance with the recommendations presented in the "Foundations" section of this report.

SECTION 11: LIMITATIONS

This report, an instrument of professional service, has been prepared for the sole use of Salvatore Caruso Design Corporation specifically to support the design of the Dupont Village Residential Development project in San Jose, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and ground water conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

Salvatore Caruso Design Corporation may have provided Cornerstone with plans, reports and other documents prepared by others. Salvatore Caruso Design Corporation understands that

Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or his representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone's control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.

An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

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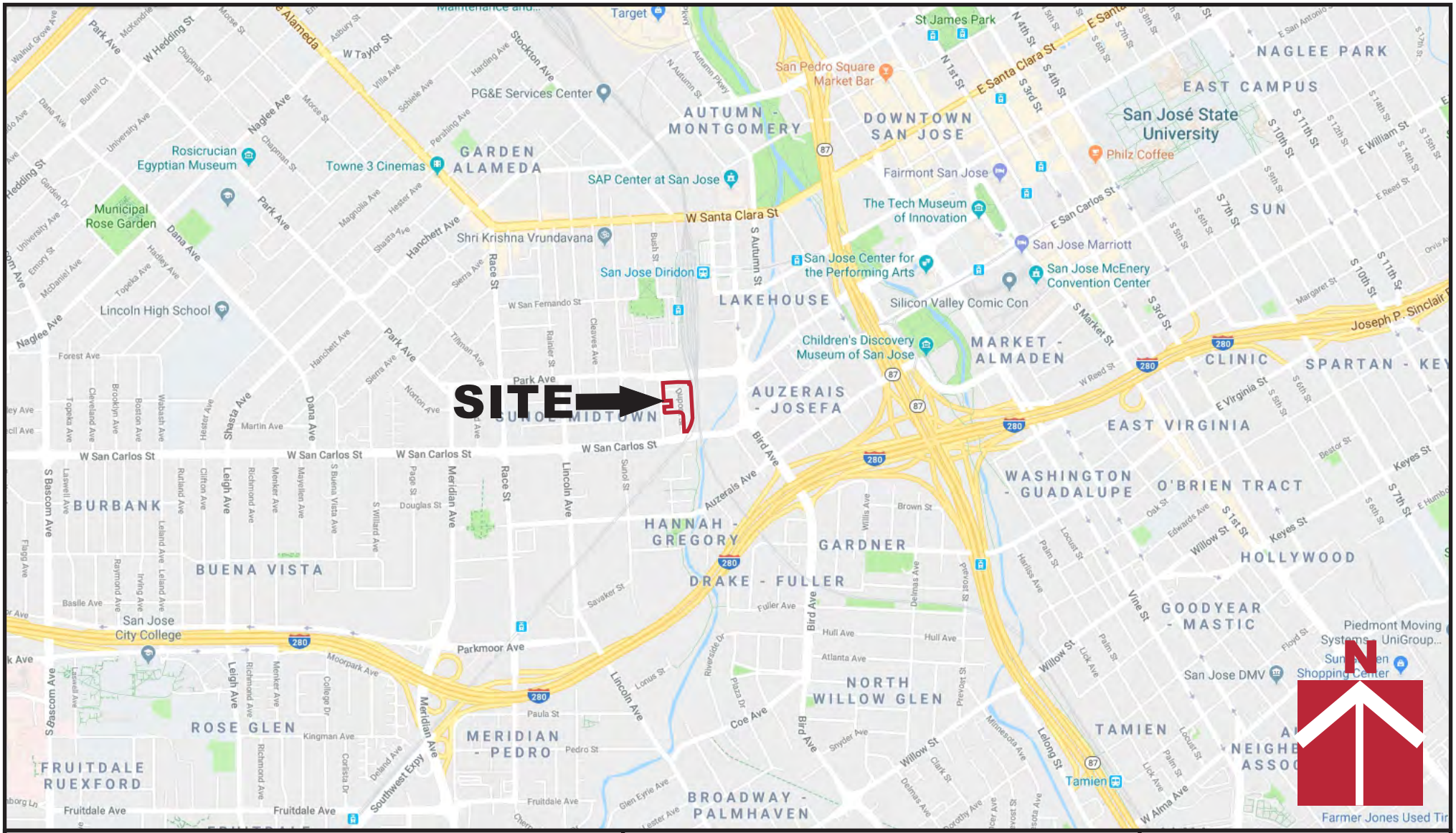

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Vicinity Map

DuPont Village
Residential Development
San Jose, CA

Project Number	908-2-1
Figure Number	Figure 1
Date	March 2018
Drawn By	RRN

RAILWAY

Top of slope

Minimum building footing setback

14'

12'

12'

5'

Park Avenue

CPT-1
EB-4
B-1

CPT-3
EB-3

CPT-2
EB-2

CPT-6

CPT-5
EB-5

EB-1
CPT-4

313 PARKING SPACES

CHILDRENS GARDEN

COMMUNITY SPACE

OFFICE

MAIL/PACKAGE ROOM

BIKE ROOM #1 28

BIKE ROOM #2 84

TRASH ROOM

FIRE RISER

ELECTRICAL ROOM

BOILER ROOM

COMMUNICATION ROOM

GENERATOR ROOM

TRASH STAGING ROOM

LOBBY

NOT PART OF PD

DuPont Street

Approximate Site Boundary

McEvoy Street

Legend

- Approximate location of exploratory boring (EB)
- Approximate location of cone penetration test (CPT)
- Top of slope
- Minimum building footing setback
- Approximate location of previous boring (EB) (Berlogar Geotechnical Consultants, 2008)
- Approximate location of previous cone penetration test (CPT) (Berlogar Geotechnical Consultants, 2007)

Base by Google Earth, dated 4/15/2017
Overlay by SCDC Architecture,
Proposed Ground Floor - A2.1, 12/13/2017

N

0 60 120

APPROXIMATE SCALE (FEET)

Project Number 908-2-1

Figure Number Figure 2

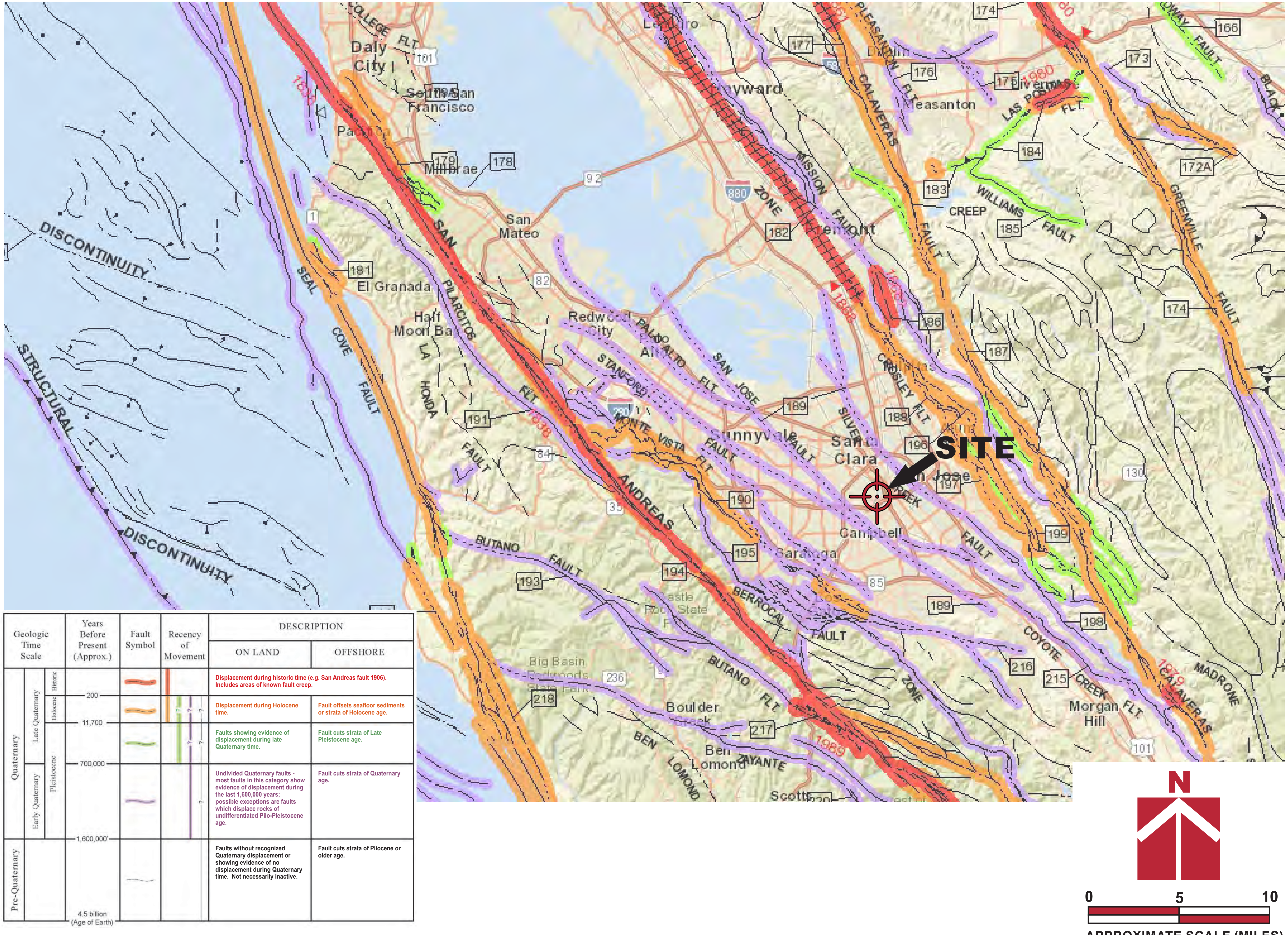
Drawn By RRN

Date June 2018

Site Plan

DuPont Village
Residential Development
San Jose, CA

CORNERSTONE EARTH GROUP



Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)

Regional Fault Map

DuPont Village
Residential Development
San Jose, CA

Project Number 908-2-1

Figure Number Figure 3

Date March 2018

Drawn By RRN

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FIGURE 4A

CPT NO. 1

PROJECT/CPT DATA

Project Title	Dupont Village Residential Developme
Project No.	908-2-1
Project Manager	MJS

SEISMIC PARAMETERS

Controlling Fault	San Andreas	
Earthquake Magnitude (Mw)	7.9	
PGA (Amax)	0.5	(g)

SITE SPECIFIC PARAMETERS

Ground Water Depth at Time of Drilling (feet)	29
Design Water Depth (feet)	20
Ave. Unit Weight Above GW (pcf)	125
Ave. Unit Weight Below GW (pcf)	120

CPT ANALYSIS RESULTS

DRY SAND SETTLEMENT FROM	20	FEET
	0.01	(Inches)
LIQUEFACTION SETTLEMENT FROM	50	FEET
	0.25	(Inches)
TOTAL SEISMIC SETTLEMENT	0.3	INCHES

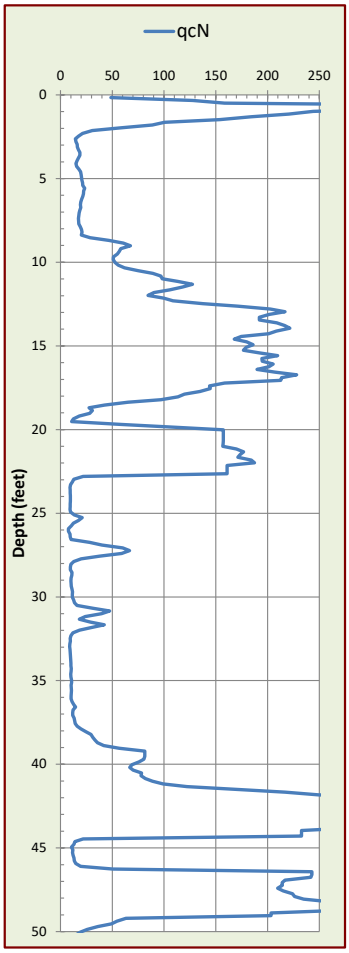
POTENTIAL LATERAL DISPLACEMENT

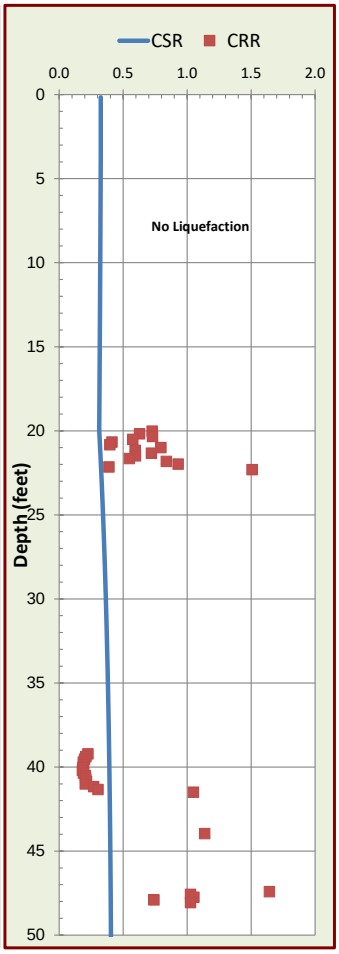
LDI[2]	0.19	L/H	27.5
LDI[1] Corrected for Distance	0.08	(4 < L/H < 40)	

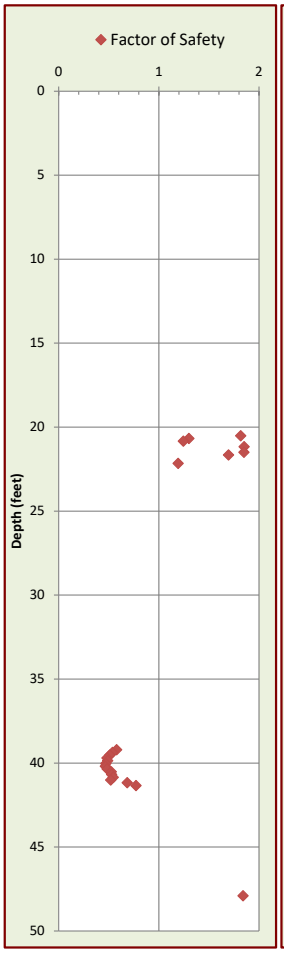
EXPECTED RANGE OF DISPLACEMENT

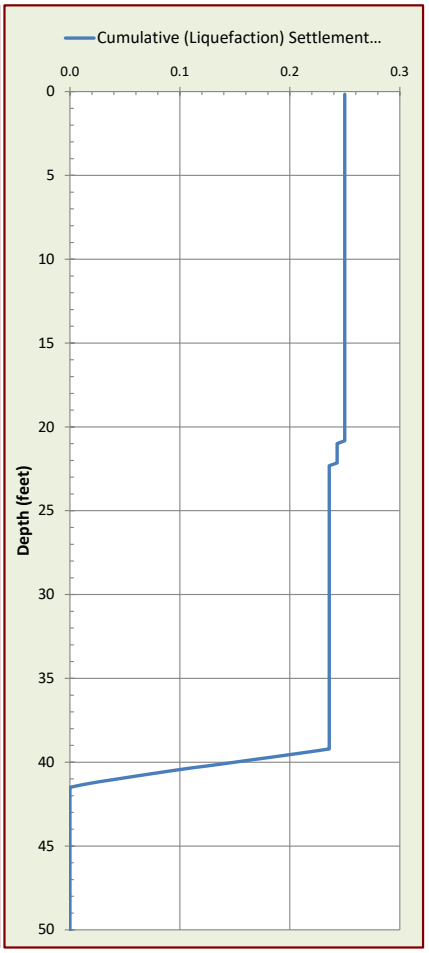
0.0 to 0.2 feet

[1]Not Valid for L/H Values < 4 and > 40.
[2]LDI Values Only Summed to 2H Below Grade.









CORNERSTONE EARTH GROUP

FIGURE 4B

CPT NO. 2

PROJECT/CPT DATA

Project Title	Dupont Village Residential Developme
Project No.	908-2-1
Project Manager	MJS

SEISMIC PARAMETERS

Controlling Fault	San Andreas	
Earthquake Magnitude (Mw)	7.9	
PGA (Amax)	0.5	(g)

SITE SPECIFIC PARAMETERS

Ground Water Depth at Time of Drilling (feet)	17.2
Design Water Depth (feet)	20
Ave. Unit Weight Above GW (pcf)	125
Ave. Unit Weight Below GW (pcf)	120

CPT ANALYSIS RESULTS

DRY SAND SETTLEMENT FROM	20	FEET
	0.01	(Inches)
LIQUEFACTION SETTLEMENT FROM	50	FEET
	0.16	(Inches)
TOTAL SEISMIC SETTLEMENT	0.2	INCHES

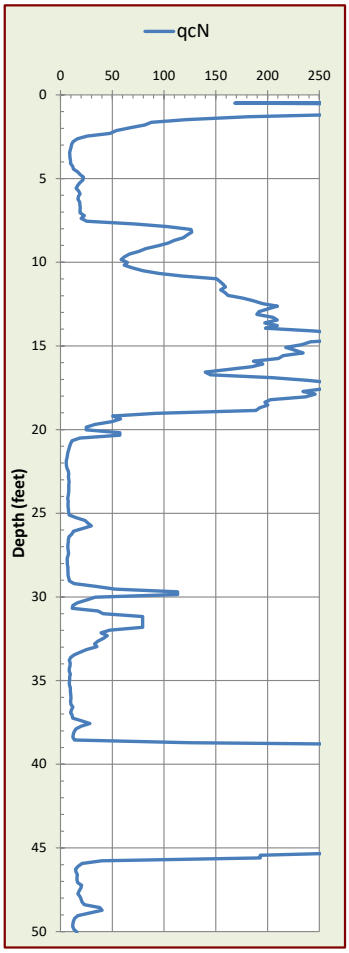
POTENTIAL LATERAL DISPLACEMENT

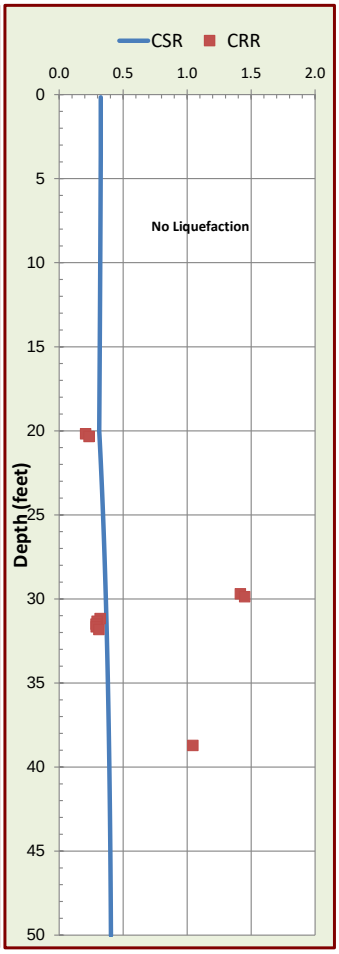
LDI[2]	0.11	L/H	35.0
LDI[1] Corrected for Distance	0.04	(4 < L/H < 40)	

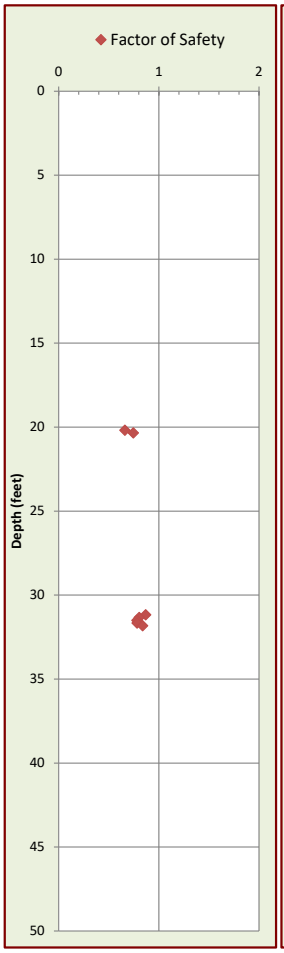
EXPECTED RANGE OF DISPLACEMENT

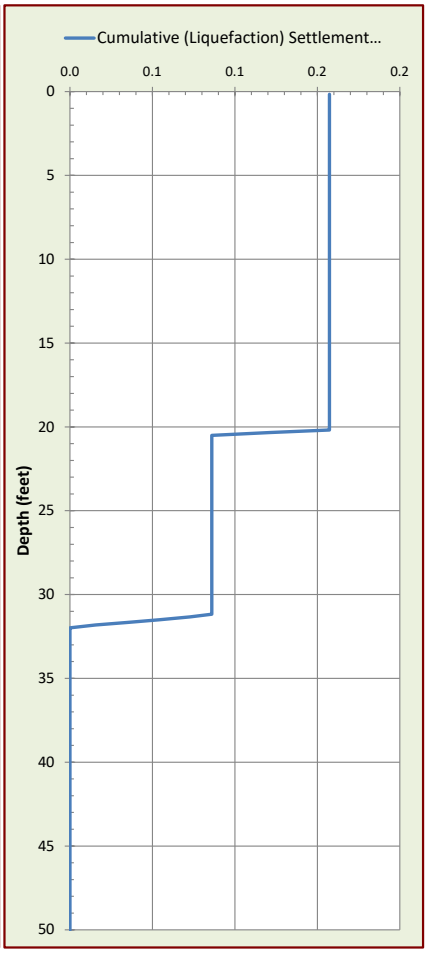
0.0 to 0.1 feet

[1]Not Valid for L/H Values < 4 and > 40.
[2]LDI Values Only Summed to 2H Below Grade.









CORNERSTONE EARTH GROUP

FIGURE 4C

CPT NO. 3

PROJECT/CPT DATA

Project Title	Dupont Village Residential Developme
Project No.	908-2-1
Project Manager	MJS

SEISMIC PARAMETERS

Controlling Fault	San Andreas	
Earthquake Magnitude (Mw)	7.9	
PGA (Amax)	0.5	(g)

SITE SPECIFIC PARAMETERS

Ground Water Depth at Time of Drilling (feet)	28
Design Water Depth (feet)	20
Ave. Unit Weight Above GW (pcf)	125
Ave. Unit Weight Below GW (pcf)	120

CPT ANALYSIS RESULTS

DRY SAND SETTLEMENT FROM	20	FEET
	0.01	(Inches)
LIQUEFACTION SETTLEMENT FROM	50	FEET
	0.06	(Inches)
TOTAL SEISMIC SETTLEMENT	**0.1**	**INCHES**

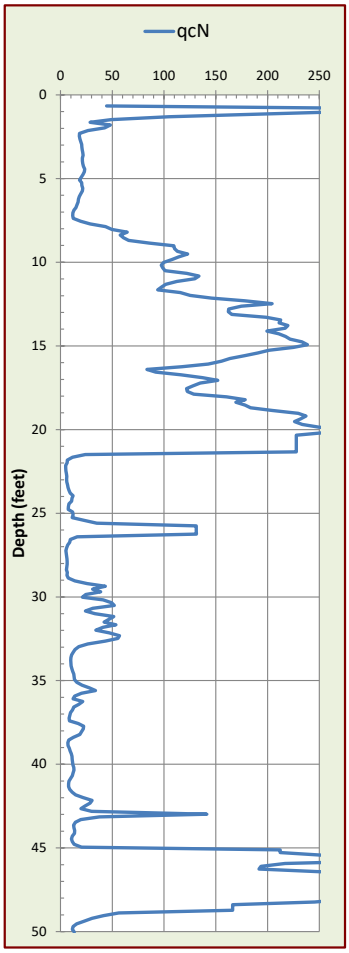
POTENTIAL LATERAL DISPLACEMENT

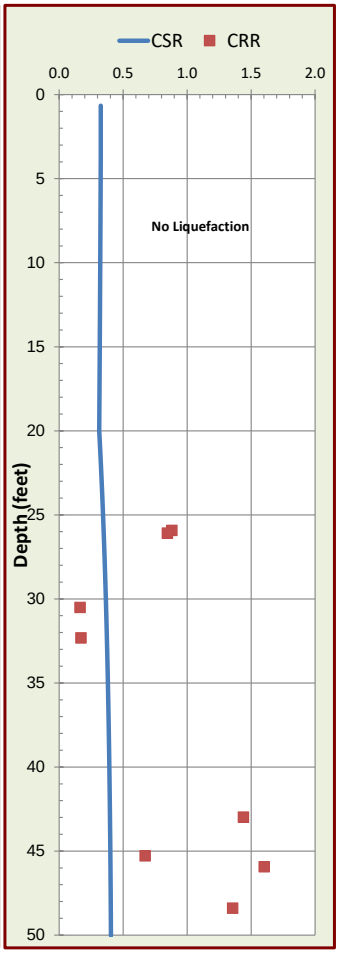
LDI[2]	0.10	L/H	26.3
LDI[1] Corrected for Distance	0.04	(4 < L/H < 40)	

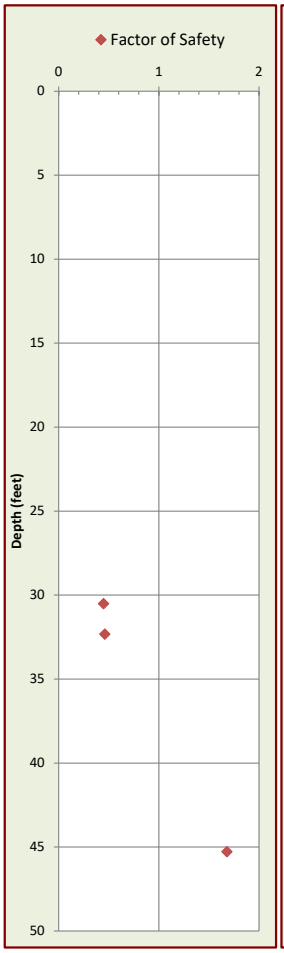
EXPECTED RANGE OF DISPLACEMENT

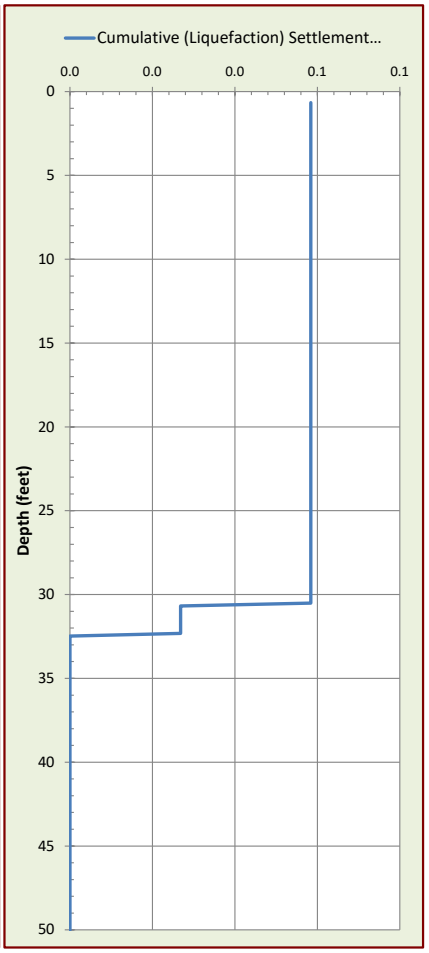
0.0 to 0.1 feet

[1]Not Valid for L/H Values < 4 and > 40.
[2]LDI Values Only Summed to 2H Below Grade.









CORNERSTONE EARTH GROUP

FIGURE 4D

CPT NO. 4

PROJECT/CPT DATA

Project Title	Dupont Village Residential Developme
Project No.	908-2-1
Project Manager	MJS

SEISMIC PARAMETERS

Controlling Fault	San Andreas	
Earthquake Magnitude (Mw)	7.9	
PGA (Amax)	0.5	(g)

SITE SPECIFIC PARAMETERS

Ground Water Depth at Time of Drilling (feet)	22.5
Design Water Depth (feet)	20
Ave. Unit Weight Above GW (pcf)	125
Ave. Unit Weight Below GW (pcf)	120

CPT ANALYSIS RESULTS

DRY SAND SETTLEMENT FROM	20	FEET
	0.01	(Inches)
LIQUEFACTION SETTLEMENT FROM	50	FEET
	0.07	(Inches)
TOTAL SEISMIC SETTLEMENT	0.1	INCHES

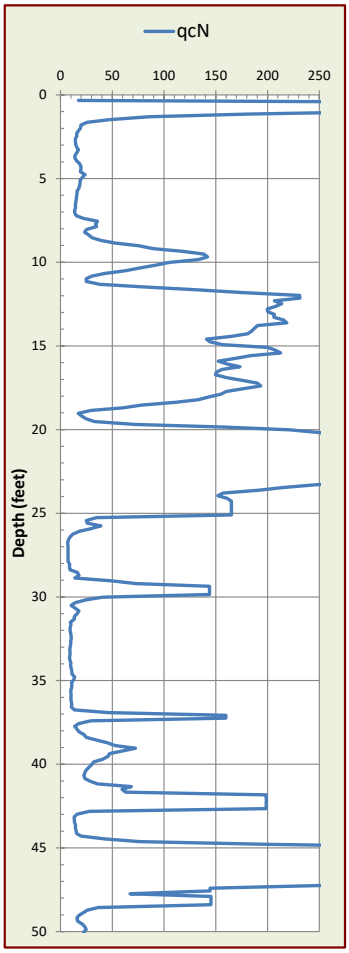
POTENTIAL LATERAL DISPLACEMENT

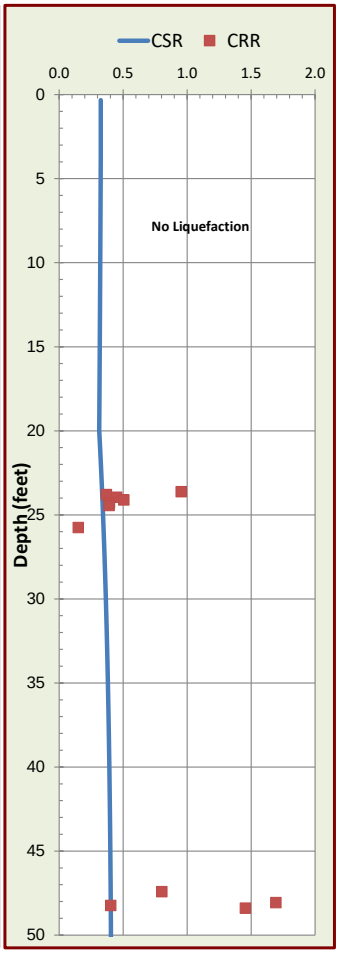
LDI[2]	0.08	L/H	27.5
LDI[1] Corrected for Distance	0.03	(4 < L/H < 40)	

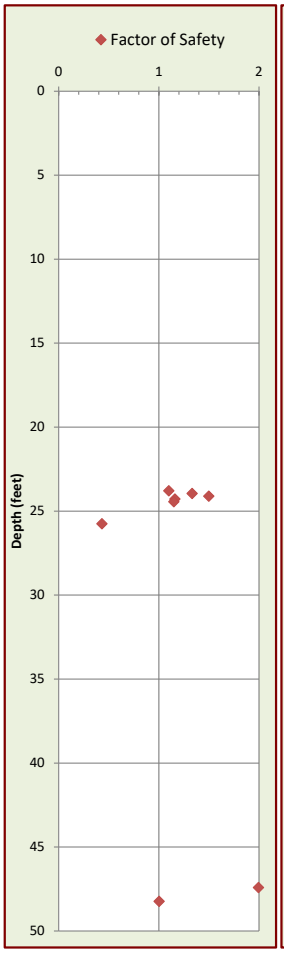
EXPECTED RANGE OF DISPLACEMENT

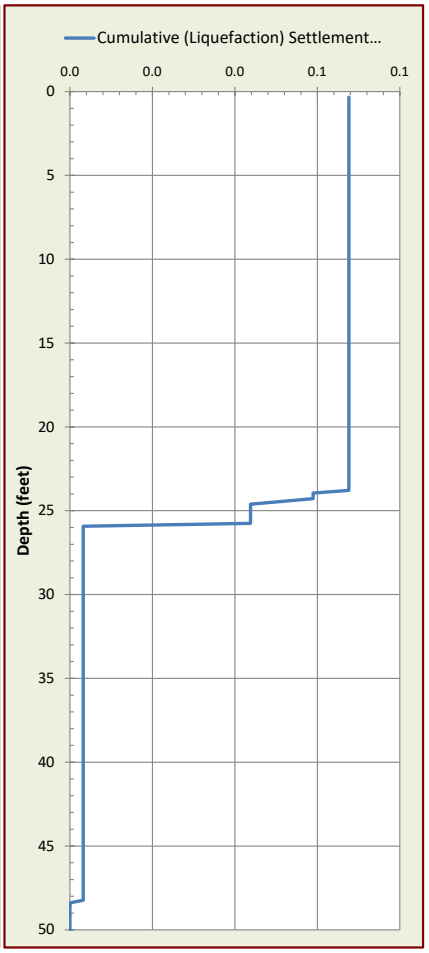
0.0 to 0.1 feet

[1]Not Valid for L/H Values < 4 and > 40.
[2]LDI Values Only Summed to 2H Below Grade.









CORNERSTONE EARTH GROUP

FIGURE 4E

CPT NO. 5

PROJECT/CPT DATA

Project Title	Dupont Village Residential Developme
Project No.	908-2-1
Project Manager	MJS

SEISMIC PARAMETERS

Controlling Fault	San Andreas	
Earthquake Magnitude (Mw)	7.9	
PGA (Amax)	0.5	(g)

SITE SPECIFIC PARAMETERS

Ground Water Depth at Time of Drilling (feet)	23
Design Water Depth (feet)	20
Ave. Unit Weight Above GW (pcf)	125
Ave. Unit Weight Below GW (pcf)	120

CPT ANALYSIS RESULTS

DRY SAND SETTLEMENT FROM	20	FEET
	0.00	(Inches)
LIQUEFACTION SETTLEMENT FROM	50	FEET
	0.18	(Inches)
TOTAL SEISMIC SETTLEMENT	**0.2**	**INCHES**

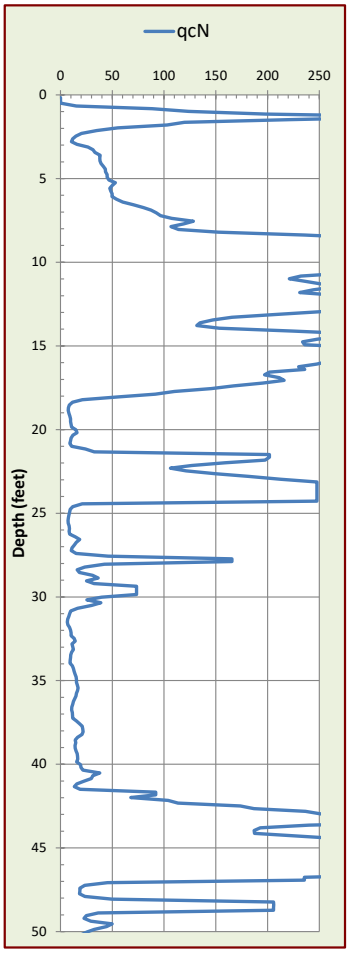
POTENTIAL LATERAL DISPLACEMENT

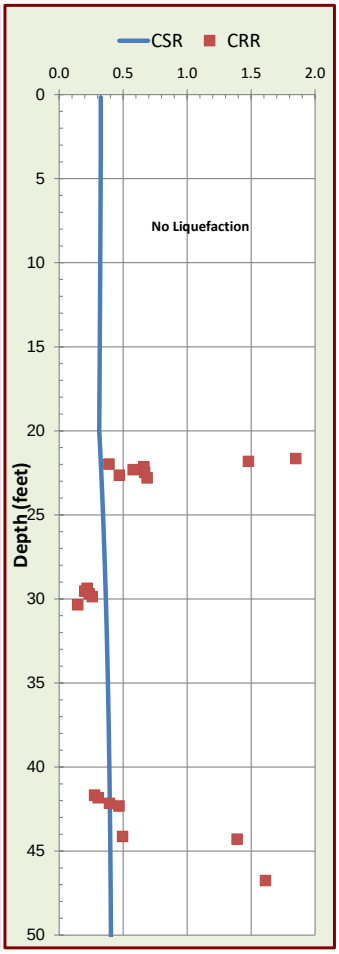
LDI[2]	0.19	L/H	11.0
LDI[1] Corrected for Distance	0.17	(4 < L/H < 40)	

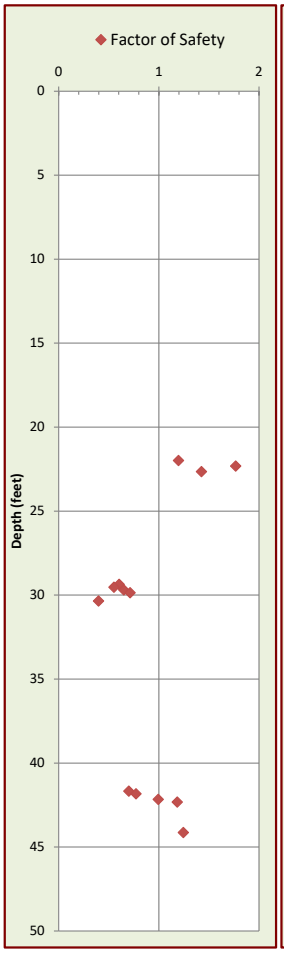
EXPECTED RANGE OF DISPLACEMENT

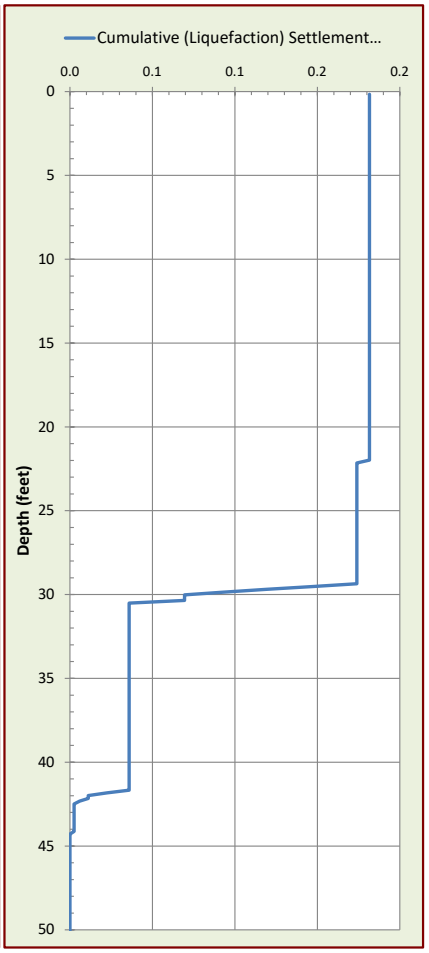
0.1 to 0.3 feet

[1]Not Valid for L/H Values < 4 and > 40.
[2]LDI Values Only Summed to 2H Below Grade.









CORNERSTONE EARTH GROUP

FIGURE 4F

CPT NO. 6

PROJECT/CPT DATA

Project Title	Dupont Village Residential Developme
Project No.	908-2-1
Project Manager	MJS

SEISMIC PARAMETERS

Controlling Fault	San Andreas	
Earthquake Magnitude (Mw)	7.9	
PGA (Amax)	0.5	(g)

SITE SPECIFIC PARAMETERS

Ground Water Depth at Time of Drilling (feet)	23
Design Water Depth (feet)	20
Ave. Unit Weight Above GW (pcf)	125
Ave. Unit Weight Below GW (pcf)	120

CPT ANALYSIS RESULTS

DRY SAND SETTLEMENT FROM	20	FEET
	0.00	(Inches)
LIQUEFACTION SETTLEMENT FROM	50	FEET
	0.16	(Inches)
TOTAL SEISMIC SETTLEMENT	0.2	INCHES

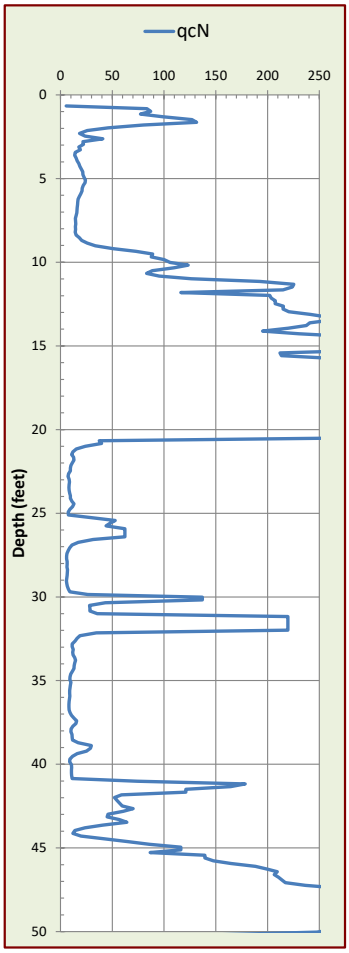
POTENTIAL LATERAL DISPLACEMENT

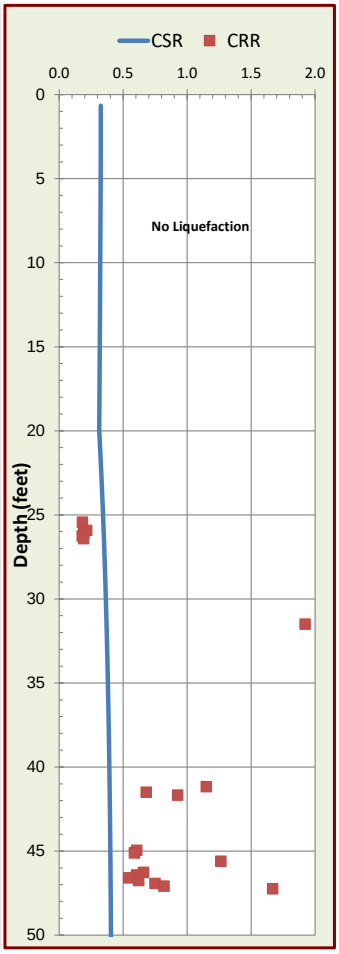
LDI[2]	0.20	L/H	15.5
LDI[1] Corrected for Distance	0.13	(4 < L/H < 40)	

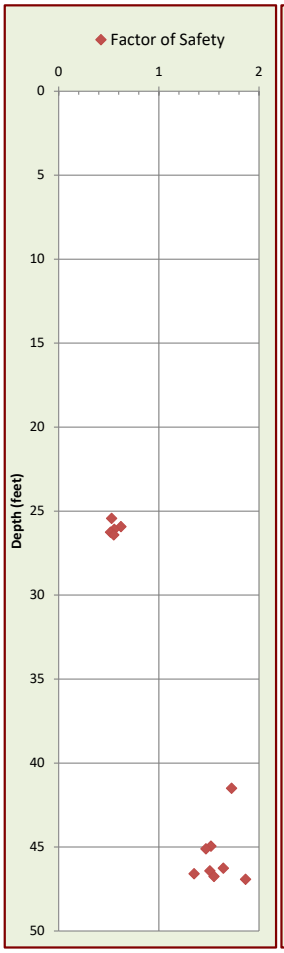
EXPECTED RANGE OF DISPLACEMENT

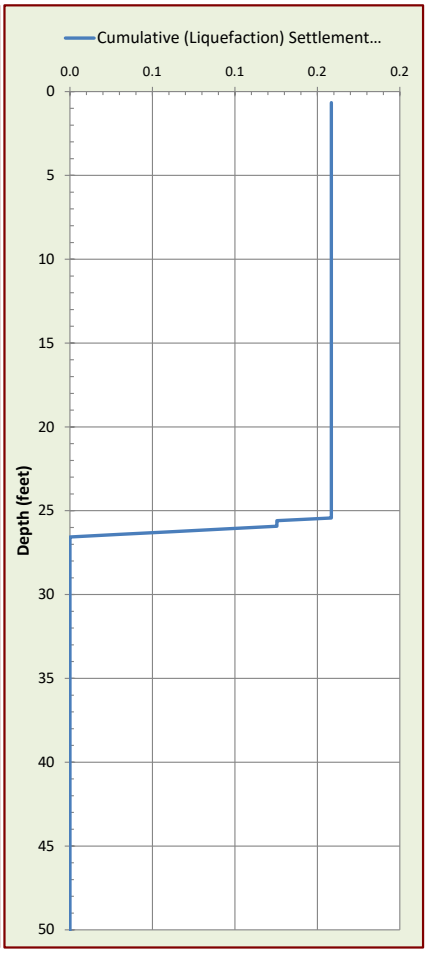
0.1 to 0.3 feet

[1]Not Valid for L/H Values < 4 and > 40.
[2]LDI Values Only Summed to 2H Below Grade.









APPENDIX A: FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using truck- and track-mounted, hollow-stem auger drilling equipment and 20-ton truck-mounted Cone Penetration Test equipment. One 6½-inch-diameter and four 8-inch-diameter exploratory borings were drilled on March 7 to 9, 2018, to depths of 30 to 45 feet. Six CPT soundings were also performed in accordance with ASTM D 5778-95 (revised, 2002) on February 27, 2018, to depths ranging from about 50 to 95 feet. The approximate locations of exploratory borings and CPTs are shown on the Site Plan, Figure 2. The soils encountered were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D2488). Boring logs, as well as a key to the classification of the soils, are included as part of this appendix.

Boring and CPT locations were approximated using existing site boundaries and other site features as references. Boring and CPT elevations were not determined. The locations of the borings and CPTs should be considered accurate only to the degree implied by the method used.

Representative soil samples were obtained from the borings at selected depths. All samples were returned to our laboratory for evaluation and appropriate testing. The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O.D. split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D1586). 2.5-inch I.D. samples were obtained using a Modified California Sampler driven into the soil with the 140-pound hammer previously described. Relatively undisturbed samples were also obtained with 2.875-inch I.D. Shelby Tube sampler which were hydraulically pushed. Unless otherwise indicated, the blows per foot recorded on the boring log represent the accumulated number of blows required to drive the last 12 inches. The various samplers are denoted at the appropriate depth on the boring logs.

The CPT involved advancing an instrumented cone-tipped probe into the ground while simultaneously recording the resistance at the cone tip (q_c) and along the friction sleeve (f_s) at approximately 5-centimeter intervals. Based on the tip resistance and tip to sleeve ratio (R_f), the CPT classified the soil behavior type and estimated engineering properties of the soil, such as equivalent Standard Penetration Test (SPT) blow count, internal friction angle within sand layers, and undrained shear strength in silts and clays. A pressure transducer behind the tip of the CPT cone measured pore water pressure (u_2). Graphical logs of the CPT data is included as part of this appendix.

Field tests included an evaluation of the unconfined compressive strength of the soil samples using a pocket penetrometer device. The results of these tests are presented on the individual boring logs at the appropriate sample depths.

Attached boring and CPT logs and related information depict subsurface conditions at the locations indicated and on the date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring and CPT locations. The passage of time may result in altered subsurface conditions due to environmental changes. In addition,

any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

OTHER MATERIAL SYMBOLS

- Poorly-Graded Sand with Clay
- Clayey Sand
- Sandy Silt
- Artificial/Undocumented Fill
- Poorly-Graded Gravelly Sand
- Topsoil
- Well-Graded Gravel with Clay
- Well-Graded Gravel with Silt
- Sand
- Silt
- Well Graded Gravelly Sand
- Gravelly Silt
- Asphalt
- Boulders and Cobble

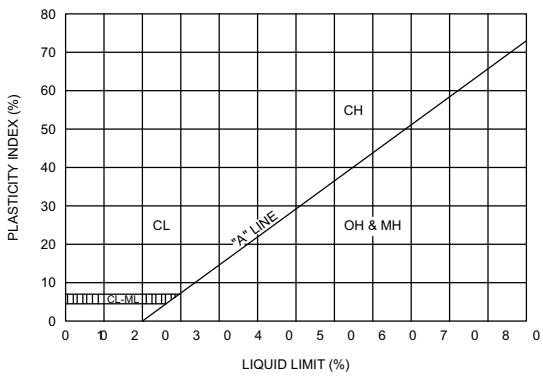
SAMPLER TYPES

- SPT
- Modified California (2.5" I.D.)
- Rock Core
- Shelby Tube
- No Recovery
- Grab Sample

ADDITIONAL TESTS

CA	-	CHEMICAL ANALYSIS (CORROSIVITY)	PI	-	PLASTICITY INDEX
CD	-	CONSOLIDATED DRAINED TRIAXIAL	SW	-	SWELL TEST
CN	-	CONSOLIDATION	TC	-	CYCLIC TRIAXIAL
CU	-	CONSOLIDATED UNDRAINED TRIAXIAL	TV	-	TORVANE SHEAR
DS	-	DIRECT SHEAR	UC	-	UNCONFINED COMPRESSION
PP	-	POCKET PENETROMETER (TSF)	(1.5)	-	(WITH SHEAR STRENGTH IN KSF)
(3.0)	-	(WITH SHEAR STRENGTH IN KSF)			
RV	-	R-VALUE	UU	-	UNCONSOLIDATED UNDRAINED TRIAXIAL
SA	-	SIEVE ANALYSIS: % PASSING #200 SIEVE			
	-	WATER LEVEL			

PLASTICITY CHART



PENETRATION RESISTANCE
(RECORDED AS BLOWS / FOOT)

SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

** UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

CORNERSTONE EARTH GROUP

LEGEND TO SOIL DESCRIPTIONS

Figure Number A-1

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development
PROJECT NUMBER 908-2-1
PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

DATE STARTED 3/7/18 **DATE COMPLETED** 3/7/18
GROUND ELEVATION _____ **BORING DEPTH** 35 ft.
DRILLING CONTRACTOR Cuesta Geo
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD MPP Track Rig, 6½ inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY RPM
▽ **AT TIME OF DRILLING** 23 ft.
NOTES _____
▼ **AT END OF DRILLING** 22.5 ft.

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
	0		5½ inches Portland cement concrete over 6 inches aggregate base						
			Fat Clay (CH) very stiff, moist, dark brown, some fine sand, high plasticity Liquid Limit = 53, Plastic Limit = 22	16	MC-1B	95	23	31	
			Lean Clay with Sand (CL) very stiff, moist, gray with brown mottles, fine sand, moderate plasticity	21	MC-2B	105	18		
	5			12	MC-3B	103	16		
			Poorly Graded Sand with Silt (SP-SM) medium dense, moist, brown, fine to coarse sand, some fine to coarse subangular to subrounded gravel	21	MC-4B	101	3		
	10								
				15	SPT				
	15		increasing gravel content	14	SPT-6		8		
			Poorly Graded Sand with Silt and Gravel (SP-SM) dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	31	SPT-7		7		
	20								
			Clayey Sand (SC) loose, moist, brown, fine to medium sand	15	MC				
	25								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

Continued Next Page

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development

PROJECT NUMBER 908-2-1

PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
	25		**Lean Clay (CL)** stiff, moist, brown with gray mottles, some fine sand, moderate plasticity							
			Silty Sand (SM) medium dense, moist, brown, fine sand	31	MC-9B	107	18			
	30		**Lean Clay with Sand (CL)** medium stiff, moist, gray with brown mottles, fine sand, low plasticity	18	SPT-10		28			○
			Silt with Sand (ML) stiff, moist, gray, fine sand, low plasticity	9	MC-11B	84	38			○
	35		Bottom of Boring at 35.0 feet.							
	40									
	45									
	50									

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development
PROJECT NUMBER 908-2-1
PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

DATE STARTED 3/9/18 **DATE COMPLETED** 3/9/18
GROUND ELEVATION _____ **BORING DEPTH** 39.4 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-53, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY RPM
▽ **AT TIME OF DRILLING** 20 ft.
NOTES _____
▼ **AT END OF DRILLING** 17.2 ft.

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
	0		4 inches asphalt concrete over 8 inches aggregate base						
			Lean Clay with Sand (CL) [Fill] very stiff, moist, dark brown with brown mottles, fine sand, some fine gravel, moderate plasticity	25	MC-1B	96	22		
			Fat Clay (CH) stiff, moist, dark brown, some fine sand, high plasticity	28	MC-2B	104	20		
	5		**Lean Clay with Sand (CL)** stiff, moist, gray with brown mottles, fine sand, moderate plasticity	22	MC-3B	120	8		
			Poorly Graded Sand with Silt (SP-SM) medium dense, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel	22	SPT				
			becomes dense	33	SPT-5		5		5
	10								
			Poorly Graded Gravel with Sand and Silt (GP-GM) dense, moist, gray and brown, fine to coarse subangular to subrounded gravel, fine to medium sand	48	SPT				
	15								
			Silty Sand (SM) medium dense, moist, brown, fine to medium sand	41	MC-7B	103	22		
	20		**Lean Clay with Sand (CL)** medium stiff, moist, brown with gray mottles, fine sand, moderate plasticity	12	SPT				
				16	MC-9B	91	28		
	25								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

Continued Next Page

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development

PROJECT NUMBER 908-2-1

PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 1.0 2.0 3.0 4.0
	25		**Lean Clay with Sand (CL)** medium stiff, moist, brown with gray mottles, fine sand, moderate plasticity		ST-10	94	28			○
	30									
			Lean Clay (CL) medium stiff, moist, gray, some fine sand, some silt, moderate plasticity	23	MC-11B	83	38			○
	35									
			Poorly Graded Sand with Silt and Gravel (SP-SM) very dense, moist, brown, fine to coarse sand, fine to coarse subangular gravel	50/5"	MC					
	40		Bottom of Boring at 39.4 feet.							
	45									
	50									

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development
PROJECT NUMBER 908-2-1
PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

DATE STARTED 3/8/18 **DATE COMPLETED** 3/8/18
GROUND ELEVATION _____ **BORING DEPTH** 45 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-53, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY RPM
▽ **AT TIME OF DRILLING** 29.5 ft.
NOTES _____
▼ **AT END OF DRILLING** 28 ft.

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
	0		5 inches Portland cement concrete over 6 inches aggregate base						
			Sandy Lean Clay (CL) [Fill] hard, moist, brown, fine sand, some fine gravel, low plasticity	56	MC-1B	97	16		
			Fat Clay (CH) hard, moist, dark brown, some fine sand, high plasticity	59	MC-2B	106	15		
	5		**Lean Clay with Sand (CL)** very stiff, moist, gray with brown mottles, fine sand, moderate plasticity	29	MC-3B	103	17		
			Poorly Graded Sand with Silt (SP-SM) medium dense, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel	19	SPT-4		6		
	10								
			Poorly Graded Sand with Silt and Gravel (SP-SM) dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	43	SPT-5		4		6
	15								
				40	SPT-6		4		
	20								
			Sandy Lean Clay (CL) medium stiff, moist, gray, fine to medium sand, low to moderate plasticity		ST-7	100	25		
	25		*Continued Next Page*						

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0
>4.5

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development

PROJECT NUMBER 908-2-1

PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
	25		**Sandy Lean Clay (CL)** medium stiff, moist, gray, fine to medium sand, low to moderate plasticity		ST-8				
			Poorly Graded Sand with Silt (SP-SM) dense, moist, brown, fine to coarse sand	55	MC				
	30		**Lean Clay (CL)** stiff, moist, gray with brown mottles, some fine sand, moderate plasticity						
				31	MC				
	35								
			becomes very stiff	43	MC-11B	95	28		
	40								
			Lean Clay with Sand (CL) medium stiff, moist, gray with brown mottles, fine to medium sand, moderate plasticity		MC				
	45		Bottom of Boring at 45.0 feet.						
	50								

UNDRAINED SHEAR STRENGTH, ksf
- ○ HAND PENETROMETER
- △ TORVANE
- ● UNCONFINED COMPRESSION
- ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

1.0 2.0 3.0 4.0

BORING NUMBER EB-4

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development
PROJECT NUMBER 908-2-1
PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

DATE STARTED 3/9/18 **DATE COMPLETED** 3/9/18
GROUND ELEVATION _____ **BORING DEPTH** 30 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-53, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY RPM
▽ **AT TIME OF DRILLING** 29 ft.
NOTES _____
▼ **AT END OF DRILLING** 29 ft.

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
	0		3 inches asphalt concrete over 5 inches aggregate base						
			Sandy Lean Clay (CL) [Fill] very stiff, moist, brown and dark brown mottled, fine sand, some fine gravel, moderate plasticity	29	MC-1		22		
			Fat Clay (CH) hard, moist, dark brown, some fine sand, high plasticity	62	MC-2	83	30		
	5		**Lean Clay with Sand (CL)** very stiff, moist, gray with brown mottles, fine sand, moderate plasticity	30	MC-3B	107	16		
			Poorly Graded Sand with Silt (SP-SM) medium dense to dense, moist, brown, fine to medium sand, some fine to coarse subangular to subrounded gravel	32	MC-4B	111	5		
	10			30	SPT				
			Poorly Graded Sand with Silt and Gravel (SP-SM) very dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	87	SPT				
	15								
			Sandy Silt (ML) soft, moist, gray, fine sand, low plasticity	25	MC-7B	110	8		
	20		**Poorly Graded Sand with Silt and Gravel (SP-SM)** medium dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	28	SPT-8		6		7
			Lean Clay with Sand (CL) stiff, moist, brown with gray mottles, fine sand, moderate plasticity	21	MC				
	25								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

Continued Next Page

BORING NUMBER EB-4

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development

PROJECT NUMBER 908-2-1

PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 1.0 2.0 3.0 4.0
	25									
			Lean Clay (CL) stiff, moist, gray with brown mottles, some fine sand, moderate plasticity							
				23	MC-10B	97	27			○
	30		Bottom of Boring at 30.0 feet.							
	35									
	40									
	45									
	50									

BORING NUMBER EB-5

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development
PROJECT NUMBER 908-2-1
PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

DATE STARTED 3/8/18 **DATE COMPLETED** 3/8/18
GROUND ELEVATION _____ **BORING DEPTH** 45 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-53, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY RPM
▽ **AT TIME OF DRILLING** 23 ft.
NOTES _____
▼ **AT END OF DRILLING** 23 ft.

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
	0		6½ inches Portland cement concrete over 5 inches aggregate base							
			Sandy Lean Clay (CL) [Fill] hard, moist, brown, fine to coarse sand, some fine gravel, low to moderate plasticity	42	MC-1B	87	21			>4.5 ○
			Lean Clay with Sand (CL) hard, moist, gray with brown mottles, fine sand, moderate plasticity	50	MC-2B	97	15			>4.5 ○
	5			28	MC-3B	101	10			>4.5 ○
			Poorly Graded Sand with Silt and Gravel (SP-SM) very dense, dry, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	56	SPT-4		2			
	10									
			Poorly Graded Sand with Silt (SP-SM) medium dense, moist, brown, fine to medium sand, some fine subangular to subrounded gravel	25	SPT-5		5			
	15		**Poorly Graded Sand with Silt and Gravel (SP-SM)** very dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	50	SPT					
			Lean Clay (CL) medium stiff, moist, brown with gray mottles, some fine sand, moderate plasticity	16	MC-7B	99	25			○
	20									
			Poorly Graded Sand with Silt (SP-SM) medium dense, moist, brown, fine to coarse sand, some fine to coarse subangular to subrounded gravel	40	MC					○
	25									

Continued Next Page

BORING NUMBER EB-5

CORNERSTONE EARTH GROUP

PROJECT NAME Dupont Village Residential Development

PROJECT NUMBER 908-2-1

PROJECT LOCATION Dupont and McEvory Streets, San Jose, CA

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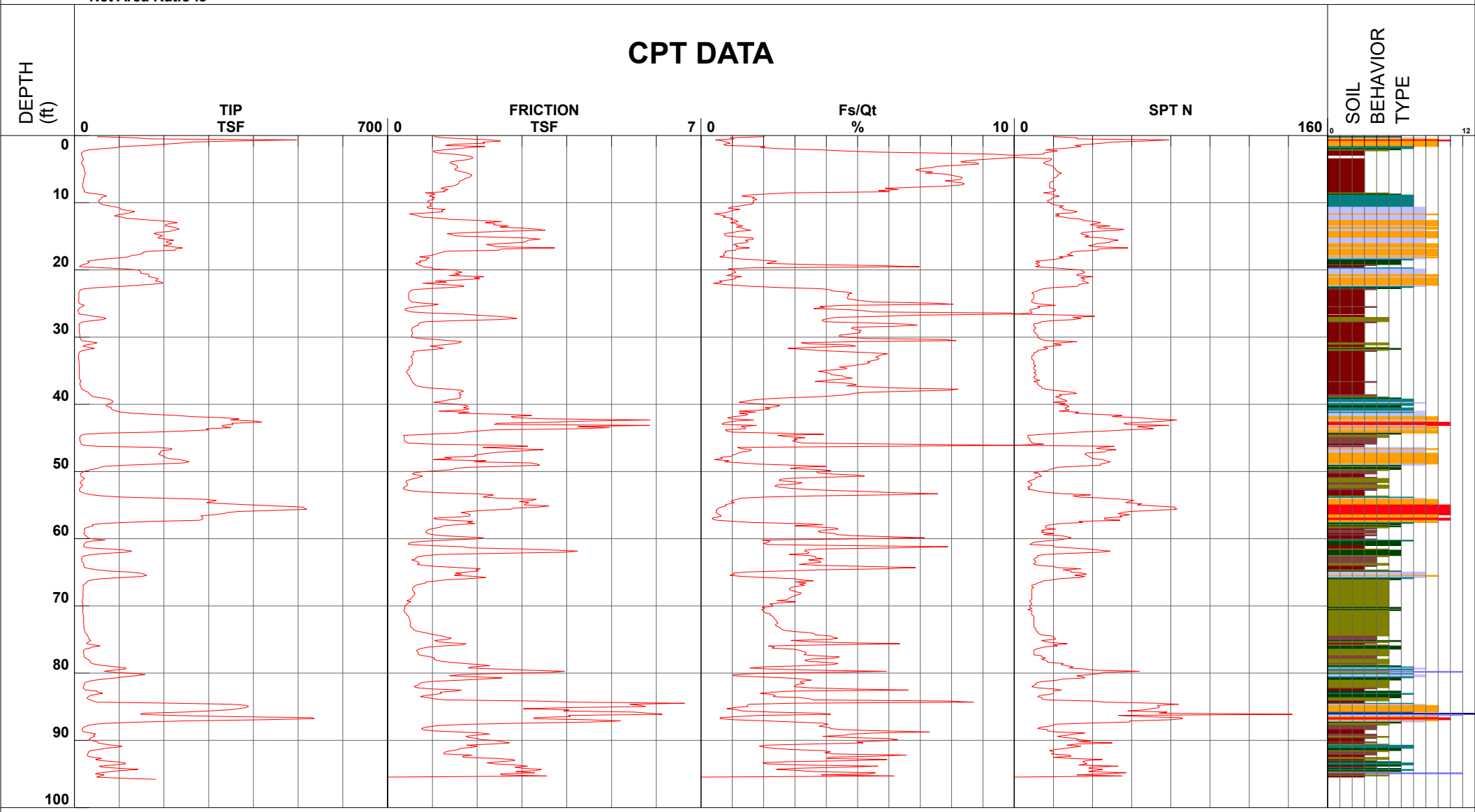
ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
	25		**Lean Clay with Sand (CL)** stiff, moist, brown with gray mottles, fine sand, moderate plasticity							
			Lean Clay (CL) stiff, moist, gray, some fine sand, moderate plasticity	34	MC-9B	98	24			○
	30			21	SPT					○
				29	MC-11B	98	25			○
	35		**Lean Clay with Sand (CL)** stiff, moist, gray with brown mottles, fine sand, moderate plasticity							
				28	MC					○
	40		**Poorly Graded Sand with Silt (SP-SM)** dense, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel							
				58	MC-13B	124	11			
	45		Bottom of Boring at 45.0 feet.							
	50									

Cornerstone Earth Group

Project	Dupont Village	Operator	RB-JO	Filename	SDF(095).cpt
Job Number	908-2-1	Cone Number	DDG1418	GPS	
Hole Number	CPT-01	Date and Time	2/27/2018 11:05:51 AM	Maximum Depth	95.80 ft
EST GW Depth During Test		19.70 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

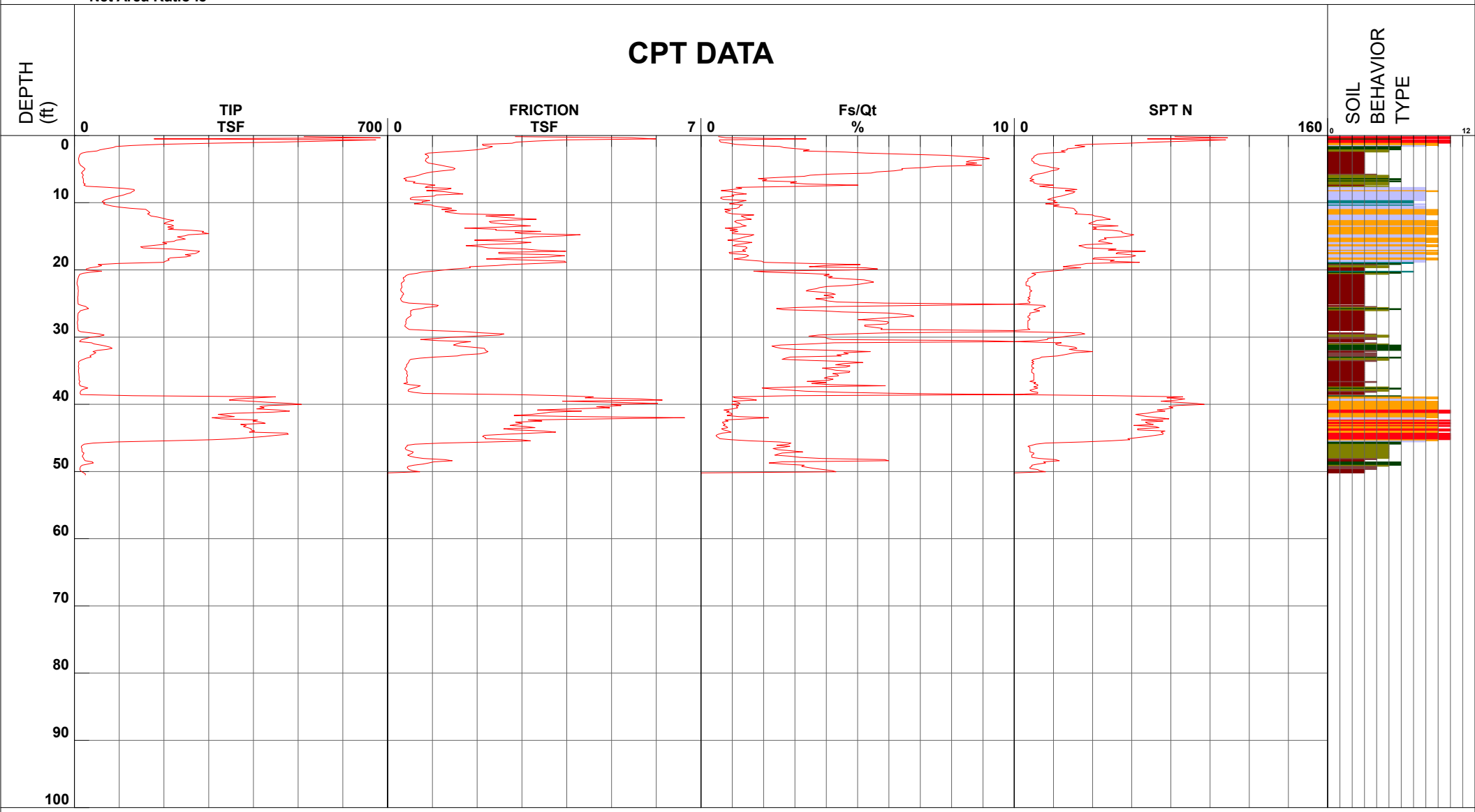
S*Soil behavior type and SPT based on data from UBC-1983

Cornerstone Earth Group

Project	Dupont Village	Operator	RB-JO	Filename	SDF(096).cpt
Job Number	908-2-1	Cone Number	DDG1418	GPS	
Hole Number	CPT-02	Date and Time	2/27/2018 12:27:21 PM	Maximum Depth	50.52 ft
EST GW Depth During Test		20.00 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

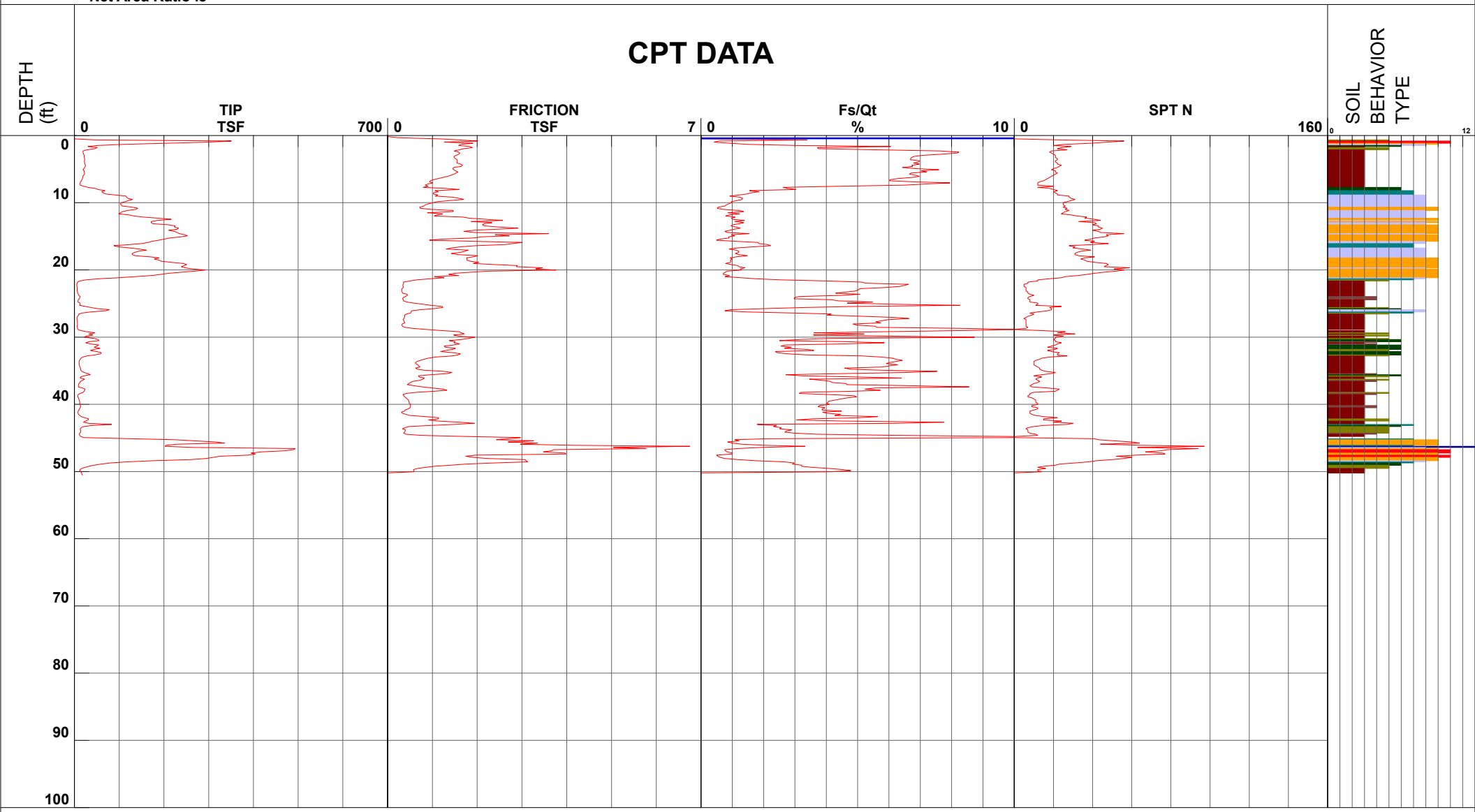
S*Soil behavior type and SPT based on data from UBC-1983

Cornerstone Earth Group

Project	Dupont Village	Operator	RB-JO	Filename	SDF(098).cpt
Job Number	908-2-1	Cone Number	DDG1418	GPS	
Hole Number	CPT-03	Date and Time	2/27/2018 2:21:23 PM	Maximum Depth	50.52 ft
EST GW Depth During Test		20.00 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

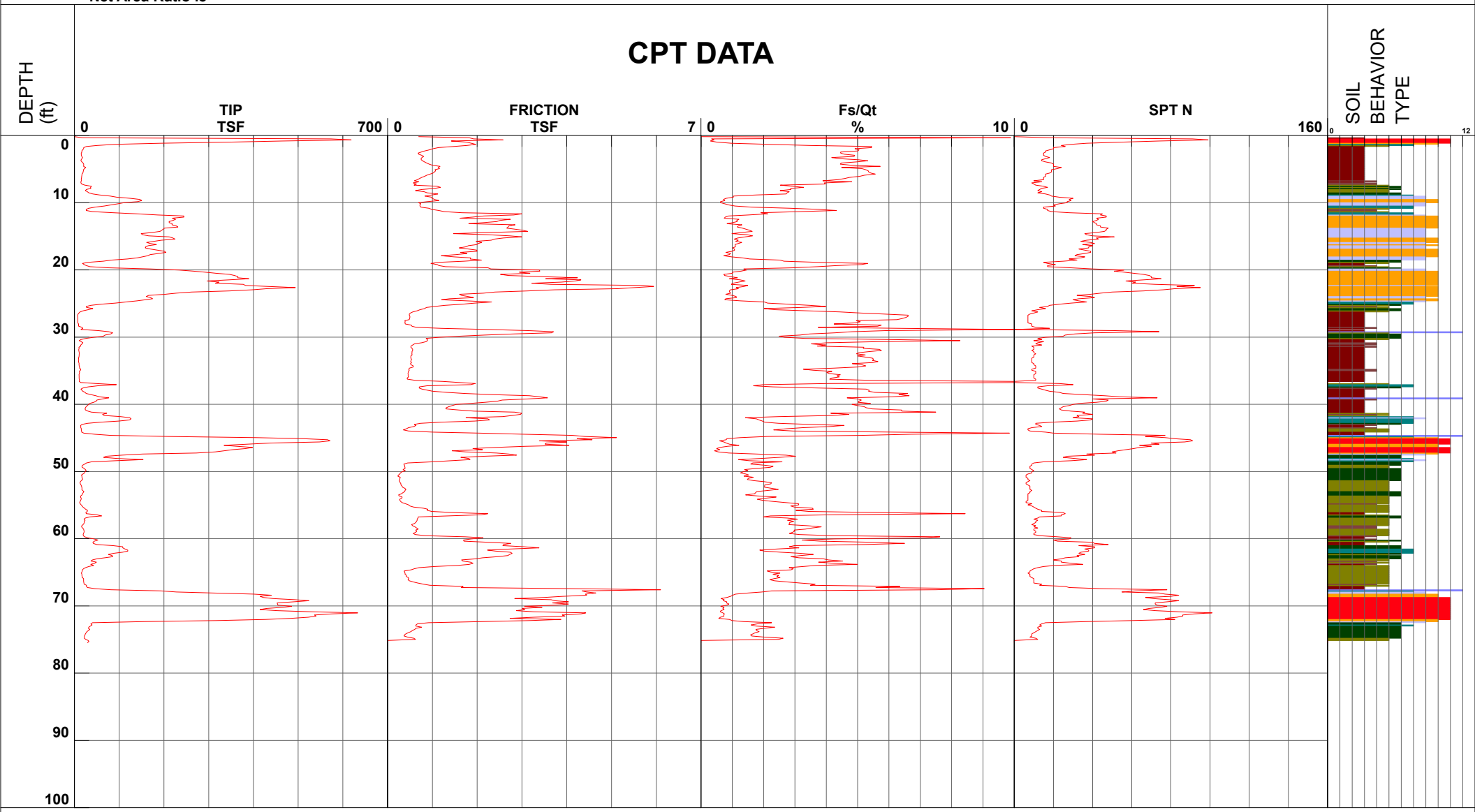
S*Soil behavior type and SPT based on data from UBC-1983

Cornerstone Earth Group

Project	Dupont Village	Operator	RB-JO	Filename	SDF(097).cpt
Job Number	908-2-1	Cone Number	DDG1418	GPS	
Hole Number	CPT-04	Date and Time	2/27/2018 1:12:42 PM	Maximum Depth	75.46 ft
EST GW Depth During Test		20.90 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

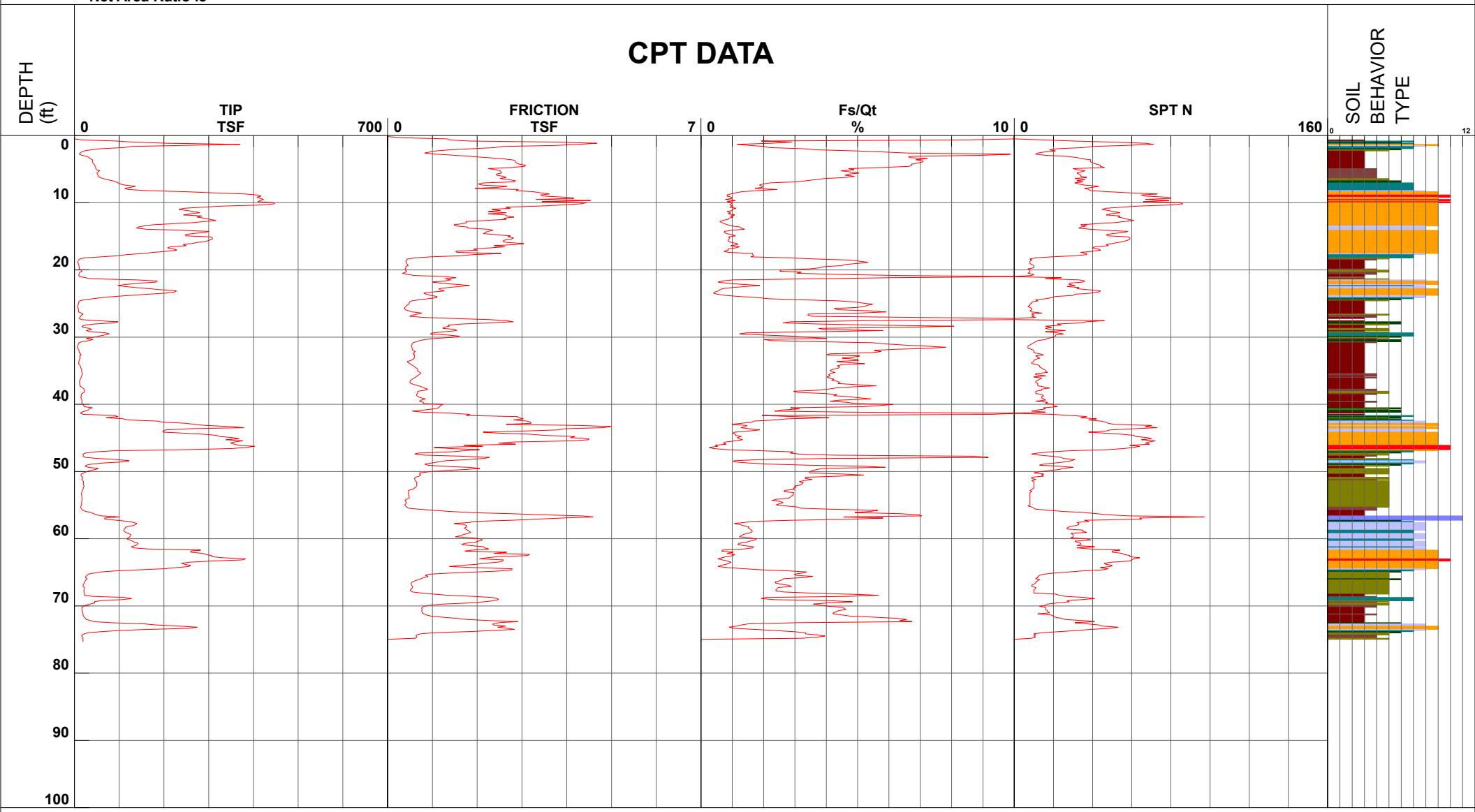
S*Soil behavior type and SPT based on data from UBC-1983

Cornerstone Earth Group

Project	Dupont Village	Operator	RB-JO	Filename	SDF(100).cpt
Job Number	908-2-1	Cone Number	DDG1418	GPS	
Hole Number	CPT-05	Date and Time	2/27/2018 3:49:06 PM	Maximum Depth	75.29 ft
EST GW Depth During Test		21.70 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

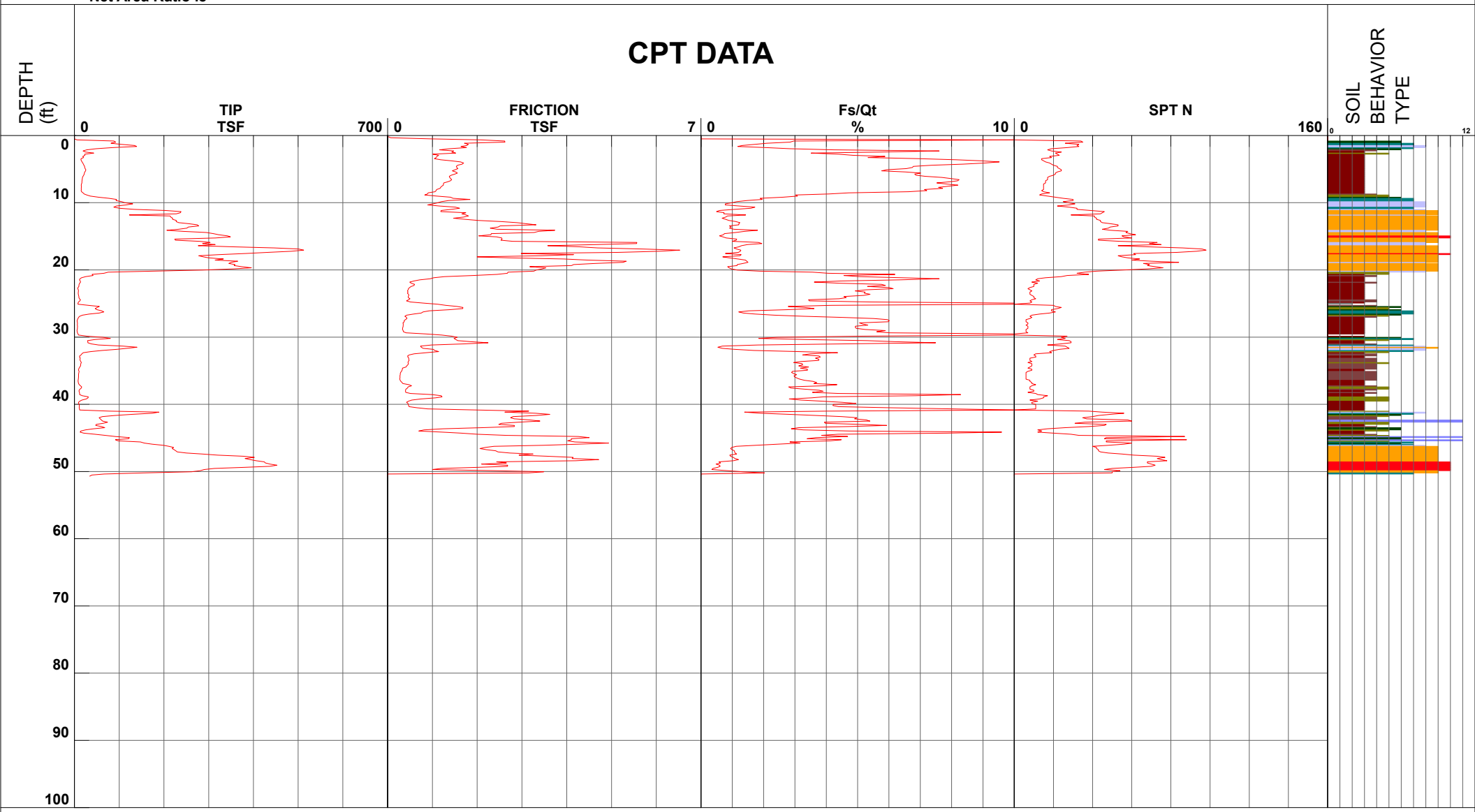
S*Soil behavior type and SPT based on data from UBC-1983

Cornerstone Earth Group

Project	Dupont Village	Operator	RB-JO	Filename	SDF(099).cpt
Job Number	908-2-1	Cone Number	DDG1418	GPS	
Hole Number	CPT-06	Date and Time	2/27/2018 3:05:24 PM	Maximum Depth	50.69 ft
EST GW Depth During Test		20.00 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

S*Soil behavior type and SPT based on data from UBC-1983

APPENDIX B: LABORATORY TEST PROGRAM

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

Moisture Content: The natural water content was determined (ASTM D2216) on 41 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

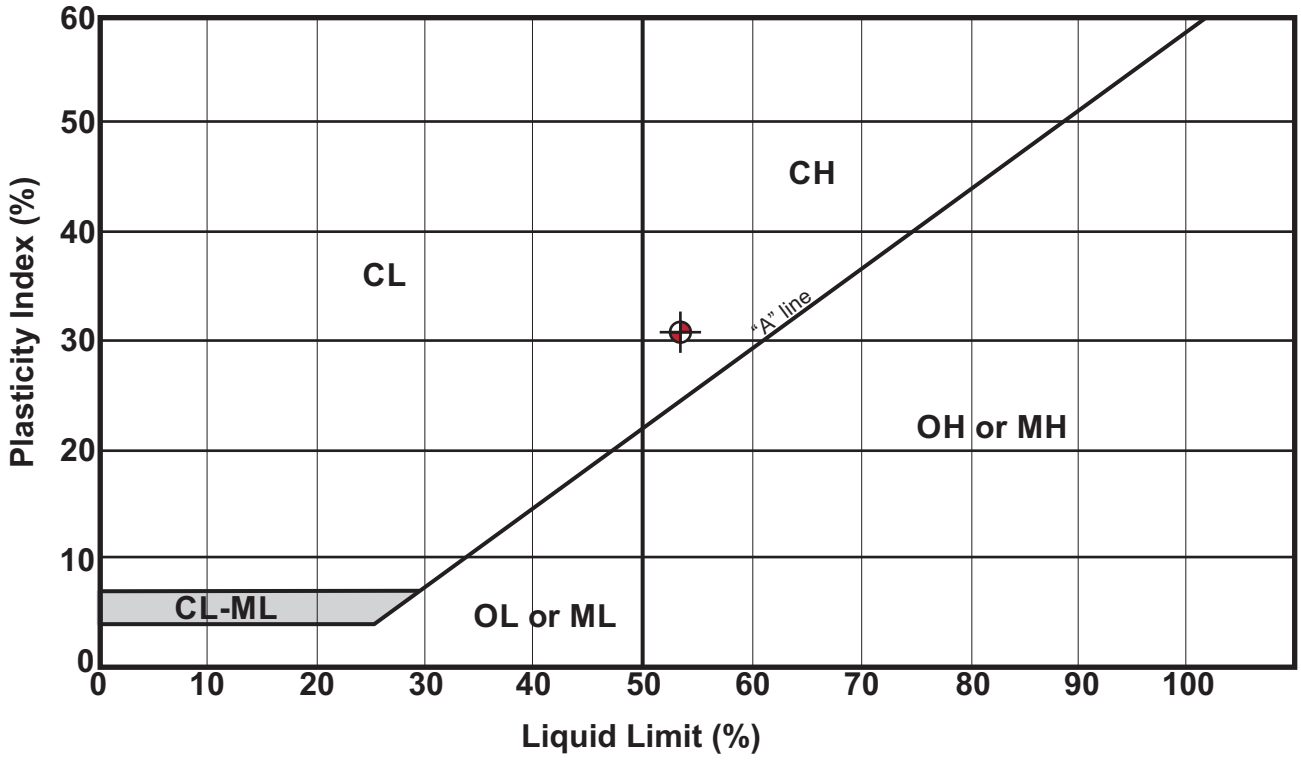
Dry Densities: In place dry density determinations (ASTM D2937) were performed on 30 samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Washed Sieve Analyses: The percent soil fraction passing the No. 200 sieve (ASTM D1140) was determined on three samples of the subsurface soils to aid in the classification of these soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Plasticity Index: One Plasticity Index determination (ASTM D4318) was performed on a sample of the subsurface soil to measure the range of water contents over which this material exhibits plasticity. The Plasticity Index was used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of this test are shown on the boring log at the appropriate sample depth.

Consolidation: One consolidation tests (ASTM D2435) was performed on a relatively undisturbed sample of the subsurface clayey soils to assist in evaluating the compressibility property of the soil. Results of the consolidation test is presented graphically in this appendix.

Plasticity Index (ASTM D4318) Testing Summary



Symbol	Boring No.	Depth (ft)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Passing No. 200 (%)	Group Name (USCS - ASTM D2487)
⊕	EB-2	2.0	23	53	22	31	---	Fat Clay (CH)

CORNERSTONE EARTH GROUP

Plasticity Index Testing Summary

DuPont Village
Residential Development
San Jose, CA

Project Number: 908-2-1

Figure Number: Figure B1

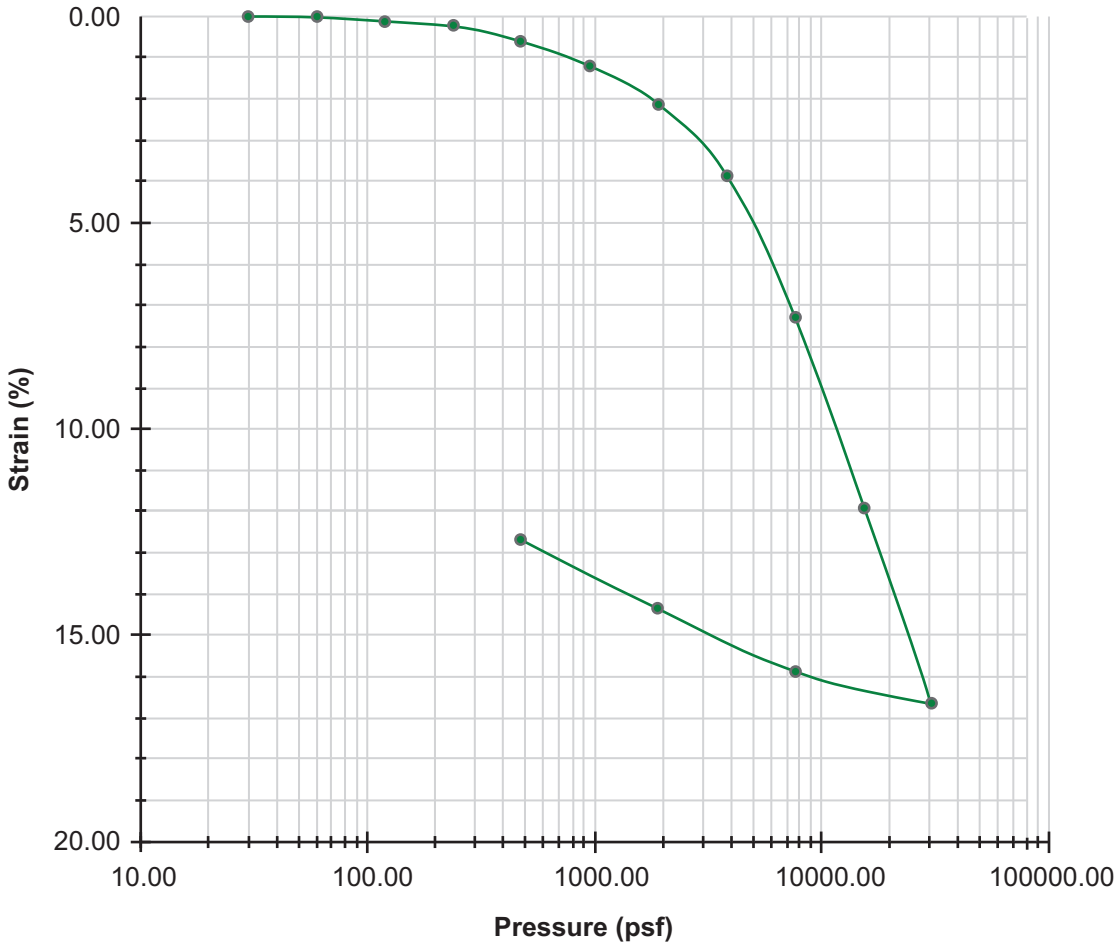
Date: June 2018

Drawn By: FLL

Consolidation Test ASTM D2435

Boring: EB-2 **Sample:** 10 **Depth:** 28.5'

Desription: Lean Clay with Sand (CL)



	BEFORE	AFTER
Moisture (%)	28.2	24.0
Dry Density (pcf)	93.6	102.7
Saturation (%)	94.1	100.00
Void Ratio	0.81	0.65

CORNERSTONE EARTH GROUP

Strain-Log Curve - EB-2 @ 28.5'

DuPont Village
Residential Development
San Jose, CA

Project Number: 908-2-1

Figure Number: Figure B2

Date: June 2018

Drawn By: FLL

APPENDIX C: LIQUEFACTION ANALYSES CALCULATIONS

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
0.160	51.470	1.042	20.0	20.0	500.296	2.024	1.71		Unsaturated	0.0			48.65	1.70	82.70	82.70	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.330	135.070	1.247	41.3	41.3	914.224	0.924	1.29		Unsaturated	0.0			127.67	1.70	217.03	217.03	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.490	167.700	1.771	61.3	61.3	931.479	1.056	1.34		Unsaturated	0.0			158.51	1.70	269.46	269.46	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.660	496.240	2.305	82.5	82.5	2375.204	0.465	0.89		Unsaturated	0.0			469.04	1.70	797.36	797.36	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	351.980	2.520	102.5	102.5	1511.350	0.716	1.11		Unsaturated	0.0			332.68	1.70	565.56	565.56	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	258.140	2.126	122.5	122.5	1013.810	0.824	1.23		Unsaturated	0.0			243.99	1.70	414.78	414.78	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	233.530	2.162	143.8	143.8	846.598	0.926	1.30		Unsaturated	0.0			220.73	1.70	375.24	375.24	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	195.010	1.430	163.8	163.8	662.302	0.734	1.26		Unsaturated	0.0			184.32	1.70	313.34	313.34	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	162.810	1.294	185.0	185.0	520.140	0.795	1.35		Unsaturated	0.0			153.88	1.70	261.60	261.60	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	106.370	2.172	205.0	205.0	322.698	2.044	1.81		Unsaturated	7.6			100.54	1.70	170.92	173.90	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	93.900	1.785	225.0	225.0	271.848	1.903	1.82		Unsaturated	8.8			88.75	1.70	150.88	156.42	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	61.200	1.576	246.3	246.3	169.224	2.580	2.05		Unsaturated	27.0			57.84	1.70	98.34	149.15	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	32.430	1.240	266.3	266.3	86.057	3.840	2.37		Unsaturated	52.5			30.65	1.70	52.11	112.94	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	22.490	1.025	287.5	287.5	57.300	4.587	2.54		Unsaturated	66.5			21.26	1.70	36.14	96.56	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	18.470	1.032	307.5	307.5	66.791	5.637	2.57		Unsaturated	68.4			17.46	1.70	29.68	88.63	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	15.170	1.149	327.5	327.5	52.360	7.656	2.74		Unsaturated	82.0			14.34	1.70	24.38	83.96	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	15.740	1.472	348.8	348.8	89.265	9.457	2.67		Unsaturated	76.6			14.88	1.70	25.29	84.39	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	16.990	1.710	368.8	368.8	91.149	10.178	2.69		Unsaturated	78.3			16.06	1.70	27.30	87.25	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	17.180	1.847	390.0	390.0	87.103	10.874	2.73		Unsaturated	81.1			16.24	1.70	27.60	88.04	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	18.430	1.906	410.0	410.0	88.902	10.460	2.71		Unsaturated	79.6			17.42	1.70	29.61	90.44	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	19.870	1.870	430.0	430.0	91.419	9.512	2.67		Unsaturated	76.3			18.78	1.70	31.93	92.95	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	19.810	1.756	451.3	451.3	86.801	8.968	2.66		Unsaturated	75.7			18.72	1.70	31.83	92.72	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	18.440	1.563	471.3	471.3	77.260	8.584	2.67		Unsaturated	76.8			17.43	1.70	29.63	90.04	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	16.920	1.404	492.5	492.5	67.711	8.419	2.70		Unsaturated	79.0			15.99	1.70	27.19	87.20	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	15.720	1.393	512.5	512.5	60.346	9.006	2.75		Unsaturated	83.3			14.86	1.70	25.26	85.28	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	16.510	1.467	533.8	533.8	60.864	9.030	2.75		Unsaturated	83.2			15.60	1.70	26.53	86.92	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	18.740	1.535	553.8	553.8	66.684	8.315	2.70		Unsaturated	79.0			17.71	1.70	30.11	91.00	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	20.620	1.558	573.8	573.8	70.878	7.660	2.66		Unsaturated	75.4			19.49	1.70	33.13	94.36	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	21.130	1.567	595.0	595.0	70.025	7.520	2.65		Unsaturated	75.2			19.97	1.70	33.95	95.39	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	21.550	1.516	615.0	615.0	69.081	7.135	2.64		Unsaturated	74.0			20.37	1.70	34.63	96.06	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	21.830	1.500	636.3	636.3	67.621	6.972	2.64		Unsaturated	73.9			20.63	1.70	35.08	96.62	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	22.510	1.567	656.3	656.3	67.602	7.063	2.64		Unsaturated	74.2			21.28	1.70	36.17	98.10	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	22.730	1.684	676.3	676.3	66.224	7.521	2.67		Unsaturated	76.4			21.48	1.70	36.52	98.91	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.580	24.780	1.778	697.5	697.5	70.054	7.276	2.64		Unsaturated	74.3			23.42	1.70	39.82	102.83	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.740	23.590	1.846	717.5	717.5	64.756	7.947	2.69		Unsaturated	78.4			22.30	1.70	37.90	101.02	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.910	23.480	1.881	738.8	738.8	62.567	8.138	2.71		Unsaturated	79.7			22.19	1.69	37.43	100.62	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	22.710	1.858	758.8	758.8	58.862	8.321	2.73		Unsaturated	81.7			21.47	1.67	35.87	98.87	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.230	21.710	1.817	778.8	778.8	54.756	8.523	2.76		Unsaturated	83.9			20.52	1.66	34.01	96.75	1.00	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.400	20.730	1.729	800.0	800.0	50.825	8.503	2.78		Unsaturated	85.5			19.59	1.64	32.19	94.58	0.99	0.323	1.099	n.a.	n.a.	n.a.	0.00	0.00
6.560	20.440	1.692	820.0	820.0	48.854	8.446	2.79		Unsaturated	86.1			19.32	1.63	31.41	93.64	0.99	0.323	1.096	n.a.	n.a.	n.a.	0.00	0.00
6.730	20.810	1.628	841.3	841.3	48.474	7.983	2.77		Unsaturated	84.8			19.67	1.60	31.56	93.67	0.99	0.323	1.093	n.a.	n.a.	n.a.	0.00	0.00
6.890	19.830	1.594	861.3	861.3	45.049	8.214	2.80		Unsaturated	87.2			18.74	1.59	29.83	91.72	0.99	0.323	1.090	n.a.	n.a.	n.a.	0.00	0.00
7.050	19.080	1.596	881.3	881.3	42.302	8.564	2.83		Unsaturated	89.7			18.03	1.58	28.46	90.21	0.99	0.323	1.086	n.a.	n.a.	n.a.	0.00	0.00
7.220	18.690	1.576	902.5	902.5	40.418	8.640	2.85		Unsaturated	91.0			17.67	1.56	27.59	89.21	0.99	0.323	1.083	n.a.	n.a.	n.a.	0.00	0.00
7.380	18.330	1.518	922.5	922.5	38.740	8.494	2.86		Unsaturated	91.5			17.33	1.55	26.80	88.24	0.99	0.323	1.081	n.a.	n.a.	n.a.	0.00	0.00
7.550	18.530	1.435	943.8	943.8	38.269	7.949	2.84		Unsaturated	90.1			17.51	1.53	26.78	88.06	0.99	0.323	1.078	n.a.	n.a.	n.a.	0.00	0.00
7.710	18.780	1.258	963.8	963.8	37.973	6.874	2.79		Unsaturated	86.5			17.75	1.51	26.86	87.76	0.99	0.323	1.076	n.a.	n.a.	n.a.	0.00	0.00
7.870	20.230	1.192	983.8	983.8	40.128	6.037	2.74		Unsaturated	81.9			19.12	1.49	28.54	89.36	0.99	0.322	1.075	n.a.	n.a.	n.a.	0.00	0.00
8.040	21.460	1.354	1005.0	1005.0	41.706	6.460	2.75		Unsaturated	82.7			20.28	1.47	29.84	91.16	0.99	0.322	1.074	n.a.	n.a.	n.a.	0.00	0.00
8.200	22.070	1.255	1025.0	1025.0	42.063	5.820	2.71		Unsaturated	79.9			20.86	1.46	30.36	91.45	0.99	0.322	1.072	n.a.	n.a.	n.a.	0.00	0.00
8.370	21.230	1.278	1046.3	1046.3	39.583	6.170	2.75		Unsaturated	82.8			20.07	1.44	28.96	90.03	0.99	0.322	1.069	n.a.	n.a.	n.a.	0.00	0.00
8.530	30.330	0.844	1066.3	1066.3	39.675	2.833	2.51		Unsaturated	63.8			28.67	1.40	40.26	101.24	0.99	0.322	1.074	n.a.	n.a.	n.a.	0.00	0.00
8.690	49.520	1.054	1086.3	1086.3	64.610	2.152	2.27		Unsaturated	44.8			46.81	1.35	63.20	123.37	0.99	0.322	1.085	n.a.	n.a.	n.a.	0.00	0.00
8.860	64.120	0.982	1107.5	1107.5	83.048	1.545	2.10		Unsaturated	30.6			60.60	1.32	80.23	132.54	0.99	0.322	1.089	n.a.	n.a.	n.a.	0.00	0.00
9.020	71.500	0.935	1127.5	1127.5	91.851	1.318	2.02		Unsaturated	24.3			67.58	1.31	88.71	133.16	0.99	0.322	1.087	n.a.	n.a.	n.a.	0.00	0.00
9.190	61.620	1.050	1148.8	1148.8	78.309	1.720	2.15		Unsaturated	34.6			58.24	1.30	75.96	131.70	0.99	0.322	1.084	n.a.	n.a.	n.a.	0.00	0.00
9.350	60.110	0.994	1168.8	1168.8	75.703	1.669	2.15		Unsaturated	34.8			56.81	1.30	73.75	129.16	0.99	0.321	1.080	n.a.	n.a.	n.a.	0.00	0.00
9.510	58.140	1.034	1188.8	1188.8	72.567	1.798	2.18		Unsaturated	37.6			54.95	1.29	70.88	128.10	0.99	0.321	1.077	n.a.	n.a.	n.a.	0.00	0.00
9.680	54.070	0.907	1210.0	1210.0	66.827	1.696	2.19		Unsaturated	38.4			51.11	1.29	65.80	122.42	0.99	0.321	1.071	n.a.	n.a.	n.a.	0.00	0.00
9.840	53.990	0.893	1230.0	1230.0	66.169	1.672	2.19		Unsaturated	38.3			51.03	1.28	65.26	121.72	0.99	0.321	1.068	n.a.	n.a.	n.a.	0.00	0.00
10.010	55.670	0.939	1251.3	1251.3	67.657	1.705	2.19		Unsaturated	38.2			52.62	1.27	66.66	123.35	0.99	0.321	1.067	n.a.	n.a.	n.a.	0.00	0.00
10.170	58.990	0.976	1271.3	1271.3	71.159	1.672	2.17		Unsaturated	36.4			55.76	1.25	69.96	125.98	0.99	0.321	1.067	n.a.	n.a.	n.a.	0.00	0.00
10.330	65.510	0.949	1291.3	1291.3	78.483	1.462	2.10		Unsaturated	30.8			61.92	1.24	76.95	128.81	0.99	0.321	1.066	n.a.	n.a.	n.a.	0.00	0.00
10.500	79.460	0.979	1312.5	1312.5	94.573	1.242	1.99		Unsaturated	22.2			75.10	1.23	92.32	133.19	0.99	0.321	1.066	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 1

PGA (A_{max}) 0.50

Total Settlement: 0.25 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
10.660	94.310	0.877	1332.5	1332.5	111.537	0.937	1.86		Unsaturated	11.5			89.14	1.23	109.89	122.24	0.99	0.321	1.059	n.a.	n.a.	n.a.	0.00	0.00
10.830	102.700	0.903	1353.8	1353.8	120.560	0.885	1.81		Unsaturated	8.1			97.07	1.22	118.80	122.32	0.99	0.320	1.057	n.a.	n.a.	n.a.	0.00	0.00
10.990	103.980	1.282	1373.8	1373.8	121.168	1.241	1.91		Unsaturated	15.8			98.28	1.19	117.44	144.60	0.99	0.320	1.066	n.a.	n.a.	n.a.	0.00	0.00
11.150	120.070	1.198	1393.8	1393.8	139.023	1.003	1.80		Unsaturated	7.3			113.49	1.19	135.48	137.66	0.99	0.320	1.060	n.a.	n.a.	n.a.	0.00	0.00
11.320	134.860	1.235	1415.0	1415.0	155.057	0.921	1.74		Unsaturated	2.5			127.47	1.18	149.93	149.93	0.98	0.320	1.064	n.a.	n.a.	n.a.	0.00	0.00
11.480	124.810	0.964	1435.0	1435.0	142.427	0.777	1.72		Unsaturated	0.8			117.97	1.18	138.97	138.97	0.98	0.320	1.056	n.a.	n.a.	n.a.	0.00	0.00
11.650	111.670	0.481	1456.3	1456.3	126.401	0.434	1.61		Unsaturated	0.0			105.55	1.18	124.77	124.77	0.98	0.320	1.048	n.a.	n.a.	n.a.	0.00	0.00
11.810	95.460	0.595	1476.3	1476.3	107.187	0.628	1.76		Unsaturated	4.1			90.23	1.19	107.33	107.36	0.98	0.320	1.041	n.a.	n.a.	n.a.	0.00	0.00
11.980	89.530	0.694	1497.5	1497.5	99.749	0.782	1.84		Unsaturated	10.6			84.62	1.18	99.85	109.15	0.98	0.320	1.039	n.a.	n.a.	n.a.	0.00	0.00
12.140	105.310	0.753	1517.5	1517.5	116.691	0.720	1.77		Unsaturated	4.5			99.54	1.17	116.15	116.21	0.98	0.319	1.040	n.a.	n.a.	n.a.	0.00	0.00
12.300	115.000	1.145	1537.5	1537.5	126.663	1.003	1.83		Unsaturated	9.7			108.70	1.15	124.85	132.27	0.98	0.319	1.044	n.a.	n.a.	n.a.	0.00	0.00
12.470	145.490	1.385	1558.8	1558.8	159.362	0.957	1.75		Unsaturated	2.7			137.51	1.13	155.15	155.15	0.98	0.319	1.051	n.a.	n.a.	n.a.	0.00	0.00
12.630	181.220	2.041	1578.8	1578.8	197.436	1.131	1.73		Unsaturated	1.6			171.29	1.11	189.43	189.43	0.98	0.319	1.068	n.a.	n.a.	n.a.	0.00	0.00
12.800	214.450	2.539	1600.0	1600.0	232.228	1.188	1.70		Unsaturated	0.0			202.69	1.09	220.61	220.61	0.98	0.319	1.084	n.a.	n.a.	n.a.	0.00	0.00
12.960	229.530	2.185	1620.0	1620.0	247.069	0.955	1.61		Unsaturated	0.0			216.95	1.08	234.21	234.21	0.98	0.319	1.080	n.a.	n.a.	n.a.	0.00	0.00
13.120	213.310	2.393	1640.0	1640.0	228.133	1.126	1.69		Unsaturated	0.0			201.62	1.08	217.99	217.99	0.98	0.319	1.076	n.a.	n.a.	n.a.	0.00	0.00
13.290	203.280	2.369	1661.3	1661.3	215.959	1.170	1.72		Unsaturated	0.4			192.14	1.08	207.58	207.58	0.98	0.319	1.070	n.a.	n.a.	n.a.	0.00	0.00
13.450	203.200	2.699	1681.3	1681.3	214.575	1.334	1.76		Unsaturated	4.0			192.06	1.08	206.76	206.78	0.98	0.318	1.066	n.a.	n.a.	n.a.	0.00	0.00
13.620	221.070	2.509	1702.5	1702.5	232.051	1.139	1.69		Unsaturated	0.0			208.95	1.07	223.04	223.04	0.98	0.318	1.065	n.a.	n.a.	n.a.	0.00	0.00
13.780	229.130	3.029	1722.5	1722.5	239.133	1.327	1.73		Unsaturated	1.4			216.57	1.06	229.96	229.96	0.98	0.318	1.062	n.a.	n.a.	n.a.	0.00	0.00
13.940	234.370	3.351	1742.5	1742.5	243.204	1.435	1.75		Unsaturated	3.2			221.52	1.06	234.20	234.20	0.98	0.318	1.058	n.a.	n.a.	n.a.	0.00	0.00
14.110	220.730	3.517	1763.8	1763.8	227.602	1.600	1.81		Unsaturated	7.6			208.63	1.06	220.31	223.73	0.98	0.318	1.055	n.a.	n.a.	n.a.	0.00	0.00
14.270	212.610	2.519	1783.8	1783.8	217.953	1.190	1.72		Unsaturated	0.6			200.95	1.06	212.02	212.02	0.98	0.318	1.051	n.a.	n.a.	n.a.	0.00	0.00
14.440	184.830	1.855	1805.0	1805.0	188.226	1.008	1.71		Unsaturated	0.0			174.70	1.06	184.71	184.71	0.98	0.318	1.035	n.a.	n.a.	n.a.	0.00	0.00
14.600	177.510	1.332	1825.0	1825.0	179.732	0.754	1.64		Unsaturated	0.0			167.78	1.05	177.00	177.00	0.98	0.318	1.030	n.a.	n.a.	n.a.	0.00	0.00
14.760	190.200	1.445	1845.0	1845.0	191.590	0.763	1.62		Unsaturated	0.0			179.77	1.05	188.48	188.48	0.98	0.317	1.032	n.a.	n.a.	n.a.	0.00	0.00
14.930	196.890	1.520	1866.3	1866.3	197.219	0.776	1.62		Unsaturated	0.0			186.10	1.04	194.15	194.15	0.98	0.317	1.031	n.a.	n.a.	n.a.	0.00	0.00
15.090	189.600	2.179	1886.3	1886.3	188.862	1.155	1.75		Unsaturated	3.2			179.21	1.04	186.52	186.52	0.98	0.317	1.026	n.a.	n.a.	n.a.	0.00	0.00
15.260	186.910	3.075	1907.5	1907.5	185.119	1.654	1.87		Unsaturated	13.0			176.66	1.03	182.69	204.50	0.98	0.317	1.029	n.a.	n.a.	n.a.	0.00	0.00
15.420	203.540	3.409	1927.5	1927.5	200.615	1.683	1.86		Unsaturated	11.7			192.38	1.03	198.02	215.18	0.97	0.317	1.028	n.a.	n.a.	n.a.	0.00	0.00
15.580	221.920	3.141	1947.5	1947.5	217.681	1.421	1.78		Unsaturated	5.4			209.75	1.03	215.21	215.59	0.97	0.317	1.025	n.a.	n.a.	n.a.	0.00	0.00
15.750	205.750	3.096	1968.8	1968.8	200.648	1.512	1.82		Unsaturated	8.8			194.47	1.02	199.04	205.49	0.97	0.317	1.020	n.a.	n.a.	n.a.	0.00	0.00
15.910	206.190	3.015	1988.8	1988.8	200.055	1.470	1.81		Unsaturated	8.1			194.89	1.02	198.86	203.35	0.97	0.316	1.017	n.a.	n.a.	n.a.	0.00	0.00
16.080	217.330	2.540	2010.0	2010.0	209.788	1.174	1.73		Unsaturated	1.1			205.42	1.02	208.80	208.80	0.97	0.316	1.015	n.a.	n.a.	n.a.	0.00	0.00
16.240	212.970	2.205	2030.0	2030.0	204.535	1.040	1.70		Unsaturated	0.0			201.29	1.01	204.02	204.02	0.97	0.316	1.011	n.a.	n.a.	n.a.	0.00	0.00
16.400	200.850	2.337	2050.0	2050.0	191.887	1.170	1.75		Unsaturated	3.1			189.84	1.01	191.90	191.90	0.97	0.316	1.008	n.a.	n.a.	n.a.	0.00	0.00
16.570	219.050	2.459	2071.3	2071.3	208.277	1.128	1.72		Unsaturated	0.3			207.04	1.01	208.46	208.46	0.97	0.316	1.006	n.a.	n.a.	n.a.	0.00	0.00
16.730	241.360	3.732	2091.3	2091.3	228.480	1.553	1.80		Unsaturated	6.7			228.13	1.00	228.91	230.67	0.97	0.316	1.004	n.a.	n.a.	n.a.	0.00	0.00
16.900	226.060	2.546	2112.5	2112.5	212.845	1.131	1.71		Unsaturated	0.0			213.67	1.00	213.78	213.78	0.97	0.316	1.000	n.a.	n.a.	n.a.	0.00	0.00
17.060	225.140	2.486	2132.5	2132.5	210.969	1.109	1.71		Unsaturated	0.0			212.80	1.00	212.28	212.28	0.97	0.316	0.998	n.a.	n.a.	n.a.	0.00	0.00
17.220	167.730	1.298	2152.5	2152.5	156.176	0.779	1.69		Unsaturated	0.0			158.53	0.99	157.48	157.48	0.97	0.315	0.997	n.a.	n.a.	n.a.	0.00	0.00
17.390	152.280	1.205	2173.8	2173.8	140.994	0.797	1.73		Unsaturated	1.6			143.93	0.99	142.33	142.33	0.97	0.315	0.996	n.a.	n.a.	n.a.	0.00	0.00
17.550	153.000	1.115	2193.8	2193.8	141.009	0.734	1.71		Unsaturated	0.0			144.61	0.99	142.46	142.46	0.97	0.315	0.995	n.a.	n.a.	n.a.	0.00	0.00
17.720	142.550	1.033	2215.0	2215.0	130.667	0.731	1.73		Unsaturated	1.7			134.74	0.98	132.09	132.09	0.97	0.315	0.994	n.a.	n.a.	n.a.	0.00	0.00
17.880	126.680	0.946	2235.0	2235.0	115.476	0.754	1.78		Unsaturated	5.8			119.74	0.98	116.75	117.24	0.97	0.315	0.993	n.a.	n.a.	n.a.	0.00	0.00
18.040	120.000	0.721	2255.0	2255.0	108.838	0.607	1.75		Unsaturated	2.9			113.42	0.97	110.03	110.03	0.97	0.315	0.993	n.a.	n.a.	n.a.	0.00	0.00
18.210	102.590	0.938	2276.3	2276.3	92.453	0.925	1.92		Unsaturated	16.2			96.97	0.97	93.79	119.97	0.97	0.315	0.991	n.a.	n.a.	n.a.	0.00	0.00
18.370	69.020	0.867	2296.3	2296.3	61.582	1.277	2.14		Unsaturated	34.3			65.24	0.96	62.80	115.27	0.97	0.314	0.990	n.a.	n.a.	n.a.	0.00	0.00
18.540	45.000	0.862	2317.5	2317.5	39.595	1.966	2.41		Unsaturated	55.6			42.53	0.96	40.64	99.44	0.97	0.314	0.990	n.a.	n.a.	n.a.	0.00	0.00
18.700	29.200	0.704	2337.5	2337.5	23.984	2.513	2.64		Unsaturated	74.6			27.60	0.95	26.17	85.21	0.97	0.314	0.991	n.a.	n.a.	n.a.	0.00	0.00
18.860	32.690	0.739	2357.5	2357.5	28.217	2.346	2.57		Unsaturated	68.6			30.90	0.94	29.19	88.05	0.97	0.314	0.990	n.a.	n.a.	n.a.	0.00	0.00
19.030	29.880	0.629	2378.8	2378.8	24.122	2.192	2.61		Unsaturated	71.5			28.24	0.94	26.53	85.16	0.97	0.314	0.989	n.a.	n.a.	n.a.	0.00	0.00
19.190	19.200	0.680	2398.8	2398.8	15.008	3.775	2.91		Unsaturated	96.1			18.15	0.93	16.92	75.77	0.97	0.314	0.989	n.a.	n.a.	n.a.	0.00	0.00
19.360	13.220	0.738	2420.0	2420.0	9.926	6.148	3.19		Unsaturated	100.0			12.50	0.93	11.57	69.09	0.96	0.314	0.989	n.a.	n.a.	n.a.	0.00	0.00
19.520	11.370	0.792	2440.0	2440.0	8.320	7.804	3.31		Unsaturated	100.0			10.75	0.92	9.89	66.89	0.96	0.313	0.988	n.a.	n.a.	n.a.	0.00	0.00
19.690	62.180	1.005	2461.3	2461.3	53.415	1.649	2.26		Unsaturated	43.7			58.77	0.93	54.72	112.12	0.96	0.313	0.982	n.a.	n.a.	n.a.	0.00	0.00
19.850	114.680	1.000	2481.3	2481.3	99.015	0.882	1.88		Unsaturated	13.3			108.39	0.93	100.75	118.64	0.96	0.313	0.980	n.a.	n.a.	n.a.	0.00	0.00
20.010	142.970	1.520	2501.3	2501.3	123.203	1.072	1.86		Sand	11.9	157.28		157.28	0.94	147.54	163.30	0.96	0.313	0.970	0.408	0.727	2.32	0.00	0.00
20.180	147.800	1.559	2522.5	2522.5	126.855	1.064	1.85		Sand	11.0	157.28		157.28	0.93	146.90	159.26	0.96	0.314	0.969	0.364	0.629	2.00	0.00	0.00
20.340	148.760	1.660	2542.5	2542.5	127.175	1.125	1.87		Sand	12.3	157.28		157.28	0.93	146.63	163.50	0.96	0.315	0.967	0.410	0.730	2.32	0.00	0.00
20.510	147.470	1.509	2563.8	2563.8	125.530	1.032	1.84		Sand	10.6	157.28		157.28	0.93	145.87	156.69	0.96	0.316	0.967	0.340	0.575	1.82	0.00	0.00
20.670	166.400	1.607	2583.8	2583.8	141.226	0.973	1.79		Sand	6.2			157.28	0.92	144.90	145.74	0.96	0.318	0.969	0.263	0.413	1.30	0.00	0.00
20.830	166.310	1.369	2603.8	2603.8	140.598	0.830	1.74		Sand	2.6			157.19	0.92	144.29	144.29	0.96	0.319	0.968	0.255	0.396	1.24	0.01	0.01
21.000	165.810	2.150	2625.0	2625.0	139.594	1.307	1.88		Sand	13.5			156.72	0.92	144.46	165.96	0.96	0.320	0.960	0.442	0.795	2.49	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
21.160	179.790	1.940	2645.0	2645.0	150.875	1.087	1.80		Sand	7.1			169.93	0.92	155.75	157.81	0.96	0.321	0.962	0.350	0.594	1.85	0.00	0.00
21.330	187.100	2.060	2666.3	2666.3	156.419	1.109	1.80		Sand	6.7			176.84	0.92	161.90	163.40	0.96	0.322	0.958	0.409	0.721	2.24	0.00	0.00
21.490	183.560	1.665	2686.3	2686.3	152.858	0.914	1.75		Sand	2.7			173.50	0.91	158.07	158.07	0.96	0.323	0.959	0.352	0.597	1.85	0.00	0.00
21.650	181.320	1.064	2706.3	2706.3	150.411	0.591	1.63		Sand	0.0			171.38	0.91	155.54	155.54	0.96	0.324	0.959	0.330	0.549	1.69	0.00	0.00
21.820	194.940	1.307	2727.5	2727.5	161.154	0.675	1.64		Sand	0.0			184.25	0.91	167.49	167.49	0.96	0.325	0.952	0.464	0.838	2.58	0.00	0.00
21.980	198.380	0.782	2747.5	2747.5	163.412	0.397	1.50		Sand	0.0			187.50	0.91	170.16	170.16	0.96	0.326	0.950	0.506	0.930	2.85	0.00	0.00
22.150	170.250	1.150	2768.8	2768.8	139.531	0.681	1.69		Sand	0.0			160.92	0.89	143.99	143.99	0.96	0.327	0.959	0.253	0.389	1.19	0.01	0.01
22.310	136.760	1.643	2788.8	2788.8	111.449	1.214	1.93		Sand	17.4	160.92		160.92	0.91	145.87	181.12	0.96	0.328	0.941	0.760	1.507	4.60	0.00	0.00
22.470	101.260	1.704	2808.8	2808.8	81.920	1.706	2.13		Sand	33.3	160.92		160.92	0.92	147.52	217.53	0.96	0.329	0.915	5.914	11.905	36.20	0.00	0.00
22.640	53.130	1.353	2830.0	2830.0	42.266	2.615	2.47		Sand	60.3	160.92		160.92	0.92	148.28	238.69	0.96	0.330	0.913	37.628	75.562	229.09	0.00	0.00
22.800	23.150	0.882	2850.0	2850.0	15.246	4.059	2.93		Clay	97.2			21.88	0.92	n.a.	n.a.	0.96	0.331	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.970	13.640	0.564	2871.3	2871.3	8.501	4.625	3.16		Clay	100.0			12.89	0.92	n.a.	n.a.	0.95	0.332	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	12.180	0.507	2891.3	2891.3	7.425	4.727	3.22		Clay	100.0			11.51	0.92	n.a.	n.a.	0.95	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.290	10.380	0.482	2911.3	2911.3	6.131	5.396	3.32		Clay	100.0			9.81	0.92	n.a.	n.a.	0.95	0.334	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.460	9.780	0.469	2932.5	2932.5	5.670	5.645	3.36		Clay	100.0			9.24	0.92	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.620	9.960	0.465	2952.5	2952.5	5.747	5.483	3.34		Clay	100.0			9.41	0.92	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.790	10.010	0.471	2973.8	2973.8	5.732	5.524	3.35		Clay	100.0			9.46	0.91	n.a.	n.a.	0.95	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	10.060	0.471	2993.8	2993.8	5.721	5.499	3.35		Clay	100.0			9.51	0.91	n.a.	n.a.	0.95	0.337	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.110	10.060	0.468	3013.8	3013.8	5.676	5.474	3.35		Clay	100.0			9.51	0.91	n.a.	n.a.	0.95	0.338	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.280	10.110	0.472	3035.0	3035.0	5.662	5.489	3.35		Clay	100.0			9.56	0.91	n.a.	n.a.	0.95	0.339	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.440	9.870	0.479	3055.0	3055.0	5.462	5.745	3.37		Clay	100.0			9.33	0.91	n.a.	n.a.	0.95	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.610	9.870	0.509	3076.3	3076.3	5.417	6.109	3.39		Clay	100.0			9.33	0.91	n.a.	n.a.	0.95	0.341	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	9.800	0.542	3096.3	3096.3	5.330	6.562	3.42		Clay	100.0			9.26	0.90	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.930	10.380	0.765	3116.3	3116.3	5.662	8.669	3.47		Clay	100.0			9.81	0.90	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.100	14.110	1.132	3137.5	3137.5	7.994	9.022	3.36		Clay	100.0			13.34	0.90	n.a.	n.a.	0.95	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.260	22.250	1.012	3157.5	3157.5	13.093	4.897	3.03		Clay	100.0			21.03	0.90	n.a.	n.a.	0.95	0.344	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	18.420	0.698	3178.8	3178.8	10.589	4.145	3.06		Clay	100.0			17.41	0.90	n.a.	n.a.	0.95	0.345	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.590	13.230	0.520	3198.8	3198.8	7.272	4.470	3.21		Clay	100.0			12.50	0.90	n.a.	n.a.	0.95	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	11.100	0.398	3218.8	3218.8	5.897	4.198	3.27		Clay	100.0			10.49	0.90	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.920	8.160	0.383	3240.0	3240.0	4.037	5.861	3.49		Clay	100.0			7.71	0.89	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.080	8.150	0.423	3260.0	3260.0	4.000	6.491	3.52		Clay	100.0			7.70	0.89	n.a.	n.a.	0.95	0.348	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.250	9.740	0.534	3281.3	3281.3	4.937	6.591	3.44		Clay	100.0			9.21	0.89	n.a.	n.a.	0.94	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.410	9.870	0.972	3301.3	3301.3	4.980	11.827	3.60		Clay	100.0			9.33	0.89	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.570	10.800	1.667	3321.3	3321.3	5.504	18.241	3.69		Clay	100.0			10.21	0.89	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	29.660	2.012	3342.5	3342.5	16.747	7.188	3.06		Clay	100.0			28.03	0.89	n.a.	n.a.	0.94	0.351	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	42.280	2.440	3362.5	3362.5	24.148	6.011	2.89		Clay	94.2			39.96	0.88	n.a.	n.a.	0.94	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	63.540	2.737	3383.8	3383.8	36.556	4.425	2.67		Clay	76.4			60.06	0.88	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	70.590	2.880	3403.8	3403.8	40.478	4.181	2.62		Clay	72.5			66.72	0.88	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	62.530	2.431	3425.0	3425.0	35.514	3.998	2.65		Clay	74.7			59.10	0.88	n.a.	n.a.	0.94	0.354	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	40.000	1.544	3445.0	3445.0	22.222	4.033	2.80		Clay	87.0			37.81	0.88	n.a.	n.a.	0.94	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	21.180	0.840	3465.0	3465.0	11.225	4.318	3.05		Clay	100.0			20.02	0.88	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.890	13.610	0.714	3486.3	3486.3	6.808	6.017	3.31		Clay	100.0			12.86	0.88	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.050	10.620	0.686	3506.3	3506.3	5.058	7.741	3.48		Clay	100.0			10.04	0.88	n.a.	n.a.	0.94	0.357	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	10.020	0.691	3527.5	3527.5	4.681	8.365	3.53		Clay	100.0			9.47	0.87	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	10.170	0.627	3547.5	3547.5	4.734	7.464	3.49		Clay	100.0			9.61	0.87	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	11.740	0.566	3567.5	3567.5	5.582	5.685	3.36		Clay	100.0			11.10	0.87	n.a.	n.a.	0.94	0.359	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	11.490	0.550	3588.8	3588.8	5.403	5.670	3.37		Clay	100.0			10.86	0.87	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	10.860	0.535	3608.8	3608.8	5.019	5.908	3.41		Clay	100.0			10.26	0.87	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	10.620	0.541	3629.8	3627.3	4.855	6.140	3.43		Clay	100.0			10.04	0.87	n.a.	n.a.	0.94	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	10.800	0.543	3649.0	3636.5	4.936	6.049	3.42		Clay	100.0			10.21	0.87	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	11.000	0.556	3668.2	3645.7	5.028	6.065	3.42		Clay	100.0			10.40	0.87	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.530	11.790	0.561	3688.6	3655.5	5.441	5.641	3.37		Clay	100.0			11.14	0.87	n.a.	n.a.	0.93	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.690	12.290	0.541	3707.8	3664.7	5.695	5.188	3.33		Clay	100.0			11.62	0.87	n.a.	n.a.	0.93	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.860	12.070	0.531	3728.2	3674.5	5.555	5.199	3.34		Clay	100.0			11.41	0.86	n.a.	n.a.	0.93	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	12.070	0.567	3747.4	3683.8	5.536	5.558	3.36		Clay	100.0			11.41	0.86	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.180	13.320	0.692	3766.6	3693.0	6.194	6.054	3.34		Clay	100.0			12.59	0.86	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.350	14.250	1.102	3787.0	3702.8	6.674	8.914	3.42		Clay	100.0			13.47	0.86	n.a.	n.a.	0.93	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.510	16.820	1.363	3806.2	3712.0	8.037	9.135	3.37		Clay	100.0			15.90	0.86	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.680	33.410	1.650	3826.6	3721.8	16.926	5.239	2.96		Clay	100.0			31.58	0.86	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.840	50.220	1.609	3845.8	3731.0	25.890	3.331	2.70		Clay	78.7			47.47	0.86	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.000	42.030	1.440	3865.0	3740.2	21.441	3.590	2.78		Clay	85.4			39.73	0.86	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.170	25.280	1.200	3885.4	3750.0	12.447	5.142	3.06		Clay	100.0			23.89	0.86	n.a.	n.a.	0.93	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.330	19.340	0.951	3904.6	3759.2	9.251	5.470	3.18		Clay	100.0			18.28	0.86	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.500	30.610	1.130	3925.0	3769.0	15.202	3.944	2.92		Clay	96.7			28.93	0.86	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 1

PGA (A_{max}) 0.50

Total Settlement: 0.25 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
31.660	44.670	1.237	3944.2	3778.2	22.602	2.898	2.70		Clay	79.2			42.22	0.86	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.820	32.680	1.058	3963.4	3787.4	16.211	3.446	2.86		Clay	92.0			30.89	0.86	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.990	19.370	0.728	3983.8	3797.2	9.153	4.189	3.11		Clay	100.0			18.31	0.86	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.150	12.680	0.566	4003.0	3806.4	5.611	5.297	3.34		Clay	100.0			11.98	0.86	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	10.620	0.569	4023.4	3816.2	4.511	6.613	3.48		Clay	100.0			10.04	0.86	n.a.	n.a.	0.93	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	9.950	0.585	4042.6	3825.4	4.145	7.381	3.54		Clay	100.0			9.40	0.86	n.a.	n.a.	0.92	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.640	10.050	0.572	4061.8	3834.7	4.182	7.133	3.52		Clay	100.0			9.50	0.85	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.810	9.550	0.535	4082.2	3844.5	3.906	7.122	3.55		Clay	100.0			9.03	0.85	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	9.400	0.517	4101.4	3853.7	3.814	7.037	3.55		Clay	100.0			8.88	0.85	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	9.800	0.549	4121.8	3863.5	4.006	7.095	3.54		Clay	100.0			9.26	0.85	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	9.840	0.551	4141.0	3872.7	4.012	7.087	3.54		Clay	100.0			9.30	0.85	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	10.060	0.547	4160.2	3881.9	4.111	6.855	3.52		Clay	100.0			9.51	0.85	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.630	10.360	0.543	4180.6	3891.7	4.250	6.566	3.50		Clay	100.0			9.79	0.85	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.790	10.390	0.553	4199.8	3900.9	4.250	6.666	3.50		Clay	100.0			9.82	0.85	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.960	10.610	0.555	4220.2	3910.7	4.347	6.531	3.49		Clay	100.0			10.03	0.85	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.120	10.700	0.530	4239.4	3919.9	4.378	6.175	3.47		Clay	100.0			10.11	0.85	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.280	11.020	0.523	4258.6	3929.1	4.526	5.883	3.45		Clay	100.0			10.42	0.85	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.450	10.900	0.475	4279.0	3938.9	4.448	5.416	3.43		Clay	100.0			10.30	0.85	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.610	10.510	0.482	4298.2	3948.1	4.235	5.767	3.47		Clay	100.0			9.93	0.85	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.780	10.730	0.482	4318.6	3957.9	4.331	5.628	3.45		Clay	100.0			10.14	0.85	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.940	11.270	0.449	4337.8	3967.1	4.588	4.933	3.40		Clay	100.0			10.65	0.85	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.100	11.370	0.419	4357.0	3976.4	4.623	4.559	3.38		Clay	100.0			10.75	0.85	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.270	10.910	0.428	4377.4	3986.2	4.376	4.905	3.41		Clay	100.0			10.31	0.85	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.430	11.040	0.446	4396.6	3995.4	4.426	5.044	3.42		Clay	100.0			10.43	0.85	n.a.	n.a.	0.92	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.600	11.210	0.458	4417.0	4005.2	4.495	5.086	3.41		Clay	100.0			10.60	0.85	n.a.	n.a.	0.91	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.760	11.110	0.494	4436.2	4014.4	4.430	5.551	3.44		Clay	100.0			10.50	0.84	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.930	10.770	0.482	4456.6	4024.2	4.245	5.641	3.46		Clay	100.0			10.18	0.84	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.090	10.870	0.516	4475.8	4033.4	4.280	5.972	3.47		Clay	100.0			10.27	0.84	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.250	11.820	0.523	4495.0	4042.6	4.736	5.464	3.41		Clay	100.0			11.17	0.84	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.420	13.490	0.532	4515.4	4052.4	5.544	4.736	3.32		Clay	100.0			12.75	0.84	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.580	15.350	0.551	4534.6	4061.6	6.442	4.215	3.24		Clay	100.0			14.51	0.84	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.750	12.860	0.553	4555.0	4071.4	5.198	5.224	3.37		Clay	100.0			12.16	0.84	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.910	12.510	0.588	4574.2	4080.6	5.010	5.755	3.41		Clay	100.0			11.82	0.84	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.070	12.520	0.609	4593.4	4089.8	4.999	5.958	3.41		Clay	100.0			11.83	0.84	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.240	13.930	0.638	4613.8	4099.6	5.670	5.487	3.35		Clay	100.0			13.17	0.84	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.400	14.560	0.765	4633.0	4108.8	5.960	6.251	3.37		Clay	100.0			13.76	0.84	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.570	15.060	0.935	4653.4	4118.6	6.183	7.342	3.40		Clay	100.0			14.23	0.84	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	17.040	1.377	4672.6	4127.8	7.124	9.363	3.41		Clay	100.0			16.11	0.84	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.890	20.890	1.635	4691.8	4137.1	8.965	8.817	3.32		Clay	100.0			19.74	0.84	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.060	26.120	1.695	4712.2	4146.9	11.461	7.134	3.18		Clay	100.0			24.69	0.84	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.220	31.260	1.614	4731.4	4156.1	13.905	5.587	3.05		Clay	100.0			29.55	0.84	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.390	33.040	1.590	4751.8	4165.9	14.722	5.184	3.01		Clay	100.0			31.23	0.84	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	35.250	1.648	4771.0	4175.1	15.743	5.014	2.98		Clay	100.0			33.32	0.84	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	37.850	1.605	4790.2	4184.3	16.947	4.527	2.92		Clay	96.8			35.78	0.84	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.880	44.240	1.616	4810.6	4194.1	19.949	3.864	2.82		Clay	88.9			41.81	0.83	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.040	59.900	1.632	4829.8	4203.3	27.352	2.839	2.63		Clay	73.6			56.62	0.83	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.210	74.700	1.526	4850.2	4213.1	48.413	2.112	2.36		Sand	51.8	81.39		81.39	0.73	59.60	122.17	0.90	0.391	0.913	0.176	0.226	0.58	0.03	0.02
39.370	82.120	1.336	4869.4	4222.3	53.318	1.677	2.26		Sand	44.1	81.39		81.39	0.73	59.20	117.96	0.90	0.391	0.915	0.167	0.209	0.54	0.03	0.02
39.530	86.110	1.226	4888.6	4231.5	55.920	1.465	2.21		Sand	39.9			81.39	0.72	58.90	114.94	0.90	0.391	0.917	0.161	0.199	0.51	0.03	0.02
39.700	85.200	1.033	4909.0	4241.3	55.242	1.248	2.17		Sand	36.8			80.53	0.72	57.93	111.44	0.90	0.392	0.919	0.154	0.188	0.48	0.03	0.02
39.860	80.210	1.296	4928.2	4250.5	51.847	1.667	2.27		Sand	44.7			75.81	0.72	54.56	112.49	0.90	0.392	0.918	0.156	0.191	0.49	0.03	0.02
40.030	73.050	1.587	4948.6	4260.3	47.012	2.249	2.39		Sand	54.1			69.05	0.72	49.47	110.15	0.90	0.392	0.919	0.152	0.185	0.47	0.03	0.02
40.190	70.760	1.773	4967.8	4269.5	45.431	2.597	2.44		Sand	58.3			66.88	0.71	47.82	109.43	0.90	0.392	0.920	0.151	0.183	0.47	0.03	0.02
40.350	74.330	1.797	4987.0	4278.8	47.748	2.502	2.41		Sand	56.1			70.26	0.72	50.37	112.00	0.90	0.393	0.918	0.155	0.190	0.48	0.03	0.02
40.520	82.880	1.696	5007.4	4288.6	53.364	2.110	2.33		Sand	49.3			78.34	0.72	56.51	117.17	0.90	0.393	0.914	0.165	0.206	0.52	0.03	0.02
40.680	82.390	1.820	5026.6	4297.8	52.975	2.279	2.35		Sand	51.3			77.87	0.72	56.15	117.56	0.90	0.393	0.913	0.166	0.208	0.53	0.03	0.02
40.850	86.660	1.679	5047.0	4307.6	55.737	1.995	2.30		Sand	46.9			81.91	0.72	59.15	119.36	0.90	0.394	0.912	0.170	0.214	0.54	0.03	0.02
41.010	94.110	1.149	5066.2	4316.8	60.601	1.254	2.14		Sand	34.3			88.95	0.72	63.93	116.70	0.90	0.394	0.914	0.164	0.204	0.52	0.03	0.02
41.170	104.910	1.820	5085.4	4326.0	67.669	1.778	2.20		Sand	39.2			99.16	0.73	72.64	131.47	0.89	0.394	0.902	0.202	0.270	0.68	0.02	0.01
41.340	129.270	1.583	5105.8	4335.8	83.671	1.249	2.03		Sand	25.5			122.18	0.74	90.04	136.88	0.89	0.394	0.897	0.221	0.304	0.77	0.02	0.01
41.500	178.120	2.672	5125.0	4345.0	115.797	1.522	1.99		Sand	21.9			168.36	0.77	129.58	175.45	0.89	0.395	0.854	0.610	1.050	2.66	0.00	0.00
41.670	229.550	3.218	5145.4	4354.8	149.545	1.418	1.89		Sand	13.9			216.97	0.78	170.20	194.93	0.89	0.395	0.821	1.437	2.595	6.57	0.00	0.00
41.830	263.590	2.761	5164.6	4364.0	171.784	1.058	1.75		Sand	3.3			249.14	0.78	195.39	195.40	0.89	0.395	0.820	1.472	2.654	6.71	0.00	0.00
41.990	332.360	2.821	5183.8	4373.2	216.810	0.856	1.62		Sand	0.0			314.14	0.83	259.38	259.38	0.89	0.396	0.782	425.175	731.665	1849.88	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
42.160	367.640	3.525	5204.2	4383.0	239.731	0.966	1.62		Sand	0.0			347.49	0.83	286.75	286.75	0.89	0.396	0.782	33502.507	########	145540.88	0.00	0.00
42.320	348.580	5.866	5223.4	4392.2	226.969	1.696	1.83		Sand	9.2			329.47	0.82	271.73	281.07	0.89	0.396	0.781	11982.093	########	51977.51	0.00	0.00
42.490	404.100	4.417	5243.8	4402.0	263.092	1.100	1.64		Sand	0.0			381.95	0.82	314.83	314.83	0.89	0.396	0.780	########	########	##########	0.00	0.00
42.650	418.960	3.684	5263.0	4411.2	272.539	0.885	1.56		Sand	0.0			395.99	0.82	326.22	326.22	0.89	0.397	0.780	########	########	##########	0.00	0.00
42.810	351.700	2.435	5282.2	4420.5	228.264	0.698	1.54		Sand	0.0			332.42	0.82	273.70	273.70	0.89	0.397	0.779	3481.172	5965.921	15035.61	0.00	0.00
42.980	354.550	2.391	5302.6	4430.2	229.867	0.679	1.53		Sand	0.0			335.11	0.82	275.76	275.76	0.89	0.397	0.778	4861.116	8323.726	20964.58	0.00	0.00
43.140	330.160	5.851	5321.8	4439.5	213.706	1.787	1.86		Sand	12.0			312.06	0.82	256.65	277.83	0.89	0.397	0.778	6860.761	########	29547.39	0.00	0.00
43.310	331.100	4.258	5342.2	4449.3	214.077	1.297	1.75		Sand	3.3			312.95	0.82	257.23	257.23	0.89	0.398	0.777	319.941	546.933	1375.88	0.00	0.00
43.470	349.800	4.957	5361.4	4458.5	226.026	1.428	1.77		Sand	4.6			330.62	0.82	271.61	271.74	0.89	0.398	0.776	2553.342	4361.405	10965.40	0.00	0.00
43.640	295.040	4.200	5381.8	4468.3	190.154	1.437	1.82		Sand	8.7			278.87	0.80	224.42	230.83	0.89	0.398	0.776	17.691	30.193	75.87	0.00	0.00
43.800	299.750	2.348	5401.0	4477.5	193.012	0.791	1.63		Sand	0.0			283.32	0.80	227.10	227.10	0.89	0.398	0.775	12.721	21.693	54.48	0.00	0.00
43.960	246.240	2.011	5420.2	4486.7	158.074	0.826	1.71		Sand	0.0			232.74	0.76	177.45	177.45	0.88	0.398	0.845	0.657	1.137	2.85	0.00	0.00
44.130	173.890	1.734	5440.6	4496.5	110.985	1.013	1.88		Sand	13.4	232.74		232.74	0.78	182.62	205.90	0.88	0.399	0.787	2.679	4.642	11.64	0.00	0.00
44.290	65.700	1.557	5459.8	4505.7	40.787	2.473	2.46		Sand	59.9	232.74		232.74	0.82	190.67	292.81	0.88	0.399	0.773	########	########	463025.13	0.00	0.00
44.460	23.040	0.901	5480.2	4515.5	8.991	4.438	3.13		Clay	100.0			21.78	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.620	14.680	0.358	5499.4	4524.7	5.273	2.998	3.23		Clay	100.0			13.88	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.780	13.800	0.367	5518.6	4533.9	4.870	3.322	3.28		Clay	100.0			13.04	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.950	11.230	0.370	5539.0	4543.7	3.724	4.378	3.45		Clay	100.0			10.61	0.82	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.110	12.760	0.374	5558.2	4552.9	4.384	3.747	3.35		Clay	100.0			12.06	0.82	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.280	12.240	0.372	5578.6	4562.7	4.143	3.935	3.38		Clay	100.0			11.57	0.82	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	12.840	0.372	5597.8	4571.9	4.392	3.702	3.35		Clay	100.0			12.14	0.82	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.600	13.700	0.416	5617.0	4581.2	4.755	3.818	3.32		Clay	100.0			12.95	0.82	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.770	14.220	0.458	5637.4	4591.0	4.967	4.019	3.32		Clay	100.0			13.44	0.82	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.930	15.670	1.003	5656.6	4600.2	5.583	7.811	3.45		Clay	100.0			14.81	0.81	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.100	20.490	2.799	5677.0	4610.0	7.658	15.858	3.54		Clay	100.0			19.37	0.81	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	53.520	3.132	5696.2	4619.2	21.940	6.180	2.93		Clay	97.3			50.59	0.81	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.420	182.450	2.133	5715.4	4628.4	114.774	1.188	1.91		Sand	16.1	205.78	1.18	242.82	0.79	193.00	228.54	0.88	0.401	0.765	14.424	24.283	60.50	0.00	0.00
46.590	217.720	2.748	5735.8	4638.2	137.163	1.279	1.88		Sand	13.5		1.18	242.83	0.78	190.28	214.48	0.88	0.402	0.765	4.738	7.969	19.84	0.00	0.00
46.750	216.820	3.474	5755.0	4647.4	136.447	1.624	1.96		Sand	19.5		1.18	241.82	0.80	194.53	242.76	0.87	0.402	0.764	57.542	96.712	240.74	0.00	0.00
46.920	194.430	3.084	5775.4	4657.2	122.032	1.610	1.99		Sand	22.0		1.18	216.85	0.79	171.25	223.72	0.87	0.402	0.763	9.584	16.095	40.05	0.00	0.00
47.080	191.930	2.564	5794.6	4666.4	120.314	1.357	1.94		Sand	18.1		1.18	214.06	0.78	165.97	205.90	0.87	0.402	0.777	2.679	4.580	11.39	0.00	0.00
47.240	192.150	2.286	5813.8	4675.6	120.330	1.208	1.90		Sand	15.3		1.18	214.31	0.76	163.92	193.67	0.87	0.402	0.806	1.347	2.388	5.94	0.00	0.00
47.410	188.070	2.117	5834.2	4685.4	117.606	1.143	1.90		Sand	14.6		1.18	209.76	0.76	158.90	185.52	0.87	0.402	0.822	0.916	1.644	4.09	0.00	0.00
47.570	192.940	1.943	5853.4	4694.6	120.574	1.022	1.85		Sand	11.4		1.18	215.19	0.75	161.02	175.37	0.87	0.403	0.839	0.608	1.027	2.55	0.00	0.00
47.740	200.900	1.960	5873.8	4704.4	125.488	0.990	1.83		Sand	9.6		1.18	224.07	0.75	167.65	175.96	0.87	0.403	0.838	0.621	1.053	2.62	0.00	0.00
47.900	202.670	1.272	5893.0	4713.6	126.480	0.637	1.71		Sand	0.0		1.18	226.04	0.74	167.26	167.26	0.87	0.403	0.850	0.461	0.741	1.84	0.00	0.00
48.060	210.630	1.432	5912.2	4722.9	131.387	0.690	1.72		Sand	0.3		1.18	234.92	0.75	175.41	175.41	0.87	0.403	0.838	0.609	1.028	2.55	0.00	0.00
48.230	235.380	1.024	5932.6	4732.6	146.886	0.441	1.56		Sand	0.0		1.18	262.52	0.77	201.73	201.73	0.87	0.403	0.784	2.086	3.599	8.93	0.00	0.00
48.390	247.410	2.194	5951.8	4741.9	154.333	0.897	1.74		Sand	2.0		1.18	275.94	0.78	214.82	214.82	0.87	0.403	0.758	4.854	8.093	20.07	0.00	0.00
48.560	256.260	1.932	5972.2	4751.7	159.750	0.763	1.68		Sand	0.0		1.18	285.81	0.79	224.55	224.55	0.87	0.403	0.757	10.260	17.094	42.37	0.00	0.00
48.720	244.570	3.204	5991.4	4760.9	152.223	1.326	1.86		Sand	11.8		1.18	272.77	0.79	216.36	234.94	0.87	0.404	0.757	25.959	43.217	107.09	0.00	0.00
48.880	182.400	3.340	6010.6	4770.1	112.932	1.862	2.06		Sand	27.5		1.18	203.43	0.78	159.31	222.45	0.87	0.404	0.756	8.650	14.389	35.64	0.00	0.00
49.050	115.850	3.391	6031.0	4779.9	70.959	3.006	2.35		Sand	50.7	172.4	1.18	203.43	0.81	164.07	253.96	0.87	0.404	0.756	210.802	350.390	867.69	0.00	0.00
49.210	66.880	2.666	6050.2	4789.1	26.667	4.175	2.75		Clay	83.1			63.21	0.81	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.380	57.710	1.808	6070.6	4798.9	22.786	3.306	2.74		Clay	81.9			54.55	0.81	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.540	52.050	1.489	6089.8	4808.1	20.384	3.039	2.75		Clay	83.1			49.20	0.81	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.700	38.140	1.456	6109.0	4817.3	14.566	4.150	2.95		Clay	99.0			36.05	0.80	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.870	27.380	1.133	6129.4	4827.1	10.074	4.658	3.11		Clay	100.0			25.88	0.80	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.030	20.420	0.753	6148.6	4836.3	7.173	4.340	3.21		Clay	100.0			19.30	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.200	15.560	0.582	6169.0	4846.1	5.149	4.664	3.34		Clay	100.0			14.71	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.360	13.280	0.553	6188.2	4855.3	4.196	5.424	3.45		Clay	100.0			12.55	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.520	13.570	0.669	6207.4	4864.6	4.303	6.393	3.49		Clay	100.0			12.83	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.690	14.990	0.779	6227.8	4874.3	4.873	6.559	3.45		Clay	100.0			14.17	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.850	17.930	0.706	6247.0	4883.6	6.064	4.769	3.29		Clay	100.0			16.95	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.020	22.250	0.610	6267.4	4893.4	7.813	3.193	3.10		Clay	100.0			21.03	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.180	20.440	0.511	6286.6	4902.6	7.056	2.954	3.12		Clay	100.0			19.32	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.350	17.180	0.428	6307.0	4912.4	5.711	3.054	3.20		Clay	100.0			16.24	0.80	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.510	14.390	0.410	6326.2	4921.6	4.562	3.652	3.33		Clay	100.0			13.60	0.80	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.670	13.070	0.419	6345.4	4930.8	4.014	4.235	3.41		Clay	100.0			12.35	0.80	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.840	14.560	0.448	6365.8	4940.6	4.606	3.936	3.34		Clay	100.0			13.76	0.80	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.000	18.300	0.442	6385.0	4949.8	6.104	2.926	3.17		Clay	100.0			17.30	0.80	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.170	17.620	0.414	6405.4	4959.6	5.814	2.869	3.18		Clay	100.0			16.65	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.330	14.840	0.371	6424.6	4968.8	4.680	3.194	3.29		Clay	100.0			14.03	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.490	12.300	0.343	6443.8	4978.0	3.647	3.783	3.42		Clay	100.0			11.63	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
52.660	11.230	0.370	6464.2	4987.8	3.207	4.624	3.51		Clay	100.0			10.61	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.820	11.330	0.465	6483.4	4997.0	3.237	5.744	3.56		Clay	100.0			10.71	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.990	13.130	0.701	6503.8	5006.8	3.946	7.095	3.54		Clay	100.0			12.41	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	18.990	1.159	6523.0	5016.0	6.271	7.371	3.39		Clay	100.0			17.95	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.310	26.650	2.006	6542.2	5025.3	9.305	8.582	3.30		Clay	100.0			25.19	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.480	40.200	2.361	6562.6	5035.0	14.665	6.394	3.07		Clay	100.0			38.00	0.80	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.640	62.280	2.229	6581.8	5044.3	23.389	3.779	2.76		Clay	84.2			58.87	0.80	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.810	104.580	2.133	6602.2	5054.1	61.940	2.106	2.28		Sand	45.4			98.85	0.68	67.40	128.96	0.85	0.407	0.883	0.194	0.250	0.62	0.02	0.00
53.970	193.000	2.471	6621.4	5063.3	115.904	1.302	1.94		Sand	18.1			182.42	0.72	131.37	167.10	0.85	0.407	0.837	0.458	0.725	1.78	0.00	0.00
54.130	286.430	3.317	6640.6	5072.5	172.829	1.171	1.78		Sand	5.7			270.73	0.75	204.04	204.59	0.85	0.407	0.757	2.472	4.120	10.13	0.00	0.00
54.300	317.160	3.226	6661.0	5082.3	191.398	1.028	1.71		Sand	0.0			299.77	0.78	232.88	232.88	0.85	0.407	0.737	21.366	34.650	85.18	0.00	0.00
54.460	307.200	2.941	6680.2	5091.5	185.150	0.968	1.70		Sand	0.0			290.36	0.77	223.13	223.13	0.85	0.407	0.737	9.136	14.805	36.39	0.00	0.00
54.630	295.480	3.152	6700.6	5101.3	177.831	1.079	1.75		Sand	2.9			279.28	0.76	211.84	211.84	0.85	0.407	0.736	3.943	6.385	15.69	0.00	0.00
54.790	336.860	3.075	6719.8	5110.5	202.832	0.922	1.66		Sand	0.0			318.39	0.79	251.75	251.75	0.84	0.407	0.735	160.584	259.830	638.49	0.00	0.00
54.950	393.790	3.052	6739.0	5119.7	237.237	0.782	1.56		Sand	0.0			372.20	0.79	294.81	294.81	0.84	0.407	0.735	########	########	647261.34	0.00	0.00
55.120	451.050	3.599	6759.4	5129.5	271.764	0.804	1.53		Sand	0.0			426.32	0.79	337.51	337.51	0.84	0.407	0.734	########	########	##########	0.00	0.00
55.280	511.780	3.369	6778.6	5138.7	308.349	0.663	1.43		Sand	0.0			483.72	0.79	382.77	382.77	0.84	0.407	0.734	########	########	##########	0.00	0.00
55.450	513.920	2.806	6799.0	5148.5	309.346	0.550	1.37		Sand	0.0			485.75	0.79	384.18	384.18	0.84	0.407	0.733	########	########	##########	0.00	0.00
55.610	519.150	2.749	6818.2	5157.7	312.230	0.533	1.36		Sand	0.0			490.69	0.79	387.90	387.90	0.84	0.407	0.733	########	########	##########	0.00	0.00
55.770	454.450	2.164	6837.4	5167.0	272.811	0.480	1.37		Sand	0.0			429.54	0.79	339.40	339.40	0.84	0.407	0.732	########	########	##########	0.00	0.00
55.940	366.480	1.827	6857.8	5176.7	219.387	0.503	1.46		Sand	0.0			346.39	0.79	273.56	273.56	0.84	0.407	0.732	3405.533	5481.313	13459.09	0.00	0.00
56.100	342.420	1.646	6877.0	5186.0	204.660	0.485	1.47		Sand	0.0			323.65	0.79	255.48	255.48	0.84	0.407	0.731	255.438	410.835	1008.70	0.00	0.00
56.270	332.280	1.794	6897.4	5195.8	198.345	0.545	1.51		Sand	0.0			314.06	0.78	245.72	245.72	0.84	0.407	0.731	79.581	127.895	313.98	0.00	0.00
56.430	310.010	1.844	6916.6	5205.0	184.743	0.602	1.56		Sand	0.0			293.02	0.76	223.87	223.87	0.84	0.407	0.730	9.703	15.583	38.25	0.00	0.00
56.590	282.600	1.840	6935.8	5214.2	168.069	0.659	1.62		Sand	0.0			267.11	0.74	197.95	197.95	0.84	0.407	0.769	1.687	2.852	7.00	0.00	0.00
56.760	285.320	1.626	6956.2	5224.0	169.542	0.577	1.58		Sand	0.0			269.68	0.74	200.30	200.30	0.84	0.407	0.762	1.921	3.220	7.90	0.00	0.00
56.920	287.380	1.035	6975.4	5233.2	170.625	0.365	1.46		Sand	0.0			271.63	0.74	202.05	202.05	0.84	0.407	0.756	2.125	3.536	8.68	0.00	0.00
57.090	286.370	1.055	6995.8	5243.0	169.853	0.373	1.47		Sand	0.0			270.67	0.74	200.95	200.95	0.84	0.407	0.759	1.995	3.330	8.17	0.00	0.00
57.250	279.480	1.421	7015.0	5252.2	165.565	0.515	1.56		Sand	0.0			264.16	0.74	194.46	194.46	0.84	0.408	0.776	1.402	2.392	5.87	0.00	0.00
57.410	174.500	1.903	7034.2	5261.4	102.488	1.113	1.93		Sand	17.6			164.93	0.69	113.48	145.65	0.84	0.408	0.860	0.262	0.365	0.90	0.01	0.00
57.580	110.280	1.778	7054.6	5271.2	63.929	1.665	2.20		Sand	39.1			104.23	0.67	69.62	127.72	0.83	0.408	0.879	0.191	0.243	0.60	0.02	0.00
57.740	63.130	1.943	7073.8	5280.4	22.571	3.261	2.74		Clay	81.9			59.67	0.79	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.910	40.300	1.566	7094.2	5290.2	13.895	4.260	2.97		Clay	100.0			38.09	0.79	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.070	41.550	1.249	7113.4	5299.4	14.339	3.287	2.89		Clay	94.4			39.27	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.230	33.320	1.204	7132.6	5308.6	11.210	4.048	3.03		Clay	100.0			31.49	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.400	25.080	1.077	7153.0	5318.4	8.086	5.009	3.20		Clay	100.0			23.71	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.560	21.980	0.960	7172.2	5327.7	6.905	5.220	3.27		Clay	100.0			20.78	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.730	22.460	0.888	7192.6	5337.4	7.068	4.708	3.23		Clay	100.0			21.23	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.890	23.170	0.866	7211.8	5346.7	7.318	4.426	3.20		Clay	100.0			21.90	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.060	22.320	0.848	7232.2	5356.5	6.984	4.532	3.23		Clay	100.0			21.10	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.220	21.080	0.903	7251.4	5365.7	6.506	5.173	3.29		Clay	100.0			19.92	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.380	22.840	0.984	7270.6	5374.9	7.146	5.126	3.25		Clay	100.0			21.59	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.550	25.380	1.232	7291.0	5384.7	8.073	5.668	3.23		Clay	100.0			23.99	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.710	28.020	1.705	7310.2	5393.9	9.034	6.998	3.25		Clay	100.0			26.48	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.880	30.010	2.137	7330.6	5403.7	9.751	8.112	3.27		Clay	100.0			28.36	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.040	40.580	1.947	7349.8	5412.9	13.636	5.275	3.04		Clay	100.0			38.36	0.78	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.200	68.460	1.337	7369.0	5422.1	38.247	2.065	2.43		Sand	57.6			64.71	0.63	40.48	99.86	0.82	0.408	0.900	0.137	0.156	0.38	0.03	0.00
60.370	38.280	0.844	7389.4	5431.9	12.734	2.439	2.86		Clay	91.8			36.18	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.530	25.640	0.548	7408.6	5441.1	8.063	2.499	3.03		Clay	100.0			24.23	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.700	23.270	0.466	7429.0	5450.9	7.175	2.383	3.06		Clay	100.0			21.99	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	22.060	0.465	7448.2	5460.1	6.716	2.536	3.10		Clay	100.0			20.85	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.020	20.630	0.966	7467.4	5469.4	6.179	5.717	3.33		Clay	100.0			19.50	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.190	21.200	1.669	7487.8	5479.1	6.372	9.560	3.46		Clay	100.0			20.04	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.350	29.510	1.851	7507.0	5488.4	9.386	7.185	3.25		Clay	100.0			27.89	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.520	78.590	2.995	7527.4	5498.2	27.219	4.002	2.73		Clay	81.5			74.28	0.78	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	112.060	3.727	7546.6	5507.4	63.442	3.441	2.42		Sand	56.8			105.92	0.67	70.64	138.08	0.82	0.408	0.862	0.226	0.300	0.74	0.02	0.00
61.840	128.130	4.239	7565.8	5516.6	72.790	3.409	2.38		Sand	53.3			121.11	0.68	82.53	151.87	0.82	0.408	0.844	0.301	0.430	1.06	0.01	0.00
62.010	115.060	3.962	7586.2	5526.4	65.076	3.561	2.43		Sand	57.0			108.75	0.67	72.76	140.88	0.82	0.408	0.858	0.238	0.321	0.79	0.02	0.00
62.170	72.400	2.478	7605.4	5535.6	24.784	3.613	2.73		Clay	81.6			68.43	0.78	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.340	41.650	1.172	7625.8	5545.4	13.646	3.098	2.89		Clay	94.6			39.37	0.78	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.500	24.660	0.854	7645.0	5554.6	7.503	4.100	3.18		Clay	100.0			23.31	0.78	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.660	18.610	0.679	7664.2	5563.8	5.312	4.597	3.33		Clay	100.0			17.59	0.77	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.830	17.210	0.628	7684.6	5573.6	4.797	4.699	3.37		Clay	100.0			16.27	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.990	16.220	0.632	7703.8	5582.8	4.431	5.108	3.42		Clay	100.0			15.33	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
63.160	15.740	0.541	7724.2	5592.6	4.248	4.556	3.41		Clay	100.0			14.88	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	16.590	0.627	7743.4	5601.8	4.541	4.932	3.40		Clay	100.0			15.68	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.480	17.770	0.679	7762.6	5611.0	4.950	4.890	3.37		Clay	100.0			16.80	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.650	20.610	0.704	7783.0	5620.8	5.949	4.213	3.27		Clay	100.0			19.48	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.810	21.200	0.663	7802.2	5630.1	6.145	3.834	3.23		Clay	100.0			20.04	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.980	20.960	0.803	7822.6	5639.8	6.046	4.707	3.29		Clay	100.0			19.81	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	20.930	1.132	7841.8	5649.1	6.022	6.655	3.38		Clay	100.0			19.78	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.300	23.350	1.596	7861.0	5658.3	6.864	8.220	3.39		Clay	100.0			22.07	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.470	35.060	2.073	7881.4	5668.1	10.981	6.660	3.17		Clay	100.0			33.14	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.630	52.300	1.971	7900.6	5677.3	17.033	4.076	2.89		Clay	94.3			49.43	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.800	76.700	2.026	7921.0	5687.1	25.581	2.786	2.65		Clay	75.0			72.50	0.77	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.960	120.810	1.777	7940.2	5696.3	67.308	1.521	2.16		Sand	35.7			114.19	0.65	74.06	130.40	0.81	0.407	0.866	0.199	0.253	0.62	0.02	0.00
65.120	145.770	1.513	7959.4	5705.5	81.615	1.067	2.00		Sand	22.7			137.78	0.65	89.38	130.87	0.81	0.407	0.865	0.200	0.255	0.63	0.02	0.00
65.290	156.090	1.657	7979.8	5715.3	87.475	1.089	1.98		Sand	21.3			147.53	0.65	96.53	136.09	0.81	0.407	0.859	0.218	0.285	0.70	0.02	0.00
65.450	161.110	1.496	7999.0	5724.5	90.283	0.952	1.93		Sand	17.5			152.28	0.64	98.21	128.49	0.81	0.407	0.867	0.193	0.243	0.60	0.02	0.00
65.620	150.790	1.993	8019.4	5734.3	84.275	1.358	2.05		Sand	27.2			142.52	0.66	94.56	145.02	0.80	0.407	0.847	0.259	0.354	0.87	0.01	0.00
65.780	104.920	2.192	8038.6	5743.5	57.886	2.172	2.31		Sand	47.9			99.17	0.64	63.49	125.31	0.80	0.407	0.870	0.184	0.229	0.56	0.03	0.00
65.940	60.880	1.809	8057.8	5752.7	19.765	3.182	2.77		Clay	84.9			57.54	0.77	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.110	42.470	1.330	8078.2	5762.5	13.338	3.459	2.93		Clay	97.5			40.14	0.77	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.270	31.060	1.113	8097.4	5771.8	9.360	4.121	3.10		Clay	100.0			29.36	0.77	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.440	28.260	0.854	8117.8	5781.5	8.372	3.529	3.10		Clay	100.0			26.71	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.600	25.180	0.845	8137.0	5790.8	7.291	4.000	3.18		Clay	100.0			23.80	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.770	23.100	0.727	8157.4	5800.6	6.558	3.820	3.21		Clay	100.0			21.83	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.930	19.020	0.630	8176.6	5809.8	5.140	4.219	3.32		Clay	100.0			17.98	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.090	19.620	0.597	8195.8	5819.0	5.335	3.844	3.28		Clay	100.0			18.54	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.260	19.990	0.574	8216.2	5828.8	5.449	3.617	3.26		Clay	100.0			18.89	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.420	19.620	0.553	8235.4	5838.0	5.311	3.570	3.27		Clay	100.0			18.54	0.77	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.590	19.520	0.553	8255.8	5847.8	5.264	3.595	3.27		Clay	100.0			18.45	0.76	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.750	19.330	0.567	8275.0	5857.0	5.188	3.734	3.29		Clay	100.0			18.27	0.76	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.910	19.110	0.584	8294.2	5866.2	5.101	3.903	3.30		Clay	100.0			18.06	0.76	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.080	19.010	0.608	8314.6	5876.0	5.055	4.093	3.32		Clay	100.0			17.97	0.76	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.240	19.260	0.606	8333.8	5885.2	5.129	4.016	3.31		Clay	100.0			18.20	0.76	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.410	19.280	0.584	8354.2	5895.0	5.124	3.867	3.30		Clay	100.0			18.22	0.76	n.a.	n.a.	0.79	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.570	19.450	0.574	8373.4	5904.2	5.170	3.757	3.29		Clay	100.0			18.38	0.76	n.a.	n.a.	0.79	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.730	18.880	0.538	8392.6	5913.4	4.966	3.665	3.30		Clay	100.0			17.84	0.76	n.a.	n.a.	0.79	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.900	18.670	0.520	8413.0	5923.2	4.884	3.592	3.30		Clay	100.0			17.65	0.76	n.a.	n.a.	0.79	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.060	18.140	0.497	8432.2	5932.5	4.694	3.568	3.31		Clay	100.0			17.15	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.230	17.510	0.425	8452.6	5942.2	4.471	3.199	3.31		Clay	100.0			16.55	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	17.100	0.515	8471.8	5951.5	4.323	4.001	3.37		Clay	100.0			16.16	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.550	18.420	0.459	8491.0	5960.7	4.756	3.241	3.29		Clay	100.0			17.41	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.720	19.740	0.432	8511.4	5970.5	5.187	2.787	3.22		Clay	100.0			18.66	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.880	17.640	0.405	8530.6	5979.7	4.473	3.024	3.29		Clay	100.0			16.67	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.050	16.720	0.381	8551.0	5989.5	4.155	3.062	3.32		Clay	100.0			15.80	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	19.630	0.381	8570.2	5998.7	5.116	2.482	3.20		Clay	100.0			18.55	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.370	19.030	0.385	8589.4	6007.9	4.905	2.615	3.23		Clay	100.0			17.99	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.540	18.990	0.365	8609.8	6017.7	4.881	2.488	3.22		Clay	100.0			17.95	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.700	18.590	0.364	8629.0	6026.9	4.737	2.551	3.23		Clay	100.0			17.57	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.870	18.640	0.371	8649.4	6036.7	4.743	2.591	3.24		Clay	100.0			17.62	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	19.250	0.393	8668.6	6045.9	4.934	2.634	3.23		Clay	100.0			18.19	0.76	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.190	19.320	0.424	8687.8	6055.1	4.947	2.833	3.24		Clay	100.0			18.26	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.360	19.780	0.432	8708.2	6064.9	5.087	2.800	3.23		Clay	100.0			18.70	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.520	20.510	0.464	8727.4	6074.2	5.316	2.874	3.22		Clay	100.0			19.39	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.690	20.670	0.473	8747.8	6083.9	5.357	2.904	3.22		Clay	100.0			19.54	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.850	20.960	0.485	8767.0	6093.2	5.441	2.928	3.21		Clay	100.0			19.81	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.010	21.020	0.491	8786.2	6102.4	5.449	2.953	3.21		Clay	100.0			19.87	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.180	21.000	0.500	8806.6	6112.2	5.431	3.014	3.22		Clay	100.0			19.85	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.340	20.960	0.500	8825.8	6121.4	5.406	3.020	3.22		Clay	100.0			19.81	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.510	21.160	0.513	8846.2	6131.2	5.460	3.063	3.22		Clay	100.0			20.00	0.76	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.670	21.350	0.509	8865.4	6140.4	5.510	3.009	3.21		Clay	100.0			20.18	0.75	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.830	21.400	0.500	8884.6	6149.6	5.515	2.949	3.21		Clay	100.0			20.23	0.75	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.000	21.380	0.507	8905.0	6159.4	5.496	2.995	3.21		Clay	100.0			20.21	0.75	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.160	21.480	0.527	8924.2	6168.6	5.518	3.099	3.22		Clay	100.0			20.30	0.75	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.330	22.450	0.559	8944.6	6178.4	5.820	3.110	3.20		Clay	100.0			21.22	0.75	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.490	22.860	0.577	8963.8	6187.6	5.940	3.140	3.20		Clay	100.0			21.61	0.75	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
73.650	23.310	0.609	8983.0	6196.8	6.074	3.234	3.20		Clay	100.0			22.03	0.75	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.820	24.280	0.712	9003.4	6206.6	6.373	3.598	3.20		Clay	100.0			22.95	0.75	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.980	25.000	0.853	9022.6	6215.8	6.592	4.161	3.23		Clay	100.0			23.63	0.75	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.150	26.780	0.947	9043.0	6225.6	7.151	4.256	3.20		Clay	100.0			25.31	0.75	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.310	29.780	1.061	9062.2	6234.9	8.099	4.203	3.16		Clay	100.0			28.15	0.75	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.480	30.330	1.227	9082.6	6244.6	8.259	4.759	3.18		Clay	100.0			28.67	0.75	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.640	31.720	1.305	9101.8	6253.9	8.689	4.801	3.17		Clay	100.0			29.98	0.75	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.800	33.220	1.418	9121.0	6263.1	9.152	4.948	3.16		Clay	100.0			31.40	0.75	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.970	33.270	1.337	9141.4	6272.9	9.150	4.658	3.14		Clay	100.0			31.45	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.130	37.260	1.046	9160.6	6282.1	10.404	3.202	3.00		Clay	100.0			35.22	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.300	33.360	1.126	9181.0	6291.9	9.145	3.914	3.10		Clay	100.0			31.53	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.460	30.180	1.299	9200.2	6301.1	8.119	5.078	3.20		Clay	100.0			28.53	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.620	28.490	1.743	9219.4	6310.3	7.569	7.297	3.32		Clay	100.0			26.93	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.790	42.610	1.671	9239.8	6320.1	12.022	4.397	3.03		Clay	100.0			40.27	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.950	57.500	1.232	9259.0	6329.3	16.707	2.330	2.75		Clay	83.1			54.35	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.120	39.670	0.923	9279.4	6339.1	11.052	2.636	2.93		Clay	97.3			37.50	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.280	34.460	0.779	9298.6	6348.3	9.392	2.613	2.99		Clay	100.0			32.57	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.440	23.630	0.693	9317.8	6357.5	5.968	3.655	3.23		Clay	100.0			22.33	0.75	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.610	20.960	0.646	9338.2	6367.3	5.117	3.967	3.31		Clay	100.0			19.81	0.75	n.a.	n.a.	0.77	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.770	20.650	0.656	9357.4	6376.6	5.009	4.107	3.32		Clay	100.0			19.52	0.75	n.a.	n.a.	0.77	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.940	20.920	0.688	9377.8	6386.3	5.083	4.239	3.32		Clay	100.0			19.77	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.100	20.900	0.681	9397.0	6395.6	5.066	4.202	3.32		Clay	100.0			19.75	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.260	21.790	0.700	9416.2	6404.8	5.334	4.096	3.30		Clay	100.0			20.60	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.430	22.390	0.807	9436.6	6414.6	5.510	4.568	3.31		Clay	100.0			21.16	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.590	22.310	0.958	9455.8	6423.8	5.474	5.450	3.36		Clay	100.0			21.09	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.760	25.160	1.048	9476.2	6433.6	6.349	5.130	3.29		Clay	100.0			23.78	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.920	30.170	1.034	9495.4	6442.8	7.892	4.068	3.16		Clay	100.0			28.52	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.080	33.570	1.089	9514.6	6452.0	8.931	3.779	3.09		Clay	100.0			31.73	0.75	n.a.	n.a.	0.76	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.250	36.050	1.204	9535.0	6461.8	9.682	3.850	3.07		Clay	100.0			34.07	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.410	36.230	1.425	9554.2	6471.0	9.721	4.530	3.11		Clay	100.0			34.24	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.580	39.820	1.708	9574.6	6480.8	10.811	4.874	3.09		Clay	100.0			37.64	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.740	50.020	2.072	9593.8	6490.0	13.936	4.581	2.99		Clay	100.0			47.28	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.900	69.650	2.281	9613.0	6499.2	19.954	3.518	2.80		Clay	86.8			65.83	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.070	92.660	1.890	9633.4	6509.0	47.339	2.152	2.37		Sand	52.9			87.58	0.59	51.53	112.33	0.76	0.400	0.868	0.156	0.181	0.45	0.03	0.00
79.230	115.060	1.798	9652.6	6518.2	59.364	1.631	2.22		Sand	40.6			108.75	0.60	65.58	123.77	0.76	0.400	0.856	0.180	0.218	0.55	0.03	0.00
79.400	114.300	2.494	9673.0	6528.0	58.905	2.278	2.32		Sand	48.5			108.03	0.61	65.76	128.50	0.76	0.400	0.850	0.193	0.238	0.60	0.02	0.00
79.560	85.030	3.122	9692.2	6537.3	24.531	3.893	2.76		Clay	83.6			80.37	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.720	66.820	3.954	9711.4	6546.5	18.931	6.381	2.98		Clay	100.0			63.16	0.74	n.a.	n.a.	0.76	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.890	93.380	3.624	9731.8	6556.3	27.001	4.094	2.74		Clay	82.3			88.26	0.74	n.a.	n.a.	0.75	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.050	139.300	2.447	9751.0	6565.5	72.130	1.820	2.19		Sand	38.1			131.66	0.62	82.21	142.45	0.75	0.399	0.830	0.246	0.324	0.81	0.02	0.00
80.220	157.600	1.625	9771.4	6575.3	81.883	1.064	1.99		Sand	22.6			148.96	0.61	91.16	132.63	0.75	0.399	0.844	0.206	0.259	0.65	0.02	0.00
80.380	135.420	1.389	9790.6	6584.5	69.936	1.064	2.05		Sand	26.9			128.00	0.60	76.77	123.36	0.75	0.399	0.855	0.179	0.216	0.54	0.03	0.00
80.540	109.890	1.954	9809.8	6593.7	56.213	1.861	2.28		Sand	45.0			103.87	0.60	62.09	122.10	0.75	0.399	0.856	0.176	0.211	0.53	0.03	0.00
80.710	94.480	2.552	9830.2	6603.5	27.127	2.849	2.64		Clay	73.9			89.30	0.74	n.a.	n.a.	0.75	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.870	66.330	2.159	9849.4	6612.7	18.572	3.516	2.82		Clay	88.8			62.69	0.74	n.a.	n.a.	0.75	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.040	46.750	1.647	9869.8	6622.5	12.628	3.939	2.98		Clay	100.0			44.19	0.74	n.a.	n.a.	0.75	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.200	32.600	1.044	9889.0	6631.7	8.340	3.776	3.12		Clay	100.0			30.81	0.74	n.a.	n.a.	0.75	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.360	24.680	0.783	9908.2	6640.9	5.941	3.970	3.25		Clay	100.0			23.33	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.530	21.940	0.723	9928.6	6650.7	5.105	4.261	3.32		Clay	100.0			20.74	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.690	22.700	0.696	9947.8	6659.9	5.323	3.928	3.29		Clay	100.0			21.46	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.860	21.410	0.646	9968.2	6669.7	4.926	3.930	3.32		Clay	100.0			20.24	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.020	19.830	0.591	9987.4	6679.0	4.443	3.981	3.36		Clay	100.0			18.74	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.190	19.450	0.678	10007.8	6688.7	4.320	4.691	3.41		Clay	100.0			18.38	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.350	20.950	0.994	10027.0	6698.0	4.759	6.236	3.44		Clay	100.0			19.80	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.510	24.900	1.649	10046.2	6707.2	5.927	8.297	3.44		Clay	100.0			23.53	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.680	51.090	1.504	10066.6	6717.0	13.714	3.265	2.91		Clay	95.5			48.29	0.74	n.a.	n.a.	0.75	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.840	51.610	1.173	10085.8	6726.2	13.847	2.519	2.84		Clay	90.0			48.78	0.74	n.a.	n.a.	0.75	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.010	63.190	1.201	10106.2	6736.0	17.262	2.067	2.71		Clay	79.8			59.73	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.170	47.850	1.078	10125.4	6745.2	12.687	2.519	2.87		Clay	92.5			45.23	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.330	35.010	0.830	10144.6	6754.4	8.865	2.772	3.02		Clay	100.0			33.09	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.500	31.650	0.730	10165.0	6764.2	7.855	2.749	3.06		Clay	100.0			29.91	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.660	28.370	0.906	10184.2	6773.4	6.873	3.893	3.20		Clay	100.0			26.81	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.830	29.550	1.025	10204.6	6783.2	7.208	4.191	3.20		Clay	100.0			27.93	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
83.990	36.030	1.283	10223.8	6792.4	9.104	4.148	3.11		Clay	100.0			34.05	0.74	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
84.150	42.210	3.305	10243.0	6801.6	10.906	8.910	3.26		Clay	100.0			39.90	0.73	n.a.	n.a.	0.74	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
84.320	47.910	4.163	10263.4	6811.4	12.561	9.731	3.24		Clay	100.0			45.28	0.73	n.a.	n.a.	0.74	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
84.480	228.050	6.632	10282.6	6820.6	117.351	2.975	2.20		Sand	38.8			215.55	0.71	153.50	231.28	0.74	0.396	0.649	18.433	26.313	66.40	0.00	0.00
84.650	351.450	5.409	10303.0	6830.4	182.179	1.562	1.86		Sand	11.8			332.18	0.73	243.84	263.83	0.74	0.396	0.648	785.170	1120.101	2827.37	0.00	0.00
84.810	383.660	5.641	10322.2	6839.7	198.985	1.490	1.82		Sand	8.6			362.63	0.73	266.10	273.01	0.74	0.396	0.648	3115.655	4441.931	11215.52	0.00	0.00
84.970	388.600	5.761	10341.4	6848.9	201.441	1.502	1.82		Sand	8.6			367.30	0.73	269.43	276.18	0.74	0.396	0.648	5211.405	7425.172	18753.23	0.00	0.00
85.140	383.940	4.076	10361.8	6858.7	198.845	1.076	1.71		Sand	0.2			362.89	0.73	266.09	266.09	0.74	0.396	0.647	1087.040	1547.781	3910.29	0.00	0.00
85.300	366.290	3.032	10381.0	6867.9	189.447	0.840	1.65		Sand	0.0			346.21	0.73	253.66	253.66	0.74	0.396	0.647	203.016	288.884	730.04	0.00	0.00
85.470	345.120	4.049	10401.4	6877.7	178.208	1.191	1.78		Sand	5.3			326.20	0.71	232.14	232.53	0.74	0.396	0.646	20.684	29.413	74.35	0.00	0.00
85.630	300.610	3.933	10420.6	6886.9	154.764	1.331	1.86		Sand	11.5			284.13	0.69	196.41	212.78	0.74	0.395	0.646	4.206	5.977	15.11	0.00	0.00
85.790	244.920	5.500	10439.8	6896.1	125.498	2.295	2.09		Sand	30.4			231.49	0.71	165.08	234.52	0.74	0.395	0.646	24.956	35.445	89.65	0.00	0.00
85.960	154.940	5.832	10460.2	6905.9	78.327	3.896	2.40		Sand	55.0			146.45	0.64	93.82	166.97	0.74	0.395	0.779	0.456	0.672	1.70	0.00	0.00
86.120	148.200	6.132	10479.4	6915.1	41.347	4.289	2.62		Clay	72.6			140.08	0.73	n.a.	n.a.	0.74	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
86.290	219.310	4.046	10499.8	6924.9	111.841	1.890	2.06		Sand	28.1			207.29	0.68	140.51	201.18	0.73	0.395	0.684	2.020	3.041	7.70	0.00	0.00
86.450	341.470	4.080	10519.0	6934.1	175.545	1.214	1.79		Sand	6.2			322.75	0.71	228.03	229.09	0.73	0.395	0.644	15.141	21.450	54.32	0.00	0.00
86.610	530.910	3.272	10538.2	6943.3	274.269	0.622	1.45		Sand	0.0			501.81	0.73	366.77	366.77	0.73	0.395	0.644	########	########	##########	0.00	0.00
86.780	536.360	3.270	10558.6	6953.1	276.913	0.616	1.44		Sand	0.0			506.96	0.73	370.39	370.39	0.73	0.395	0.643	########	########	##########	0.00	0.00
86.940	418.500	4.474	10577.8	6962.3	215.311	1.083	1.69		Sand	0.0			395.56	0.73	288.90	288.90	0.73	0.395	0.643	50392.619	########	180583.98	0.00	0.00
87.110	245.190	5.206	10598.2	6972.1	124.912	2.170	2.08		Sand	29.1			231.75	0.71	163.86	230.76	0.73	0.394	0.642	17.572	24.830	62.95	0.00	0.00
87.270	154.250	4.583	10617.4	6981.4	77.503	3.077	2.33		Sand	49.2			145.79	0.63	92.22	162.23	0.73	0.394	0.787	0.395	0.567	1.44	0.00	0.00
87.430	78.320	3.053	10636.6	6990.6	20.886	4.182	2.83		Clay	89.5			74.03	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
87.600	44.880	1.821	10657.0	7000.4	11.300	4.604	3.06		Clay	100.0			42.42	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
87.760	31.650	1.230	10676.2	7009.6	7.507	4.676	3.21		Clay	100.0			29.91	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
87.930	26.160	0.989	10696.6	7019.4	5.930	4.752	3.30		Clay	100.0			24.73	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.090	19.910	0.821	10715.8	7028.6	4.141	5.640	3.47		Clay	100.0			18.82	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.250	18.310	0.756	10735.0	7037.8	3.678	5.844	3.52		Clay	100.0			17.31	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.420	17.270	0.786	10755.4	7047.6	3.375	6.610	3.58		Clay	100.0			16.32	0.73	n.a.	n.a.	0.73	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.580	17.380	1.005	10774.6	7056.8	3.399	8.376	3.64		Clay	100.0			16.43	0.73	n.a.	n.a.	0.73	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.750	21.550	1.572	10795.0	7066.6	4.572	9.732	3.57		Clay	100.0			20.37	0.73	n.a.	n.a.	0.73	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.910	37.340	2.082	10814.2	7075.8	9.026	6.520	3.23		Clay	100.0			35.29	0.73	n.a.	n.a.	0.73	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.070	47.400	2.278	10833.4	7085.0	11.851	5.425	3.09		Clay	100.0			44.80	0.73	n.a.	n.a.	0.73	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.240	42.540	1.955	10853.8	7094.8	10.462	5.269	3.13		Clay	100.0			40.21	0.73	n.a.	n.a.	0.73	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.400	45.110	1.753	10873.0	7104.0	11.169	4.419	3.06		Clay	100.0			42.64	0.73	n.a.	n.a.	0.73	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.570	38.720	1.796	10893.4	7113.8	9.355	5.398	3.17		Clay	100.0			36.60	0.73	n.a.	n.a.	0.72	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.730	33.680	2.009	10912.6	7123.0	7.925	7.117	3.30		Clay	100.0			31.83	0.73	n.a.	n.a.	0.72	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.900	33.200	2.085	10933.0	7132.8	7.776	7.516	3.32		Clay	100.0			31.38	0.73	n.a.	n.a.	0.72	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.060	40.620	2.423	10952.2	7142.1	9.841	6.894	3.22		Clay	100.0			38.39	0.73	n.a.	n.a.	0.72	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.220	52.050	2.588	10971.4	7151.3	13.023	5.559	3.07		Clay	100.0			49.20	0.73	n.a.	n.a.	0.72	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.390	52.640	2.718	10991.8	7161.1	13.167	5.766	3.07		Clay	100.0			49.75	0.72	n.a.	n.a.	0.72	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.550	66.190	2.337	11011.0	7170.3	16.927	3.851	2.88		Clay	93.3			62.56	0.72	n.a.	n.a.	0.72	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.720	83.980	1.770	11031.4	7180.1	21.856	2.256	2.65		Clay	74.9			79.38	0.72	n.a.	n.a.	0.72	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.880	106.990	1.994	11050.6	7189.3	52.029	1.965	2.32		Sand	48.3			101.12	0.57	57.58	118.08	0.72	0.392	0.850	0.167	0.195	0.50	0.03	0.00
91.040	94.460	1.905	11069.8	7198.5	45.570	2.142	2.38		Sand	53.8			89.28	0.56	49.87	110.56	0.72	0.392	0.859	0.153	0.174	0.44	0.03	0.00
91.210	68.240	1.609	11090.2	7208.3	17.395	2.567	2.76		Clay	83.9			64.50	0.72	n.a.	n.a.	0.72	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.370	55.180	1.596	11109.4	7217.5	13.751	3.216	2.90		Clay	95.1			52.16	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.540	36.740	1.437	11129.8	7227.3	8.627	4.610	3.16		Clay	100.0			34.73	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.700	31.550	1.303	11149.0	7236.5	7.179	5.015	3.24		Clay	100.0			29.82	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.860	31.910	1.260	11168.2	7245.7	7.267	4.786	3.23		Clay	100.0			30.16	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.030	29.370	1.254	11188.6	7255.5	6.554	5.276	3.29		Clay	100.0			27.76	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.190	28.760	1.887	11207.8	7264.7	6.375	8.149	3.41		Clay	100.0			27.18	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.360	30.520	1.677	11228.2	7274.5	6.847	6.732	3.34		Clay	100.0			28.85	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.520	41.390	1.688	11247.4	7283.8	9.821	4.721	3.12		Clay	100.0			39.12	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.680	60.510	2.431	11266.6	7293.0	15.049	4.431	2.96		Clay	99.5			57.19	0.72	n.a.	n.a.	0.72	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.850	47.420	2.814	11287.0	7302.8	11.441	6.735	3.16		Clay	100.0			44.82	0.72	n.a.	n.a.	0.72	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
93.010	57.170	2.839	11306.2	7312.0	14.091	5.510	3.04		Clay	100.0			54.04	0.72	n.a.	n.a.	0.72	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
93.180	91.450	2.521	11326.6	7321.8	23.433	2.938	2.69		Clay	78.6			86.44	0.72	n.a.	n.a.	0.71	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
93.340	112.550	2.213	11345.8	7331.0	54.272	2.071	2.32		Sand	48.4			106.38	0.57	60.59	121.92	0.71	0.390	0.843	0.176	0.207	0.53	0.03	0.00
93.500	114.350	2.414	11365.0	7340.2	55.146	2.221	2.33		Sand	49.6			108.08	0.57	61.83	124.04	0.71	0.390	0.840	0.181	0.215	0.55	0.03	0.00
93.670	87.050	2.854	11385.4	7350.0	22.138	3.508	2.76		Clay	84.0			82.28	0.72	n.a.	n.a.	0.71	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
93.830	55.280	3.123	11404.6	7359.2	13.474	6.300	3.09		Clay	100.0			52.25	0.72	n.a.	n.a.	0.71	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
94.000	61.510	2.844	11425.0	7369.0	15.144	5.097	2.99		Clay	100.0			58.14	0.72	n.a.	n.a.	0.71	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
94.160	99.430	3.027	11444.2	7378.2	25.401	3.230	2.69		Clay	78.5			93.98	0.72	n.a.	n.a.	0.71	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
94.320	142.110	3.429	11463.4	7387.4	68.988	2.515	2.30		Sand	46.9			134.32	0.60	80.50	146.28	0.71	0.390	0.806	0.266	0.349	0.90	0.01	0.00
94.490	107.560	3.328	11483.8	7397.2	27.529	3.268	2.67		Clay	76.6			101.66	0.72	n.a.	n.a.	0.71	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	1

PGA (A_{max})	0.50

Total Settlement:	0.25	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
94.650	79.700	2.865	11503.0	7406.4	19.969	3.874	2.82		Clay	88.9			75.33	0.72	n.a.	n.a.	0.71	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
94.820	59.060	3.284	11523.4	7416.2	14.373	6.162	3.06		Clay	100.0			55.82	0.72	n.a.	n.a.	0.71	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
94.980	47.110	2.517	11542.6	7425.4	11.134	6.088	3.14		Clay	100.0			44.53	0.72	n.a.	n.a.	0.71	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
95.140	66.220	2.544	11561.8	7434.7	16.259	4.210	2.92		Clay	96.3			62.59	0.72	n.a.	n.a.	0.71	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
95.310	57.680	3.554	11582.2	7444.5	13.940	6.848	3.10		Clay	100.0			54.52	0.72	n.a.	n.a.	0.71	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	2

PGA (A_{max})	0.50

Total Settlement:	0.16	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
0.160	513.120	2.849	20.0	20.0	4988.473	0.555	0.99		Unsaturated	0.0			484.99	1.70	824.48	824.48	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.330	683.470	5.441	41.3	41.3	4626.649	0.796	1.14		Unsaturated	0.0			646.00	1.70	1098.20	1098.20	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.490	178.170	5.987	61.3	61.3	989.644	3.361	1.81		Unsaturated	7.8			168.40	1.70	286.28	290.82	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.660	673.470	3.941	82.5	82.5	3223.568	0.585	0.99		Unsaturated	0.0			636.55	1.70	1082.14	1082.14	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	563.880	3.343	102.5	102.5	2421.349	0.593	1.00		Unsaturated	0.0			532.97	1.70	906.05	906.05	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	454.110	2.872	122.5	122.5	1783.638	0.633	1.04		Unsaturated	0.0			429.22	1.70	729.67	729.67	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	304.840	2.776	143.8	143.8	1105.192	0.911	1.25		Unsaturated	0.0			288.13	1.70	489.82	489.82	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	191.240	2.115	163.8	163.8	649.493	1.107	1.42		Unsaturated	0.0			180.76	1.70	307.29	307.29	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	128.940	2.135	185.0	185.0	411.872	1.657	1.67		Unsaturated	0.0			121.87	1.70	207.18	207.18	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	93.020	2.341	205.0	205.0	282.158	2.520	1.92		Unsaturated	16.2			87.92	1.70	149.47	181.04	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	86.120	2.279	225.0	225.0	249.297	2.649	1.96		Unsaturated	20.0			81.40	1.70	138.38	180.59	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	70.500	2.156	246.3	246.3	194.991	3.063	2.07		Unsaturated	29.0			66.64	1.70	113.28	169.99	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	57.180	1.975	266.3	266.3	152.005	3.461	2.18		Unsaturated	37.4			54.05	1.70	91.88	153.84	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	50.660	1.654	287.5	287.5	129.534	3.274	2.20		Unsaturated	39.2			47.88	1.70	81.40	142.39	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	27.130	1.249	307.5	307.5	66.885	4.629	2.50		Unsaturated	63.2			25.64	1.70	43.59	105.37	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	17.340	0.912	327.5	327.5	59.932	5.310	2.58		Unsaturated	69.3			16.39	1.70	27.86	86.45	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	12.930	0.836	348.8	348.8	42.591	6.552	2.74		Unsaturated	82.6			12.22	1.70	20.78	79.36	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	11.410	0.888	368.8	368.8	60.885	7.910	2.71		Unsaturated	79.6			10.78	1.70	18.33	75.78	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	10.920	0.912	390.0	390.0	55.000	8.502	2.76		Unsaturated	83.7			10.32	1.70	17.55	75.29	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	10.110	0.911	410.0	410.0	48.317	9.197	2.82		Unsaturated	88.7			9.56	1.70	16.24	74.16	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	9.380	0.860	430.0	430.0	42.628	9.385	2.86		Unsaturated	92.0			8.87	1.70	15.07	72.97	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	9.610	0.853	451.3	451.3	41.593	9.085	2.86		Unsaturated	91.7			9.08	1.70	15.44	73.42	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	9.830	0.841	471.3	471.3	40.719	8.760	2.85		Unsaturated	91.2			9.29	1.70	15.79	73.83	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	10.300	0.871	492.5	492.5	40.827	8.658	2.85		Unsaturated	90.8			9.74	1.70	16.55	74.78	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	10.320	0.906	512.5	512.5	39.273	9.001	2.87		Unsaturated	92.7			9.75	1.70	16.58	75.01	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	12.460	1.054	533.8	533.8	45.689	8.640	2.82		Unsaturated	88.2			11.78	1.70	20.02	79.04	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	13.300	1.190	553.8	553.8	47.036	9.138	2.83		Unsaturated	89.1			12.57	1.70	21.37	80.89	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	17.360	1.306	573.8	573.8	59.514	7.649	2.70		Unsaturated	79.1			16.41	1.70	27.89	88.14	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	20.240	1.445	595.0	595.0	67.034	7.246	2.65		Unsaturated	75.1			19.13	1.70	32.52	93.52	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	23.530	1.507	615.0	615.0	52.128	6.491	2.68		Unsaturated	77.7			22.24	1.70	37.81	100.80	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	22.860	1.469	636.3	636.3	70.859	6.519	2.60		Unsaturated	71.0			21.61	1.70	36.73	98.24	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	19.810	1.221	656.3	656.3	59.373	6.267	2.64		Unsaturated	73.8			18.72	1.70	31.83	92.41	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	17.710	0.992	676.3	676.3	51.377	5.709	2.65		Unsaturated	74.7			16.74	1.70	28.46	88.19	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.580	15.910	0.862	697.5	697.5	44.620	5.541	2.68		Unsaturated	77.2			15.04	1.70	25.56	84.83	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.740	18.520	0.768	717.5	717.5	36.597	4.230	2.65		Unsaturated	75.3			17.50	1.70	29.76	89.98	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.910	20.090	0.700	738.8	738.8	38.936	3.550	2.58		Unsaturated	69.6			18.99	1.70	32.28	92.22	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	18.270	0.601	758.8	758.8	34.668	3.360	2.60		Unsaturated	71.2			17.27	1.70	29.36	88.75	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.230	17.850	0.442	778.8	778.8	33.224	2.529	2.54		Unsaturated	65.9			16.87	1.70	28.63	86.76	1.00	0.323	1.096	n.a.	n.a.	n.a.	0.00	0.00
6.400	19.720	0.360	800.0	800.0	29.698	1.865	2.49		Unsaturated	62.4			18.64	1.66	31.02	89.03	0.99	0.323	1.095	n.a.	n.a.	n.a.	0.00	0.00
6.560	19.890	0.418	820.0	820.0	29.577	2.148	2.53		Unsaturated	65.5			18.80	1.64	30.85	89.52	0.99	0.323	1.093	n.a.	n.a.	n.a.	0.00	0.00
6.730	20.130	0.395	841.3	841.3	29.545	2.003	2.51		Unsaturated	64.0			19.03	1.62	30.83	89.17	0.99	0.323	1.090	n.a.	n.a.	n.a.	0.00	0.00
6.890	20.040	0.612	861.3	861.3	34.774	3.119	2.58		Unsaturated	69.4			18.94	1.60	30.29	89.62	0.99	0.323	1.088	n.a.	n.a.	n.a.	0.00	0.00
7.050	20.090	0.573	881.3	881.3	34.289	2.918	2.57		Unsaturated	68.3			18.99	1.58	30.03	89.06	0.99	0.323	1.085	n.a.	n.a.	n.a.	0.00	0.00
7.220	24.400	0.822	902.5	902.5	41.100	3.432	2.55		Unsaturated	67.4			23.06	1.54	35.53	95.97	0.99	0.323	1.088	n.a.	n.a.	n.a.	0.00	0.00
7.380	21.130	1.059	922.5	922.5	44.810	5.126	2.65		Unsaturated	75.1			19.97	1.54	30.71	91.18	0.99	0.323	1.082	n.a.	n.a.	n.a.	0.00	0.00
7.550	26.750	0.897	943.8	943.8	37.191	3.415	2.59		Unsaturated	69.8			25.28	1.50	37.84	99.44	0.99	0.323	1.085	n.a.	n.a.	n.a.	0.00	0.00
7.710	75.090	0.838	963.8	963.8	104.490	1.124	1.93		Unsaturated	17.3			70.97	1.41	100.15	130.02	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.870	109.480	1.421	983.8	983.8	151.081	1.304	1.86		Unsaturated	11.6			103.48	1.35	140.17	154.28	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.040	133.380	1.324	1005.0	1005.0	182.239	0.996	1.72		Unsaturated	0.3			126.07	1.32	166.87	166.87	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.200	134.190	0.867	1025.0	1025.0	181.538	0.648	1.59		Unsaturated	0.0			126.83	1.31	166.68	166.68	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.370	129.340	1.275	1046.3	1046.3	173.152	0.989	1.73		Unsaturated	1.4			122.25	1.31	160.49	160.49	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.530	125.620	1.464	1066.3	1066.3	166.554	1.170	1.79		Unsaturated	6.5			118.73	1.31	155.39	156.61	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.690	116.200	1.684	1086.3	1086.3	152.573	1.456	1.89		Unsaturated	14.1			109.83	1.29	141.47	164.85	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.860	109.920	1.082	1107.5	1107.5	142.884	0.989	1.79		Unsaturated	6.2			103.89	1.32	136.74	137.63	0.99	0.322	1.093	n.a.	n.a.	n.a.	0.00	0.00
9.020	99.800	1.041	1127.5	1127.5	128.494	1.049	1.84		Unsaturated	10.3			94.33	1.31	123.82	133.21	0.99	0.322	1.087	n.a.	n.a.	n.a.	0.00	0.00
9.190	87.150	0.562	1148.8	1148.8	111.059	0.649	1.76		Unsaturated	3.7			82.37	1.34	110.19	110.20	0.99	0.322	1.070	n.a.	n.a.	n.a.	0.00	0.00
9.350	80.350	0.503	1168.8	1168.8	101.444	0.631	1.78		Unsaturated	5.7			75.95	1.34	101.78	102.22	0.99	0.321	1.064	n.a.	n.a.	n.a.	0.00	0.00
9.510	70.660	0.509	1188.8	1188.8	88.355	0.726	1.87		Unsaturated	12.5			66.79	1.33	88.66	103.12	0.99	0.321	1.063	n.a.	n.a.	n.a.	0.00	0.00
9.680	65.330	0.940	1210.0	1210.0	80.901	1.452	2.09		Unsaturated	29.8			61.75	1.28	78.88	129.94	0.99	0.321	1.075	n.a.	n.a.	n.a.	0.00	0.00
9.840	62.050	0.771	1230.0	1230.0	76.161	1.255	2.06		Unsaturated	28.1			58.65	1.28	74.91	122.94	0.99	0.321	1.069	n.a.	n.a.	n.a.	0.00	0.00
10.010	68.390	0.779	1251.3	1251.3	83.292	1.150	2.01		Unsaturated	23.8			64.64	1.27	81.82	124.21	0.99	0.321	1.068	n.a.	n.a.	n.a.	0.00	0.00
10.170	65.020	0.593	1271.3	1271.3	78.512	0.921	1.97		Unsaturated	20.6			61.46	1.27	78.07	113.54	0.99	0.321	1.060	n.a.	n.a.	n.a.	0.00	0.00
10.330	73.250	0.972	1291.3	1291.3	87.848	1.339	2.04		Unsaturated	25.8			69.23	1.24	85.77	132.36	0.99	0.321	1.068	n.a.	n.a.	n.a.	0.00	0.00
10.500	84.080	1.034	1312.5	1312.5	100.118	1.239	1.97		Unsaturated	20.7			79.47	1.23	97.48	135.71	0.99	0.321	1.068	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 2

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
10.660	100.310	1.226	1332.5	1332.5	118.683	1.230	1.91		Unsaturated	16.1			94.81	1.21	114.89	142.80	0.99	0.321	1.069	n.a.	n.a.	n.a.	0.00	0.00
10.830	124.690	1.427	1353.8	1353.8	146.545	1.150	1.83		Unsaturated	9.2			117.85	1.20	141.33	147.90	0.99	0.320	1.070	n.a.	n.a.	n.a.	0.00	0.00
10.990	159.480	1.206	1373.8	1373.8	186.273	0.759	1.63		Unsaturated	0.0			150.74	1.17	176.29	176.29	0.99	0.320	1.088	n.a.	n.a.	n.a.	0.00	0.00
11.150	162.860	1.537	1393.8	1393.8	188.856	0.948	1.69		Unsaturated	0.0			153.93	1.16	178.82	178.82	0.99	0.320	1.087	n.a.	n.a.	n.a.	0.00	0.00
11.320	166.180	1.283	1415.0	1415.0	191.258	0.775	1.63		Unsaturated	0.0			157.07	1.15	181.22	181.22	0.98	0.320	1.086	n.a.	n.a.	n.a.	0.00	0.00
11.480	168.690	1.403	1435.0	1435.0	192.790	0.835	1.65		Unsaturated	0.0			159.44	1.15	182.87	182.87	0.98	0.320	1.085	n.a.	n.a.	n.a.	0.00	0.00
11.650	163.640	1.630	1456.3	1456.3	185.612	1.000	1.71		Unsaturated	0.0			154.67	1.14	177.04	177.04	0.98	0.320	1.077	n.a.	n.a.	n.a.	0.00	0.00
11.810	168.040	2.834	1476.3	1476.3	189.318	1.694	1.88		Unsaturated	13.1			158.83	1.13	178.76	200.90	0.98	0.320	1.096	n.a.	n.a.	n.a.	0.00	0.00
11.980	171.150	2.196	1497.5	1497.5	191.453	1.289	1.78		Unsaturated	5.7			161.77	1.13	182.73	183.27	0.98	0.320	1.076	n.a.	n.a.	n.a.	0.00	0.00
12.140	186.240	2.521	1517.5	1517.5	207.018	1.359	1.78		Unsaturated	5.3			176.03	1.12	196.67	197.00	0.98	0.319	1.084	n.a.	n.a.	n.a.	0.00	0.00
12.300	197.160	2.868	1537.5	1537.5	217.764	1.460	1.79		Unsaturated	6.1			186.35	1.11	206.40	207.30	0.98	0.319	1.092	n.a.	n.a.	n.a.	0.00	0.00
12.470	206.480	3.323	1558.8	1558.8	226.527	1.615	1.81		Unsaturated	7.9			195.16	1.10	214.27	218.51	0.98	0.319	1.092	n.a.	n.a.	n.a.	0.00	0.00
12.630	221.760	2.543	1578.8	1578.8	241.797	1.151	1.68		Unsaturated	0.0			209.60	1.09	228.42	228.42	0.98	0.319	1.088	n.a.	n.a.	n.a.	0.00	0.00
12.800	211.580	2.271	1600.0	1600.0	229.109	1.077	1.67		Unsaturated	0.0			199.98	1.09	217.87	217.87	0.98	0.319	1.084	n.a.	n.a.	n.a.	0.00	0.00
12.960	202.700	2.308	1620.0	1620.0	218.087	1.143	1.71		Unsaturated	0.0			191.59	1.09	208.59	208.59	0.98	0.319	1.078	n.a.	n.a.	n.a.	0.00	0.00
13.120	200.690	2.538	1640.0	1640.0	214.584	1.270	1.75		Unsaturated	2.7			189.69	1.09	205.90	205.90	0.98	0.319	1.072	n.a.	n.a.	n.a.	0.00	0.00
13.290	217.020	2.830	1661.3	1661.3	230.616	1.309	1.74		Unsaturated	1.9			205.12	1.08	220.72	220.72	0.98	0.319	1.073	n.a.	n.a.	n.a.	0.00	0.00
13.450	221.570	3.192	1681.3	1681.3	234.054	1.446	1.77		Unsaturated	4.2			209.42	1.07	224.30	224.35	0.98	0.318	1.069	n.a.	n.a.	n.a.	0.00	0.00
13.620	208.740	2.583	1702.5	1702.5	219.058	1.243	1.73		Unsaturated	1.6			197.30	1.07	211.27	211.27	0.98	0.318	1.065	n.a.	n.a.	n.a.	0.00	0.00
13.780	221.650	1.715	1722.5	1722.5	231.297	0.777	1.57		Unsaturated	0.0			209.50	1.06	222.85	222.85	0.98	0.318	1.062	n.a.	n.a.	n.a.	0.00	0.00
13.940	209.500	2.425	1742.5	1742.5	217.300	1.162	1.71		Unsaturated	0.1			198.02	1.06	210.54	210.54	0.98	0.318	1.058	n.a.	n.a.	n.a.	0.00	0.00
14.110	260.390	2.412	1763.8	1763.8	268.661	0.930	1.58		Unsaturated	0.0			246.12	1.05	258.23	258.23	0.98	0.318	1.055	n.a.	n.a.	n.a.	0.00	0.00
14.270	289.030	3.420	1783.8	1783.8	296.624	1.187	1.63		Unsaturated	0.0			273.19	1.05	285.78	285.78	0.98	0.318	1.051	n.a.	n.a.	n.a.	0.00	0.00
14.440	285.750	2.847	1805.0	1805.0	291.505	0.999	1.58		Unsaturated	0.0			270.09	1.04	281.65	281.65	0.98	0.318	1.048	n.a.	n.a.	n.a.	0.00	0.00
14.600	300.090	2.993	1825.0	1825.0	304.488	1.000	1.57		Unsaturated	0.0			283.64	1.04	294.93	294.93	0.98	0.318	1.044	n.a.	n.a.	n.a.	0.00	0.00
14.760	255.520	4.303	1845.0	1845.0	257.708	1.690	1.79		Unsaturated	6.5			241.51	1.04	250.48	252.04	0.98	0.317	1.041	n.a.	n.a.	n.a.	0.00	0.00
14.930	246.410	3.908	1866.3	1866.3	247.057	1.592	1.78		Unsaturated	5.7			232.90	1.04	241.17	241.82	0.98	0.317	1.038	n.a.	n.a.	n.a.	0.00	0.00
15.090	230.250	3.253	1886.3	1886.3	229.557	1.419	1.76		Unsaturated	4.1			217.63	1.03	225.19	225.24	0.98	0.317	1.034	n.a.	n.a.	n.a.	0.00	0.00
15.260	239.770	3.078	1907.5	1907.5	237.741	1.289	1.72		Unsaturated	0.8			226.63	1.03	233.48	233.48	0.98	0.317	1.031	n.a.	n.a.	n.a.	0.00	0.00
15.420	247.950	2.776	1927.5	1927.5	244.595	1.124	1.67		Unsaturated	0.0			234.36	1.03	240.54	240.54	0.97	0.317	1.028	n.a.	n.a.	n.a.	0.00	0.00
15.580	227.690	1.940	1947.5	1947.5	223.365	0.856	1.61		Unsaturated	0.0			215.21	1.03	220.69	220.69	0.97	0.317	1.025	n.a.	n.a.	n.a.	0.00	0.00
15.750	222.590	2.754	1968.8	1968.8	217.149	1.243	1.74		Unsaturated	1.8			210.39	1.02	215.14	215.14	0.97	0.317	1.022	n.a.	n.a.	n.a.	0.00	0.00
15.910	197.140	3.202	1988.8	1988.8	191.232	1.633	1.86		Unsaturated	11.9			186.33	1.02	190.06	207.85	0.97	0.316	1.018	n.a.	n.a.	n.a.	0.00	0.00
16.080	206.730	2.880	2010.0	2010.0	199.508	1.400	1.80		Unsaturated	6.9			195.40	1.02	198.73	200.66	0.97	0.316	1.014	n.a.	n.a.	n.a.	0.00	0.00
16.240	195.340	2.189	2030.0	2030.0	187.522	1.126	1.75		Unsaturated	2.7			184.63	1.01	187.31	187.31	0.97	0.316	1.009	n.a.	n.a.	n.a.	0.00	0.00
16.400	171.530	1.752	2050.0	2050.0	163.732	1.028	1.76		Unsaturated	3.7			162.13	1.01	164.09	164.11	0.97	0.316	1.006	n.a.	n.a.	n.a.	0.00	0.00
16.570	147.920	2.108	2071.3	2071.3	140.324	1.435	1.91		Unsaturated	15.8			139.81	1.01	140.93	170.06	0.97	0.316	1.004	n.a.	n.a.	n.a.	0.00	0.00
16.730	153.190	2.253	2091.3	2091.3	144.652	1.481	1.91		Unsaturated	15.8			144.79	1.00	145.41	175.17	0.97	0.316	1.002	n.a.	n.a.	n.a.	0.00	0.00
16.900	216.400	3.064	2112.5	2112.5	203.707	1.423	1.80		Unsaturated	6.9			204.54	1.00	204.65	206.55	0.97	0.316	1.000	n.a.	n.a.	n.a.	0.00	0.00
17.060	252.790	3.353	2132.5	2132.5	237.002	1.332	1.73		Unsaturated	1.7			238.93	1.00	238.41	238.41	0.97	0.316	0.998	n.a.	n.a.	n.a.	0.00	0.00
17.220	279.470	3.981	2152.4	2151.2	260.973	1.430	1.73		Unsaturated	1.6			264.15	1.00	263.00	263.00	0.97	0.315	0.995	n.a.	n.a.	n.a.	0.00	0.00
17.390	276.000	2.479	2172.8	2160.9	257.126	0.902	1.58		Unsaturated	0.0			260.87	0.99	259.43	259.43	0.97	0.315	0.994	n.a.	n.a.	n.a.	0.00	0.00
17.550	270.450	2.483	2192.0	2170.2	251.391	0.922	1.60		Unsaturated	0.0			255.62	0.99	253.92	253.92	0.97	0.315	0.992	n.a.	n.a.	n.a.	0.00	0.00
17.720	247.790	3.583	2212.4	2180.0	229.715	1.453	1.77		Unsaturated	4.8			234.21	0.99	232.20	232.35	0.97	0.315	0.991	n.a.	n.a.	n.a.	0.00	0.00
17.880	260.200	3.955	2231.6	2189.2	240.754	1.527	1.78		Unsaturated	5.1			245.94	0.99	243.65	243.93	0.97	0.315	0.990	n.a.	n.a.	n.a.	0.00	0.00
18.040	250.470	3.621	2250.8	2198.4	231.217	1.452	1.77		Unsaturated	4.6			236.74	0.99	234.16	234.28	0.97	0.315	0.989	n.a.	n.a.	n.a.	0.00	0.00
18.210	214.650	2.782	2271.2	2208.2	197.552	1.303	1.78		Unsaturated	5.2			202.88	0.99	200.06	200.37	0.97	0.315	0.989	n.a.	n.a.	n.a.	0.00	0.00
18.370	209.000	2.205	2290.4	2217.4	191.916	1.061	1.72		Unsaturated	0.6			197.54	0.98	194.45	194.45	0.97	0.314	0.988	n.a.	n.a.	n.a.	0.00	0.00
18.540	211.820	3.164	2310.8	2227.2	194.082	1.502	1.83		Unsaturated	9.4			200.21	0.98	196.93	205.15	0.97	0.314	0.986	n.a.	n.a.	n.a.	0.00	0.00
18.700	203.540	3.951	2330.0	2236.4	186.061	1.952	1.93		Unsaturated	17.4			192.38	0.98	189.29	229.10	0.97	0.314	0.983	n.a.	n.a.	n.a.	0.00	0.00
18.860	199.710	3.984	2349.2	2245.6	182.156	2.006	1.94		Unsaturated	18.6			188.76	0.98	185.51	229.22	0.97	0.314	0.982	n.a.	n.a.	n.a.	0.00	0.00
19.030	97.580	3.368	2369.6	2255.4	88.250	3.494	2.33		Unsaturated	49.5			92.23	0.98	89.98	159.55	0.97	0.314	0.989	n.a.	n.a.	n.a.	0.00	0.00
19.190	53.330	2.707	2388.8	2264.6	46.043	5.192	2.65		Unsaturated	74.8			50.41	0.97	48.83	114.60	0.97	0.314	0.992	n.a.	n.a.	n.a.	0.00	0.00
19.360	61.330	2.437	2409.2	2274.4	54.814	4.053	2.52		Unsaturated	64.4			57.97	0.97	56.10	121.75	0.96	0.314	0.991	n.a.	n.a.	n.a.	0.00	0.00
19.520	53.050	1.829	2428.4	2283.6	47.162	3.529	2.52		Unsaturated	64.6			50.14	0.96	48.37	111.86	0.96	0.313	0.991	n.a.	n.a.	n.a.	0.00	0.00
19.690	35.130	1.847	2448.8	2293.4	29.568	5.448	2.80		Unsaturated	86.8			33.20	0.96	31.87	94.32	0.96	0.313	0.992	n.a.	n.a.	n.a.	0.00	0.00
19.850	26.470	1.488	2468.0	2302.6	21.919	5.896	2.91		Unsaturated	96.2			25.02	0.96	23.92	84.93	0.96	0.313	0.992	n.a.	n.a.	n.a.	0.00	0.00
20.010	26.260	1.239	2487.2	2311.9	21.642	4.954	2.87		Clay	92.4			24.82	0.98	n.a.	n.a.	0.96	0.313	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.180	60.730	1.020	2507.6	2321.6	53.668	1.715	2.27		Sand	44.4			57.40	0.96	54.95	112.81	0.96	0.314	0.989	0.157	0.207	0.66	0.03	0.04
20.340	36.760	0.764	2526.8	2330.9	31.967	2.153	2.50		Sand	63.4	57.4		57.40	0.96	54.92	119.97	0.96	0.315	0.988	0.171	0.234	0.74	0.03	0.04
20.510	19.760	0.654	2547.2	2340.7	15.796	3.539	2.88		Clay	93.3			18.68	0.97	n.a.	n.a.	0.96	0.316	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.670	11.670	0.476	2566.4	2349.9	8.840	4.583	3.15		Clay	100.0			11.03	0.97	n.a.	n.a.	0.96	0.318	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.830	10.420	0.407	2585.6	2359.1	7.738	4.464	3.19		Clay	100.0			9.85	0.97	n.a.	n.a.	0.96	0.319	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.000	9.450	0.395	2606.0	2368.9	6.878	4.844	3.25		Clay	100.0			8.93	0.97	n.a.	n.a.	0.96	0.320	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 2

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
21.160	8.600	0.348	2625.2	2378.1	6.129	4.781	3.29		Clay	100.0			8.13	0.97	n.a.	n.a.	0.96	0.321	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.330	7.680	0.351	2645.6	2387.9	5.325	5.524	3.37		Clay	100.0			7.26	0.97	n.a.	n.a.	0.96	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	7.120	0.368	2664.8	2397.1	4.829	6.360	3.44		Clay	100.0			6.73	0.97	n.a.	n.a.	0.96	0.323	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.650	6.890	0.369	2684.0	2406.3	4.611	6.646	3.47		Clay	100.0			6.51	0.97	n.a.	n.a.	0.96	0.324	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.820	6.130	0.335	2704.4	2416.1	3.955	7.018	3.54		Clay	100.0			5.79	0.97	n.a.	n.a.	0.96	0.325	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.980	5.830	0.304	2723.6	2425.3	3.685	6.795	3.56		Clay	100.0			5.51	0.96	n.a.	n.a.	0.96	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.150	6.150	0.307	2744.0	2435.1	3.924	6.427	3.52		Clay	100.0			5.81	0.96	n.a.	n.a.	0.96	0.327	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	6.660	0.311	2763.2	2444.3	4.319	5.896	3.46		Clay	100.0			6.29	0.96	n.a.	n.a.	0.96	0.328	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.470	7.940	0.318	2782.4	2453.6	5.338	4.850	3.34		Clay	100.0			7.50	0.96	n.a.	n.a.	0.96	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.640	8.460	0.319	2802.8	2463.3	5.731	4.512	3.30		Clay	100.0			8.00	0.96	n.a.	n.a.	0.96	0.330	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.800	8.120	0.297	2822.0	2472.6	5.427	4.421	3.31		Clay	100.0			7.67	0.96	n.a.	n.a.	0.96	0.331	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.970	8.530	0.291	2842.4	2482.4	5.727	4.094	3.27		Clay	100.0			8.06	0.96	n.a.	n.a.	0.95	0.332	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	8.900	0.296	2861.6	2491.6	5.996	3.966	3.25		Clay	100.0			8.41	0.96	n.a.	n.a.	0.95	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.290	8.530	0.321	2880.8	2500.8	5.670	4.521	3.30		Clay	100.0			8.06	0.96	n.a.	n.a.	0.95	0.334	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.460	8.490	0.349	2901.2	2510.6	5.608	4.963	3.33		Clay	100.0			8.02	0.96	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.620	8.480	0.360	2920.4	2519.8	5.572	5.134	3.34		Clay	100.0			8.02	0.95	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.790	8.360	0.325	2940.8	2529.6	5.447	4.719	3.33		Clay	100.0			7.90	0.95	n.a.	n.a.	0.95	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	7.850	0.324	2960.0	2538.8	5.018	5.082	3.37		Clay	100.0			7.42	0.95	n.a.	n.a.	0.95	0.337	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.110	7.410	0.310	2979.2	2548.0	4.647	5.231	3.41		Clay	100.0			7.00	0.95	n.a.	n.a.	0.95	0.338	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.280	7.900	0.286	2999.6	2557.8	5.004	4.464	3.34		Clay	100.0			7.47	0.95	n.a.	n.a.	0.95	0.339	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.440	7.730	0.298	3018.8	2567.0	4.847	4.791	3.37		Clay	100.0			7.31	0.95	n.a.	n.a.	0.95	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.610	7.720	0.307	3039.2	2576.8	4.812	4.955	3.38		Clay	100.0			7.30	0.95	n.a.	n.a.	0.95	0.341	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	8.070	0.345	3058.4	2586.0	5.059	5.272	3.38		Clay	100.0			7.63	0.95	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.930	8.220	0.474	3077.6	2595.2	5.149	7.090	3.45		Clay	100.0			7.77	0.95	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.100	8.750	0.925	3098.0	2605.0	5.529	12.851	3.59		Clay	100.0			8.27	0.95	n.a.	n.a.	0.95	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.260	15.770	1.129	3117.2	2614.3	10.872	7.943	3.23		Clay	100.0			14.91	0.95	n.a.	n.a.	0.95	0.344	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	25.140	1.100	3137.6	2624.0	17.966	4.665	2.91		Clay	95.9			23.76	0.94	n.a.	n.a.	0.95	0.345	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.590	28.120	0.860	3156.8	2633.3	20.159	3.240	2.77		Clay	84.8			26.58	0.94	n.a.	n.a.	0.95	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	31.590	0.758	3176.0	2642.5	22.707	2.528	2.66		Clay	76.2			29.86	0.94	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.920	21.800	0.567	3196.4	2652.3	15.234	2.808	2.83		Clay	89.5			20.60	0.94	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.080	13.260	0.510	3215.6	2661.5	8.756	4.378	3.14		Clay	100.0			12.53	0.94	n.a.	n.a.	0.95	0.348	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.250	11.590	0.519	3236.0	2671.3	7.466	5.201	3.24		Clay	100.0			10.95	0.94	n.a.	n.a.	0.94	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.410	8.640	0.513	3255.2	2680.5	5.232	7.308	3.45		Clay	100.0			8.17	0.94	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.570	8.080	0.510	3274.4	2689.7	4.791	7.917	3.50		Clay	100.0			7.64	0.94	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	7.930	0.527	3294.8	2699.5	4.655	8.382	3.53		Clay	100.0			7.50	0.94	n.a.	n.a.	0.94	0.351	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	7.580	0.510	3314.0	2708.7	4.373	8.607	3.56		Clay	100.0			7.16	0.94	n.a.	n.a.	0.94	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	7.630	0.464	3334.4	2718.5	4.387	7.782	3.53		Clay	100.0			7.21	0.94	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	7.840	0.435	3353.6	2727.7	4.519	7.061	3.49		Clay	100.0			7.41	0.94	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	8.300	0.412	3374.0	2737.5	4.831	6.226	3.44		Clay	100.0			7.84	0.93	n.a.	n.a.	0.94	0.354	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	7.550	0.417	3393.2	2746.7	4.262	7.124	3.52		Clay	100.0			7.14	0.93	n.a.	n.a.	0.94	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	6.820	0.401	3412.4	2756.0	3.711	7.843	3.59		Clay	100.0			6.45	0.93	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.890	6.990	0.412	3432.8	2765.7	3.814	7.813	3.58		Clay	100.0			6.61	0.93	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.050	6.970	0.406	3452.0	2775.0	3.780	7.744	3.58		Clay	100.0			6.59	0.93	n.a.	n.a.	0.94	0.357	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	7.570	0.388	3472.4	2784.8	4.190	6.658	3.51		Clay	100.0			7.16	0.93	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	7.510	0.386	3491.6	2794.0	4.126	6.688	3.51		Clay	100.0			7.10	0.93	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	7.650	0.415	3510.8	2803.2	4.206	7.039	3.52		Clay	100.0			7.23	0.93	n.a.	n.a.	0.94	0.359	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	7.760	0.440	3531.2	2813.0	4.262	7.344	3.52		Clay	100.0			7.33	0.93	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	8.520	0.480	3550.4	2822.2	4.780	7.120	3.48		Clay	100.0			8.05	0.93	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	8.950	1.015	3570.8	2832.0	5.060	14.161	3.64		Clay	100.0			8.46	0.93	n.a.	n.a.	0.94	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	13.860	1.741	3590.0	2841.2	8.493	14.431	3.48		Clay	100.0			13.10	0.93	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	35.170	2.091	3609.2	2850.4	23.411	6.267	2.91		Clay	96.0			33.24	0.92	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.530	55.670	2.599	3629.6	2860.2	37.658	4.826	2.69		Clay	77.8			52.62	0.92	n.a.	n.a.	0.93	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.690	66.460	2.494	3648.8	2869.4	52.462	3.858	2.52		Sand	64.2		1.8	113.07	0.90	101.41	179.95	0.93	0.364	0.936	0.725	1.416	3.90	0.00	0.00
29.860	56.510	1.943	3669.2	2879.2	44.302	3.554	2.54		Sand	66.3	62.82	1.8	113.08	0.90	101.32	180.46	0.93	0.364	0.934	0.740	1.450	3.98	0.00	0.00
30.020	35.330	1.404	3688.4	2888.4	23.186	4.193	2.80		Clay	86.8			33.39	0.92	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.180	27.090	1.088	3707.6	2897.6	17.418	4.313	2.90		Clay	95.0			25.60	0.92	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.350	17.450	0.733	3728.0	2907.4	10.721	4.705	3.09		Clay	100.0			16.49	0.92	n.a.	n.a.	0.93	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.510	12.610	1.137	3747.2	2916.7	7.362	10.588	3.44		Clay	100.0			11.92	0.92	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.680	11.950	1.854	3767.6	2926.4	6.879	18.413	3.62		Clay	100.0			11.29	0.92	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.840	38.250	1.628	3786.8	2935.7	24.769	4.477	2.79		Clay	86.6			36.15	0.92	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.000	43.450	1.541	3806.0	2944.9	28.216	3.708	2.70		Clay	78.8			41.07	0.92	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.170	57.800	1.473	3826.4	2954.7	44.702	2.636	2.45		Sand	59.0	79.43		79.43	0.87	68.90	136.62	0.93	0.369	0.952	0.220	0.320	0.87	0.01	0.01
31.330	70.190	1.588	3845.6	2963.9	54.520	2.327	2.35		Sand	51.0	79.43		79.43	0.86	68.67	133.31	0.93	0.370	0.953	0.208	0.297	0.80	0.02	0.02
31.500	80.120	1.905	3866.0	2973.7	62.339	2.436	2.32		Sand	48.7	79.43		79.43	0.86	68.52	132.06	0.93	0.370	0.953	0.204	0.289	0.78	0.02	0.02

CORNERSTONE EARTH GROUP

CPT No. 2

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
31.660	84.040	2.154	3885.2	2982.9	65.356	2.624	2.33		Sand	49.3			79.43	0.86	68.44	132.26	0.93	0.371	0.953	0.205	0.290	0.78	0.02	0.02
31.820	72.520	2.177	3904.4	2992.1	56.091	3.085	2.43		Sand	57.1	79.43		79.43	0.86	68.48	135.43	0.93	0.371	0.951	0.216	0.311	0.84	0.02	0.02
31.990	50.300	2.187	3924.8	3001.9	32.205	4.524	2.71		Clay	80.1			47.54	0.91	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.150	41.480	2.244	3944.0	3011.1	26.241	5.679	2.85		Clay	90.7			39.21	0.91	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	47.830	2.179	3964.4	3020.9	30.354	4.753	2.75		Clay	82.8			45.21	0.91	n.a.	n.a.	0.93	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	43.890	2.063	3983.6	3030.1	27.654	4.923	2.79		Clay	86.0			41.48	0.91	n.a.	n.a.	0.92	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.640	38.370	1.666	4002.8	3039.3	23.932	4.580	2.81		Clay	88.0			36.27	0.91	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.810	34.820	1.558	4023.2	3049.1	21.520	4.750	2.86		Clay	91.6			32.91	0.91	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	37.160	1.057	4042.4	3058.4	22.979	3.008	2.71		Clay	79.6			35.12	0.91	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	26.760	0.722	4062.8	3068.1	16.120	2.921	2.82		Clay	88.7			25.29	0.91	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	20.100	0.521	4082.0	3077.4	11.737	2.883	2.93		Clay	97.4			19.00	0.91	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	13.920	0.483	4101.2	3086.6	7.691	4.067	3.17		Clay	100.0			13.16	0.91	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.630	10.270	0.478	4121.6	3096.4	5.302	5.820	3.39		Clay	100.0			9.71	0.90	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.790	8.960	0.463	4140.8	3105.6	4.437	6.720	3.49		Clay	100.0			8.47	0.90	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.960	9.930	0.450	4161.2	3115.4	5.039	5.729	3.40		Clay	100.0			9.39	0.90	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.120	9.780	0.420	4180.4	3124.6	4.922	5.464	3.40		Clay	100.0			9.24	0.90	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.280	9.000	0.427	4199.6	3133.8	4.404	6.193	3.47		Clay	100.0			8.51	0.90	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.450	8.930	0.414	4220.0	3143.6	4.339	6.067	3.47		Clay	100.0			8.44	0.90	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.610	10.130	0.392	4239.2	3152.8	5.081	4.887	3.36		Clay	100.0			9.57	0.90	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.780	9.300	0.383	4259.6	3162.6	4.534	5.336	3.42		Clay	100.0			8.79	0.90	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.940	9.410	0.403	4278.8	3171.8	4.584	5.541	3.43		Clay	100.0			8.89	0.90	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.100	9.090	0.430	4298.0	3181.0	4.364	6.192	3.47		Clay	100.0			8.59	0.90	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.270	9.180	0.432	4318.4	3190.8	4.401	6.153	3.47		Clay	100.0			8.68	0.90	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.430	10.120	0.424	4337.6	3200.0	4.969	5.330	3.39		Clay	100.0			9.57	0.90	n.a.	n.a.	0.92	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.600	10.120	0.440	4358.0	3209.8	4.948	5.536	3.40		Clay	100.0			9.57	0.90	n.a.	n.a.	0.91	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.760	10.210	0.445	4377.2	3219.1	4.984	5.548	3.40		Clay	100.0			9.65	0.90	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.930	10.630	0.428	4397.6	3228.8	5.222	5.074	3.36		Clay	100.0			10.05	0.89	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.090	10.720	0.419	4416.8	3238.1	5.257	4.920	3.35		Clay	100.0			10.13	0.89	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.250	10.290	0.431	4436.0	3247.3	4.972	5.342	3.39		Clay	100.0			9.73	0.89	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.420	10.570	0.427	4456.4	3257.1	5.122	5.119	3.37		Clay	100.0			9.99	0.89	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.580	12.730	0.429	4475.6	3266.3	6.425	4.089	3.23		Clay	100.0			12.03	0.89	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.750	11.170	0.443	4496.0	3276.1	5.447	4.970	3.34		Clay	100.0			10.56	0.89	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.910	10.230	0.359	4515.2	3285.3	4.853	4.502	3.36		Clay	100.0			9.67	0.89	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.070	12.010	0.493	4534.4	3294.5	5.915	5.056	3.31		Clay	100.0			11.35	0.89	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.240	12.480	0.730	4554.8	3304.3	6.175	7.150	3.39		Clay	100.0			11.80	0.89	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.400	21.710	0.666	4574.0	3313.5	11.723	3.428	2.97		Clay	100.0			20.52	0.89	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.570	30.020	0.583	4594.4	3323.3	16.684	2.102	2.73		Clay	81.1			28.37	0.89	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	21.190	0.481	4613.6	3332.5	11.333	2.545	2.91		Clay	95.9			20.03	0.89	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.890	15.850	0.455	4632.8	3341.7	8.100	3.362	3.10		Clay	100.0			14.98	0.89	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.060	13.880	0.461	4653.2	3351.5	6.894	3.993	3.20		Clay	100.0			13.12	0.89	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.220	12.950	0.581	4672.4	3360.8	6.316	5.478	3.31		Clay	100.0			12.24	0.89	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.390	12.740	0.814	4692.8	3370.5	6.167	7.833	3.41		Clay	100.0			12.04	0.88	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	14.380	2.805	4712.0	3379.8	7.115	23.325	3.68		Clay	100.0			13.59	0.88	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	131.060	3.868	4731.2	3389.0	96.116	3.006	2.26		Sand	43.6			123.88	0.84	104.27	174.03	0.90	0.390	0.906	0.579	1.046	2.68	0.00	0.00
38.880	449.810	4.593	4751.6	3398.8	333.688	1.026	1.55		Sand	0.0			425.15	0.88	375.19	375.19	0.90	0.390	0.858	########	########	##########	0.00	0.00
39.040	409.120	4.412	4770.8	3408.0	302.925	1.085	1.60		Sand	0.0			386.69	0.88	341.00	341.00	0.90	0.390	0.857	########	########	##########	0.00	0.00
39.210	361.560	5.639	4791.2	3417.8	267.112	1.570	1.76		Sand	3.7			341.74	0.88	301.13	301.15	0.90	0.391	0.856	########	########	3028643.15	0.00	0.00
39.370	346.040	6.135	4810.4	3427.0	255.219	1.785	1.82		Sand	8.2			327.07	0.88	288.00	293.97	0.90	0.391	0.855	########	########	661137.95	0.00	0.00
39.530	393.260	3.904	4829.6	3436.2	289.893	0.999	1.58		Sand	0.0			371.70	0.88	327.07	327.07	0.90	0.391	0.855	########	########	##########	0.00	0.00
39.700	431.920	5.064	4850.0	3446.0	318.107	1.179	1.61		Sand	0.0			408.24	0.88	358.95	358.95	0.90	0.392	0.854	########	########	##########	0.00	0.00
39.860	484.650	6.033	4869.2	3455.2	356.677	1.251	1.61		Sand	0.0			458.08	0.88	402.49	402.49	0.90	0.392	0.853	########	########	##########	0.00	0.00
40.030	507.530	4.988	4889.6	3465.0	373.065	0.988	1.51		Sand	0.0			479.71	0.88	421.18	421.18	0.90	0.392	0.852	########	########	##########	0.00	0.00
40.190	434.360	5.215	4908.8	3474.2	318.590	1.207	1.62		Sand	0.0			410.55	0.88	360.21	360.21	0.90	0.392	0.851	########	########	##########	0.00	0.00
40.350	414.370	4.668	4928.0	3483.4	303.435	1.133	1.61		Sand	0.0			391.65	0.88	343.39	343.39	0.90	0.393	0.850	########	########	##########	0.00	0.00
40.520	424.270	4.962	4948.4	3493.2	310.285	1.176	1.62		Sand	0.0			401.01	0.88	351.33	351.33	0.90	0.393	0.850	########	########	##########	0.00	0.00
40.680	407.570	4.101	4967.6	3502.4	297.601	1.012	1.58		Sand	0.0			385.23	0.88	337.27	337.27	0.90	0.393	0.849	########	########	##########	0.00	0.00
40.850	456.280	3.348	4988.0	3512.2	332.913	0.738	1.44		Sand	0.0			431.27	0.87	377.30	377.30	0.90	0.394	0.848	########	########	##########	0.00	0.00
41.010	480.830	4.330	5007.2	3521.5	350.458	0.905	1.50		Sand	0.0			454.47	0.87	397.33	397.33	0.90	0.394	0.847	########	########	##########	0.00	0.00
41.170	443.650	3.644	5026.4	3530.7	322.788	0.826	1.49		Sand	0.0			419.33	0.87	366.35	366.35	0.89	0.394	0.846	########	########	##########	0.00	0.00
41.340	357.270	3.451	5046.8	3540.5	259.215	0.973	1.60		Sand	0.0			337.68	0.87	294.80	294.80	0.89	0.394	0.846	########	########	767618.02	0.00	0.00
41.500	321.460	3.225	5066.0	3549.7	232.739	1.011	1.65		Sand	0.0			303.84	0.87	265.07	265.07	0.89	0.395	0.845	937.487	1742.379	4414.20	0.00	0.00
41.670	339.330	2.823	5086.4	3559.5	245.434	0.838	1.57		Sand	0.0			320.73	0.87	279.61	279.61	0.89	0.395	0.844	9288.039	########	43659.29	0.00	0.00
41.830	357.280	4.280	5105.6	3568.7	258.174	1.207	1.68		Sand	0.0			337.69	0.87	294.20	294.20	0.89	0.395	0.843	########	########	674424.18	0.00	0.00
41.990	307.790	6.635	5124.8	3577.9	221.861	2.174	1.92		Sand	16.6			290.92	0.87	253.27	296.89	0.89	0.396	0.842	########	########	1175116.07	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	2

PGA (A_{max})	0.50

Total Settlement:	0.16	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
42.160	328.530	4.894	5145.2	3587.7	236.606	1.501	1.78		Sand	5.0			310.52	0.87	270.14	270.40	0.89	0.396	0.842	2074.059	3840.186	9702.59	0.00	0.00
42.320	409.640	3.139	5164.4	3596.9	295.096	0.771	1.49		Sand	0.0			387.18	0.87	336.61	336.61	0.89	0.396	0.841	########	########	##########	0.00	0.00
42.490	398.780	3.447	5184.8	3606.7	286.826	0.870	1.54		Sand	0.0			376.92	0.87	327.45	327.45	0.89	0.396	0.840	########	########	##########	0.00	0.00
42.650	416.600	2.858	5204.0	3615.9	299.337	0.690	1.45		Sand	0.0			393.76	0.87	341.85	341.85	0.89	0.397	0.839	########	########	##########	0.00	0.00
42.810	426.710	3.010	5223.2	3625.1	306.250	0.710	1.45		Sand	0.0			403.32	0.87	349.92	349.92	0.89	0.397	0.838	########	########	##########	0.00	0.00
42.980	371.790	2.867	5243.6	3634.9	266.225	0.777	1.52		Sand	0.0			351.41	0.87	304.66	304.66	0.89	0.397	0.838	########	########	6419367.17	0.00	0.00
43.140	383.990	2.735	5262.8	3644.1	274.668	0.717	1.49		Sand	0.0			362.94	0.87	314.45	314.45	0.89	0.397	0.837	########	########	##########	0.00	0.00
43.310	377.990	3.096	5283.2	3653.9	269.977	0.825	1.54		Sand	0.0			357.27	0.87	309.32	309.32	0.89	0.398	0.836	########	########	##########	0.00	0.00
43.470	387.110	3.291	5302.4	3663.2	276.181	0.856	1.54		Sand	0.0			365.89	0.87	316.57	316.57	0.89	0.398	0.835	########	########	##########	0.00	0.00
43.640	395.530	2.593	5322.8	3672.9	281.846	0.660	1.46		Sand	0.0			373.85	0.86	323.23	323.23	0.89	0.398	0.835	########	########	##########	0.00	0.00
43.800	394.580	2.834	5342.0	3682.2	280.806	0.723	1.49		Sand	0.0			372.95	0.86	322.24	322.24	0.89	0.398	0.834	########	########	##########	0.00	0.00
43.960	402.550	3.490	5361.2	3691.4	286.152	0.873	1.54		Sand	0.0			380.48	0.86	328.53	328.53	0.88	0.398	0.833	########	########	##########	0.00	0.00
44.130	391.110	3.754	5381.6	3701.2	277.590	0.966	1.58		Sand	0.0			369.67	0.86	318.97	318.97	0.88	0.399	0.832	########	########	##########	0.00	0.00
44.290	475.530	3.219	5400.8	3710.4	337.495	0.681	1.41		Sand	0.0			449.46	0.86	387.57	387.57	0.88	0.399	0.832	########	########	##########	0.00	0.00
44.460	477.970	2.628	5421.2	3720.2	338.783	0.553	1.35		Sand	0.0			451.77	0.86	389.28	389.28	0.88	0.399	0.831	########	########	##########	0.00	0.00
44.620	449.460	2.154	5440.4	3729.4	318.059	0.482	1.32		Sand	0.0			424.82	0.86	365.82	365.82	0.88	0.399	0.830	########	########	##########	0.00	0.00
44.780	425.670	2.123	5459.6	3738.6	300.743	0.502	1.35		Sand	0.0			402.33	0.86	346.24	346.24	0.88	0.399	0.829	########	########	##########	0.00	0.00
44.950	392.130	2.187	5480.0	3748.4	276.525	0.562	1.41		Sand	0.0			370.63	0.86	318.73	318.73	0.88	0.400	0.828	########	########	##########	0.00	0.00
45.110	362.730	2.182	5499.2	3757.6	255.326	0.606	1.46		Sand	0.0			342.84	0.86	294.65	294.65	0.88	0.400	0.828	########	########	717484.49	0.00	0.00
45.280	307.400	2.976	5519.6	3767.4	215.793	0.977	1.66		Sand	0.0			290.55	0.86	248.67	248.67	0.88	0.400	0.827	111.378	202.628	506.45	0.00	0.00
45.440	204.220	3.192	5538.8	3776.6	142.524	1.585	1.94		Sand	17.9			193.02	0.82	159.17	197.48	0.88	0.400	0.852	1.644	3.083	7.70	0.00	0.00
45.600	91.940	2.303	5558.0	3785.8	63.004	2.582	2.34		Sand	49.8	193.02		193.02	0.86	165.56	255.31	0.88	0.400	0.825	249.729	453.521	1132.48	0.00	0.00
45.770	42.000	1.205	5578.4	3795.6	20.661	3.074	2.75		Clay	83.0			39.70	0.86	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.930	21.960	0.611	5597.6	3804.8	10.072	3.186	3.01		Clay	100.0			20.76	0.86	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.100	17.950	0.433	5618.0	3814.6	7.938	2.857	3.07		Clay	100.0			16.97	0.86	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	15.390	0.434	5637.2	3823.9	6.575	3.454	3.18		Clay	100.0			14.55	0.86	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.420	15.790	0.402	5656.4	3833.1	6.763	3.101	3.15		Clay	100.0			14.92	0.85	n.a.	n.a.	0.88	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.590	17.170	0.392	5676.8	3842.9	7.459	2.735	3.08		Clay	100.0			16.23	0.85	n.a.	n.a.	0.88	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.750	16.930	0.413	5696.0	3852.1	7.311	2.932	3.10		Clay	100.0			16.00	0.85	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.920	16.870	0.482	5716.4	3861.9	7.256	3.436	3.15		Clay	100.0			15.95	0.85	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.080	17.700	0.571	5735.6	3871.1	7.663	3.850	3.15		Clay	100.0			16.73	0.85	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.240	21.580	0.556	5754.8	3880.3	9.640	2.972	3.01		Clay	100.0			20.40	0.85	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.410	20.750	0.508	5775.2	3890.1	9.184	2.846	3.01		Clay	100.0			19.61	0.85	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.570	19.140	0.445	5794.4	3899.3	8.331	2.742	3.04		Clay	100.0			18.09	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.740	17.840	0.503	5814.8	3909.1	7.640	3.368	3.12		Clay	100.0			16.86	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	19.740	0.616	5834.0	3918.3	8.587	3.661	3.10		Clay	100.0			18.66	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.060	21.060	0.801	5853.2	3927.5	9.234	4.417	3.12		Clay	100.0			19.91	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.230	22.010	1.273	5873.6	3937.3	9.688	6.674	3.22		Clay	100.0			20.80	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.390	24.370	1.441	5892.8	3946.5	10.857	6.725	3.18		Clay	100.0			23.03	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.560	40.070	1.030	5913.2	3956.3	18.762	2.774	2.76		Clay	83.4			37.87	0.85	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	42.520	0.920	5932.4	3965.6	19.949	2.327	2.69		Clay	78.1			40.19	0.85	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.880	30.150	0.789	5951.6	3974.8	13.673	2.903	2.88		Clay	93.2			28.50	0.85	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.050	17.890	0.583	5972.0	3984.6	7.481	3.913	3.17		Clay	100.0			16.91	0.85	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.210	14.550	0.461	5991.2	3993.8	5.786	3.992	3.26		Clay	100.0			13.75	0.85	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.380	13.140	0.438	6011.6	4003.6	5.063	4.319	3.33		Clay	100.0			12.42	0.85	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.540	12.690	0.451	6030.8	4012.8	4.822	4.658	3.37		Clay	100.0			11.99	0.84	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.700	12.540	0.479	6050.0	4022.0	4.731	5.034	3.39		Clay	100.0			11.85	0.84	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.870	13.700	0.562	6070.4	4031.8	5.290	5.270	3.36		Clay	100.0			12.95	0.84	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.030	16.950	0.718	6089.6	4041.0	6.882	5.163	3.27		Clay	100.0			16.02	0.84	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	3

PGA (A_{max})	0.50

Total Settlement:	0.06	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
0.660	47.060	1.594	82.5	82.5	225.069	3.390	2.08		Unsaturated	29.1			44.48	1.70	75.62	125.12	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	350.700	2.014	102.5	102.5	1505.853	0.574	1.02		Unsaturated	0.0			331.47	1.70	563.51	563.51	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	300.860	1.271	122.5	122.5	1181.626	0.423	0.93		Unsaturated	0.0			284.37	1.70	483.42	483.42	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	205.040	1.904	143.8	143.8	743.284	0.929	1.33		Unsaturated	0.0			193.80	1.70	329.46	329.46	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	110.530	1.640	163.8	163.8	375.267	1.485	1.65		Unsaturated	0.0			104.47	1.70	177.60	177.60	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	51.860	1.587	185.0	185.0	165.479	3.066	2.12		Unsaturated	32.3			49.02	1.70	83.33	138.24	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	30.220	1.829	205.0	205.0	91.456	6.073	2.51		Unsaturated	63.6			28.56	1.70	48.56	111.87	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	50.970	1.891	225.0	225.0	147.413	3.719	2.21		Unsaturated	40.1			48.18	1.70	81.90	143.64	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	45.130	1.696	246.3	246.3	124.699	3.767	2.26		Unsaturated	43.9			42.66	1.70	72.52	134.52	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	28.080	1.599	266.3	266.3	74.466	5.720	2.54		Unsaturated	66.4			26.54	1.70	45.12	108.10	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	19.520	1.489	287.5	287.5	74.063	7.683	2.64		Unsaturated	74.6			18.45	1.70	31.36	91.93	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	19.250	1.583	307.5	307.5	69.636	8.288	2.69		Unsaturated	78.0			18.19	1.70	30.93	91.91	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	19.730	1.612	327.5	327.5	68.271	8.240	2.69		Unsaturated	78.2			18.65	1.70	31.70	92.95	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	20.690	1.588	348.8	348.8	68.502	7.742	2.67		Unsaturated	76.4			19.56	1.70	33.24	94.67	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	21.600	1.531	368.8	368.8	68.769	7.148	2.64		Unsaturated	74.2			20.42	1.70	34.71	96.19	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	21.820	1.483	390.0	390.0	66.771	6.858	2.63		Unsaturated	73.7			20.62	1.70	35.06	96.57	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	22.160	1.488	410.0	410.0	65.458	6.779	2.63		Unsaturated	73.8			20.95	1.70	35.61	97.30	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	22.660	1.516	430.0	430.0	64.724	6.753	2.64		Unsaturated	73.9			21.42	1.70	36.41	98.36	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	23.200	1.550	451.3	451.3	64.051	6.748	2.64		Unsaturated	74.1			21.93	1.70	37.28	99.52	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	22.340	1.558	471.3	471.3	59.783	7.050	2.67		Unsaturated	76.8			21.12	1.70	35.90	98.18	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	22.300	1.550	492.5	492.5	57.833	7.028	2.68		Unsaturated	77.5			21.08	1.70	35.83	98.20	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	22.830	1.548	512.5	512.5	57.570	6.857	2.67		Unsaturated	76.9			21.58	1.70	36.68	99.21	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	23.410	1.631	533.8	533.8	57.367	7.046	2.68		Unsaturated	77.7			22.13	1.70	37.62	100.55	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	24.830	1.670	553.8	553.8	59.315	6.803	2.66		Unsaturated	76.1			23.47	1.70	39.90	103.24	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	24.330	1.644	573.8	573.8	56.658	6.837	2.68		Unsaturated	77.2			23.00	1.70	39.09	102.38	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	22.930	1.475	595.0	595.0	51.993	6.518	2.69		Unsaturated	77.9			21.67	1.70	36.84	99.57	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	21.250	1.455	615.0	615.0	68.106	6.948	2.63		Unsaturated	73.6			20.09	1.70	34.14	95.37	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	19.440	1.476	636.3	636.3	60.108	7.717	2.70		Unsaturated	79.2			18.37	1.70	31.24	92.48	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	21.580	1.516	656.3	656.3	64.768	7.135	2.66		Unsaturated	75.4			20.40	1.70	34.67	96.36	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	21.800	1.569	676.3	676.3	63.473	7.312	2.67		Unsaturated	76.5			20.60	1.70	35.03	97.00	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.580	22.770	1.527	697.5	697.5	64.290	6.812	2.64		Unsaturated	74.3			21.52	1.70	36.59	98.66	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.740	22.300	1.485	717.5	717.5	61.160	6.766	2.65		Unsaturated	75.2			21.08	1.70	35.83	97.83	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.910	20.730	1.419	738.8	738.8	55.122	6.969	2.69		Unsaturated	78.3			19.59	1.70	33.31	95.05	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	19.350	1.348	758.8	758.8	50.005	7.106	2.73		Unsaturated	81.0			18.29	1.70	31.03	92.48	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.230	18.340	1.236	778.8	778.8	46.101	6.884	2.74		Unsaturated	82.1			17.33	1.68	29.17	90.21	1.00	0.323	1.098	n.a.	n.a.	n.a.	0.00	0.00
6.400	18.020	1.134	800.0	800.0	44.050	6.433	2.73		Unsaturated	81.3			17.03	1.66	28.34	89.03	0.99	0.323	1.095	n.a.	n.a.	n.a.	0.00	0.00
6.560	16.860	1.017	820.0	820.0	40.122	6.182	2.74		Unsaturated	82.5			15.94	1.65	26.33	86.57	0.99	0.323	1.091	n.a.	n.a.	n.a.	0.00	0.00
6.730	15.870	0.955	841.3	841.3	36.730	6.184	2.77		Unsaturated	84.6			15.00	1.64	24.56	84.54	0.99	0.323	1.087	n.a.	n.a.	n.a.	0.00	0.00
6.890	13.810	0.936	861.3	861.3	31.070	6.997	2.86		Unsaturated	91.7			13.05	1.63	21.28	81.05	0.99	0.323	1.082	n.a.	n.a.	n.a.	0.00	0.00
7.050	12.690	1.008	881.3	881.3	27.800	8.231	2.94		Unsaturated	98.5			11.99	1.62	19.39	79.21	0.99	0.323	1.079	n.a.	n.a.	n.a.	0.00	0.00
7.220	12.530	0.898	902.5	902.5	26.767	7.435	2.92		Unsaturated	96.9			11.84	1.60	18.93	78.46	0.99	0.323	1.077	n.a.	n.a.	n.a.	0.00	0.00
7.380	12.970	0.843	922.5	922.5	27.119	6.736	2.89		Unsaturated	94.1			12.26	1.58	19.34	78.76	0.99	0.323	1.075	n.a.	n.a.	n.a.	0.00	0.00
7.550	20.540	0.902	943.8	943.8	42.528	4.496	2.63		Unsaturated	73.1			19.41	1.52	29.61	89.41	0.99	0.323	1.079	n.a.	n.a.	n.a.	0.00	0.00
7.710	30.330	0.794	963.8	963.8	41.803	2.661	2.47		Unsaturated	61.0			28.67	1.47	42.20	103.01	0.99	0.323	1.086	n.a.	n.a.	n.a.	0.00	0.00
7.870	45.990	1.279	983.8	983.8	63.070	2.811	2.36		Unsaturated	51.9			43.47	1.41	61.28	124.32	0.99	0.322	1.099	n.a.	n.a.	n.a.	0.00	0.00
8.040	52.680	1.598	1005.0	1005.0	71.560	3.062	2.35		Unsaturated	51.0			49.79	1.38	68.68	133.30	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.200	68.170	1.058	1025.0	1025.0	91.881	1.563	2.07		Unsaturated	28.3			64.43	1.36	87.56	138.28	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.370	61.110	1.133	1046.3	1046.3	81.439	1.870	2.16		Unsaturated	35.6			57.76	1.35	78.10	135.27	0.99	0.322	1.099	n.a.	n.a.	n.a.	0.00	0.00
8.530	64.360	1.023	1066.3	1066.3	84.986	1.603	2.10		Unsaturated	30.9			60.83	1.34	81.66	134.59	0.99	0.322	1.096	n.a.	n.a.	n.a.	0.00	0.00
8.690	69.690	1.024	1086.3	1086.3	91.218	1.481	2.05		Unsaturated	27.2			65.87	1.33	87.51	136.61	0.99	0.322	1.095	n.a.	n.a.	n.a.	0.00	0.00
8.860	90.770	1.119	1107.5	1107.5	117.865	1.241	1.92		Unsaturated	16.5			85.79	1.31	112.45	141.29	0.99	0.322	1.096	n.a.	n.a.	n.a.	0.00	0.00
9.020	115.760	1.067	1127.5	1127.5	149.160	0.926	1.76		Unsaturated	3.6			109.41	1.30	142.20	142.21	0.99	0.322	1.094	n.a.	n.a.	n.a.	0.00	0.00
9.190	116.600	1.456	1148.8	1148.8	148.838	1.254	1.85		Unsaturated	11.0			110.21	1.28	140.62	152.65	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.350	119.590	1.590	1168.8	1168.8	151.349	1.336	1.86		Unsaturated	12.1			113.03	1.26	142.42	158.64	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.510	129.870	1.700	1188.8	1188.8	163.021	1.315	1.84		Unsaturated	10.0			122.75	1.25	153.15	162.23	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.680	120.830	1.395	1210.0	1210.0	150.271	1.161	1.82		Unsaturated	8.8			114.21	1.25	143.24	148.76	0.99	0.321	1.088	n.a.	n.a.	n.a.	0.00	0.00
9.840	113.790	1.104	1230.0	1230.0	140.304	0.975	1.79		Unsaturated	6.4			107.55	1.26	135.53	136.54	0.99	0.321	1.077	n.a.	n.a.	n.a.	0.00	0.00
10.010	105.350	1.025	1251.3	1251.3	128.721	0.978	1.82		Unsaturated	8.7			99.57	1.26	125.31	130.17	0.99	0.321	1.071	n.a.	n.a.	n.a.	0.00	0.00
10.170	102.970	0.916	1271.3	1271.3	124.790	0.895	1.81		Unsaturated	7.5			97.33	1.26	122.27	124.63	0.99	0.321	1.066	n.a.	n.a.	n.a.	0.00	0.00
10.330	104.430	0.839	1291.3	1291.3	125.574	0.808	1.78		Unsaturated	5.0			98.71	1.25	123.28	123.45	0.99	0.321	1.063	n.a.	n.a.	n.a.	0.00	0.00
10.500	106.880	0.812	1312.5	1312.5	127.481	0.764	1.75		Unsaturated	3.4			101.02	1.24	125.07	125.07	0.99	0.321	1.062	n.a.	n.a.	n.a.	0.00	0.00
10.660	129.100	0.716	1332.5	1332.5	152.974	0.557	1.61		Unsaturated	0.0			122.02	1.21	147.34	147.34	0.99	0.321	1.072	n.a.	n.a.	n.a.	0.00	0.00
10.830	141.430	0.727	1353.8	1353.8	166.326	0.517	1.56		Unsaturated	0.0			133.68	1.19	159.02	159.02	0.99	0.320	1.077	n.a.	n.a.	n.a.	0.00	0.00
10.990	137.190	0.957	1373.8	1373.8	160.126	0.701	1.65		Unsaturated	0.0			129.67	1.19	153.92	153.92	0.99	0.320	1.071	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	3

PGA (A_{max})	0.50

Total Settlement:	0.06	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
11.150	118.870	1.464	1393.8	1393.8	137.625	1.239	1.87		Unsaturated	12.6			112.35	1.18	132.93	150.27	0.99	0.320	1.067	n.a.	n.a.	n.a.	0.00	0.00
11.320	107.600	1.462	1415.0	1415.0	123.550	1.368	1.93		Unsaturated	17.7			101.70	1.17	119.42	152.52	0.98	0.320	1.066	n.a.	n.a.	n.a.	0.00	0.00
11.480	103.300	0.889	1435.0	1435.0	117.739	0.867	1.82		Unsaturated	8.3			97.64	1.19	116.55	120.40	0.98	0.320	1.049	n.a.	n.a.	n.a.	0.00	0.00
11.650	99.360	1.225	1456.3	1456.3	112.375	1.241	1.93		Unsaturated	17.7			93.91	1.17	109.74	141.92	0.98	0.320	1.056	n.a.	n.a.	n.a.	0.00	0.00
11.810	122.360	1.098	1476.3	1476.3	137.627	0.902	1.78		Unsaturated	5.1			115.65	1.17	134.95	135.15	0.98	0.320	1.051	n.a.	n.a.	n.a.	0.00	0.00
11.980	132.560	1.042	1497.5	1497.5	148.095	0.791	1.71		Unsaturated	0.1			125.29	1.15	144.50	144.50	0.98	0.320	1.053	n.a.	n.a.	n.a.	0.00	0.00
12.140	154.380	1.681	1517.5	1517.5	171.459	1.094	1.76		Unsaturated	4.1			145.92	1.13	165.49	165.53	0.98	0.319	1.061	n.a.	n.a.	n.a.	0.00	0.00
12.300	188.280	1.829	1537.5	1537.5	207.918	0.975	1.67		Unsaturated	0.0			177.96	1.11	197.89	197.89	0.98	0.319	1.082	n.a.	n.a.	n.a.	0.00	0.00
12.470	216.210	2.201	1558.8	1558.8	237.242	1.022	1.65		Unsaturated	0.0			204.36	1.10	223.91	223.91	0.98	0.319	1.092	n.a.	n.a.	n.a.	0.00	0.00
12.630	184.840	2.570	1578.8	1578.8	201.397	1.396	1.80		Unsaturated	6.6			174.71	1.10	192.84	194.34	0.98	0.319	1.072	n.a.	n.a.	n.a.	0.00	0.00
12.800	171.930	1.865	1600.0	1600.0	186.011	1.090	1.74		Unsaturated	2.1			162.50	1.11	179.60	179.60	0.98	0.319	1.059	n.a.	n.a.	n.a.	0.00	0.00
12.960	171.520	2.330	1620.0	1620.0	184.405	1.365	1.81		Unsaturated	8.0			162.12	1.10	178.19	182.23	0.98	0.319	1.058	n.a.	n.a.	n.a.	0.00	0.00
13.120	175.060	2.157	1640.0	1640.0	187.067	1.238	1.78		Unsaturated	5.2			165.46	1.09	181.14	181.40	0.98	0.319	1.055	n.a.	n.a.	n.a.	0.00	0.00
13.290	210.200	2.118	1661.3	1661.3	223.341	1.012	1.66		Unsaturated	0.0			198.68	1.08	214.21	214.21	0.98	0.319	1.073	n.a.	n.a.	n.a.	0.00	0.00
13.450	225.090	2.167	1681.3	1681.3	237.787	0.966	1.63		Unsaturated	0.0			212.75	1.07	227.66	227.66	0.98	0.318	1.069	n.a.	n.a.	n.a.	0.00	0.00
13.620	223.440	2.483	1702.5	1702.5	234.548	1.115	1.68		Unsaturated	0.0			211.19	1.07	225.29	225.29	0.98	0.318	1.065	n.a.	n.a.	n.a.	0.00	0.00
13.780	232.420	2.911	1722.5	1722.5	242.579	1.257	1.71		Unsaturated	0.0			219.68	1.06	233.09	233.09	0.98	0.318	1.062	n.a.	n.a.	n.a.	0.00	0.00
13.940	229.620	2.425	1742.5	1742.5	238.256	1.060	1.66		Unsaturated	0.0			217.03	1.06	229.69	229.69	0.98	0.318	1.058	n.a.	n.a.	n.a.	0.00	0.00
14.110	210.920	1.936	1763.8	1763.8	217.446	0.921	1.64		Unsaturated	0.0			199.36	1.06	211.13	211.13	0.98	0.318	1.055	n.a.	n.a.	n.a.	0.00	0.00
14.270	223.090	1.699	1783.8	1783.8	228.742	0.765	1.57		Unsaturated	0.0			210.86	1.05	222.00	222.00	0.98	0.318	1.051	n.a.	n.a.	n.a.	0.00	0.00
14.440	230.010	1.934	1805.0	1805.0	234.462	0.844	1.59		Unsaturated	0.0			217.40	1.05	227.81	227.81	0.98	0.318	1.048	n.a.	n.a.	n.a.	0.00	0.00
14.600	234.580	3.596	1825.0	1825.0	237.815	1.539	1.78		Unsaturated	5.6			221.72	1.04	231.41	231.95	0.98	0.318	1.044	n.a.	n.a.	n.a.	0.00	0.00
14.760	246.700	2.401	1845.0	1845.0	248.780	0.977	1.62		Unsaturated	0.0			233.18	1.04	242.21	242.21	0.98	0.317	1.041	n.a.	n.a.	n.a.	0.00	0.00
14.930	252.390	2.715	1866.3	1866.3	253.076	1.080	1.65		Unsaturated	0.0			238.55	1.03	246.84	246.84	0.98	0.317	1.038	n.a.	n.a.	n.a.	0.00	0.00
15.090	238.050	2.102	1886.3	1886.3	237.365	0.886	1.60		Unsaturated	0.0			225.00	1.03	232.59	232.59	0.98	0.317	1.034	n.a.	n.a.	n.a.	0.00	0.00
15.260	213.210	1.917	1907.5	1907.5	211.300	0.903	1.64		Unsaturated	0.0			201.52	1.03	208.29	208.29	0.98	0.317	1.030	n.a.	n.a.	n.a.	0.00	0.00
15.420	201.740	1.221	1927.5	1927.5	198.832	0.608	1.54		Unsaturated	0.0			190.68	1.03	196.71	196.71	0.97	0.317	1.024	n.a.	n.a.	n.a.	0.00	0.00
15.580	188.480	0.938	1947.5	1947.5	184.735	0.500	1.51		Unsaturated	0.0			178.15	1.03	183.43	183.43	0.97	0.317	1.018	n.a.	n.a.	n.a.	0.00	0.00
15.750	173.180	1.915	1968.8	1968.8	168.733	1.112	1.77		Unsaturated	4.9			163.69	1.03	168.17	168.34	0.97	0.317	1.014	n.a.	n.a.	n.a.	0.00	0.00
15.910	164.650	3.000	1988.8	1988.8	159.556	1.833	1.95		Unsaturated	19.1			155.62	1.02	158.83	200.89	0.97	0.316	1.016	n.a.	n.a.	n.a.	0.00	0.00
16.080	151.050	2.787	2010.0	2010.0	145.511	1.857	1.98		Unsaturated	21.5			142.77	1.02	145.28	192.52	0.97	0.316	1.012	n.a.	n.a.	n.a.	0.00	0.00
16.240	123.960	2.625	2030.0	2030.0	118.641	2.135	2.09		Unsaturated	29.8			117.16	1.02	118.93	178.08	0.97	0.316	1.009	n.a.	n.a.	n.a.	0.00	0.00
16.400	88.420	1.963	2050.0	2050.0	83.923	2.246	2.20		Unsaturated	39.4			83.57	1.01	84.66	146.52	0.97	0.316	1.005	n.a.	n.a.	n.a.	0.00	0.00
16.570	97.340	1.629	2071.3	2071.3	92.003	1.692	2.09		Unsaturated	30.2			92.00	1.01	92.81	147.12	0.97	0.316	1.003	n.a.	n.a.	n.a.	0.00	0.00
16.730	123.220	1.432	2091.3	2091.3	116.158	1.172	1.91		Unsaturated	15.5			116.47	1.00	117.03	143.24	0.97	0.316	1.002	n.a.	n.a.	n.a.	0.00	0.00
16.900	145.080	1.307	2112.5	2112.5	136.241	0.908	1.78		Unsaturated	5.5			137.13	1.00	137.22	137.58	0.97	0.316	1.000	n.a.	n.a.	n.a.	0.00	0.00
17.060	160.820	1.800	2132.5	2132.5	150.411	1.127	1.81		Unsaturated	8.1			152.00	1.00	151.54	155.37	0.97	0.316	0.999	n.a.	n.a.	n.a.	0.00	0.00
17.220	142.840	1.722	2152.5	2152.5	132.851	1.215	1.87		Unsaturated	13.0			135.01	0.99	134.09	152.92	0.97	0.315	0.997	n.a.	n.a.	n.a.	0.00	0.00
17.390	135.190	1.625	2173.8	2173.8	125.056	1.212	1.89		Unsaturated	14.4			127.78	0.99	126.40	149.78	0.97	0.315	0.996	n.a.	n.a.	n.a.	0.00	0.00
17.550	128.930	1.424	2193.8	2193.8	118.665	1.114	1.88		Unsaturated	13.8			121.86	0.98	120.03	140.74	0.97	0.315	0.995	n.a.	n.a.	n.a.	0.00	0.00
17.720	129.540	1.574	2215.0	2215.0	118.648	1.226	1.91		Unsaturated	16.0			122.44	0.98	120.19	148.35	0.97	0.315	0.993	n.a.	n.a.	n.a.	0.00	0.00
17.880	136.170	2.013	2235.0	2235.0	124.204	1.490	1.96		Unsaturated	19.6			128.71	0.98	126.07	165.63	0.97	0.315	0.990	n.a.	n.a.	n.a.	0.00	0.00
18.040	169.790	1.903	2255.0	2255.0	154.425	1.128	1.81		Unsaturated	7.5			160.48	0.98	156.56	159.19	0.97	0.315	0.989	n.a.	n.a.	n.a.	0.00	0.00
18.210	188.740	1.762	2276.3	2276.3	170.962	0.939	1.72		Unsaturated	0.5			178.39	0.97	173.69	173.69	0.97	0.315	0.985	n.a.	n.a.	n.a.	0.00	0.00
18.370	179.290	1.776	2296.3	2296.3	161.632	0.997	1.75		Unsaturated	3.3			169.46	0.97	164.27	164.27	0.97	0.314	0.985	n.a.	n.a.	n.a.	0.00	0.00
18.540	188.640	1.768	2317.5	2317.5	169.325	0.943	1.72		Unsaturated	0.8			178.30	0.97	172.43	172.43	0.97	0.314	0.982	n.a.	n.a.	n.a.	0.00	0.00
18.700	194.320	1.846	2337.5	2337.5	173.698	0.956	1.72		Unsaturated	0.5			183.67	0.96	177.18	177.18	0.97	0.314	0.980	n.a.	n.a.	n.a.	0.00	0.00
18.860	216.350	2.031	2357.5	2357.5	192.677	0.944	1.68		Unsaturated	0.0			204.49	0.96	197.26	197.26	0.97	0.314	0.972	n.a.	n.a.	n.a.	0.00	0.00
19.030	243.080	1.914	2378.8	2378.8	215.634	0.791	1.59		Unsaturated	0.0			229.75	0.97	221.78	221.78	0.97	0.314	0.965	n.a.	n.a.	n.a.	0.00	0.00
19.190	250.840	2.393	2398.8	2398.8	221.613	0.959	1.65		Unsaturated	0.0			237.09	0.96	228.52	228.52	0.97	0.314	0.962	n.a.	n.a.	n.a.	0.00	0.00
19.360	245.360	2.891	2420.0	2420.0	215.785	1.184	1.72		Unsaturated	0.7			231.91	0.96	222.74	222.74	0.96	0.314	0.960	n.a.	n.a.	n.a.	0.00	0.00
19.520	239.080	2.880	2440.0	2440.0	209.362	1.211	1.74		Unsaturated	2.0			225.97	0.96	216.26	216.26	0.96	0.313	0.957	n.a.	n.a.	n.a.	0.00	0.00
19.690	247.070	3.455	2461.3	2461.3	215.450	1.405	1.78		Unsaturated	5.3			233.53	0.96	223.19	223.54	0.96	0.313	0.955	n.a.	n.a.	n.a.	0.00	0.00
19.850	263.960	3.308	2481.3	2481.3	229.313	1.259	1.72		Unsaturated	1.0			249.49	0.96	238.55	238.55	0.96	0.313	0.952	n.a.	n.a.	n.a.	0.00	0.00
20.010	291.870	3.763	2501.3	2501.3	252.649	1.295	1.71		Sand	0.0			275.87	0.96	263.96	263.96	0.96	0.313	0.950	799.485	1670.609	5336.83	0.00	0.00
20.180	269.010	2.248	2522.5	2522.5	231.784	0.840	1.59		Sand	0.0			254.26	0.95	242.17	242.17	0.96	0.314	0.947	54.027	112.593	358.35	0.00	0.00
20.340	240.920	1.876	2542.5	2542.5	206.641	0.783	1.60		Sand	0.0			227.71	0.94	215.12	215.12	0.96	0.315	0.945	4.957	10.306	32.69	0.00	0.00
20.510	211.670	1.507	2563.8	2563.8	180.657	0.716	1.62		Sand	0.0	227.71		227.71	0.94	214.53	214.53	0.96	0.316	0.942	4.754	9.856	31.15	0.00	0.00
20.670	192.540	1.365	2583.8	2583.8	163.585	0.714	1.65		Sand	0.0	227.71		227.71	0.94	213.98	213.98	0.96	0.318	0.940	4.573	9.459	29.79	0.00	0.00
20.830	173.810	1.586	2603.8	2603.8	146.988	0.919	1.76		Sand	3.8	227.71		227.71	0.94	213.44	213.46	0.96	0.319	0.938	4.408	9.093	28.55	0.00	0.00
21.000	136.030	1.046	2625.0	2625.0	114.322	0.777	1.80		Sand	6.7	227.71		227.71	0.94	212.97	214.66	0.96	0.320	0.935	4.798	9.873	30.88	0.00	0.00
21.160	98.380	1.263	2645.0	2645.0	82.052	1.301	2.05		Sand	27.0	227.71		227.71	0.94	214.69	287.13	0.96	0.321	0.933	36017.131	########	230528.05	0.00	0.00
21.330	55.950	0.963	2666.3	2666.3	45.988	1.762	2.33		Sand	49.2	227.71		227.71	0.94	214.24	316.37	0.96	0.322	0.931	########	########	##########	0.00	0.00
21.490	25.290	0.644	2686.3	2686.3	17.829	2.690	2.76		Clay	84.2			23.90	0.94	n.a.	n.a.	0.96	0.323	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 3

PGA (A_{max}) 0.50

Total Settlement: 0.06 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
21.650	12.230	0.493	2706.3	2706.3	8.038	4.536	3.18		Clay	100.0			11.56	0.94	n.a.	n.a.	0.96	0.324	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.820	6.990	0.356	2727.5	2727.5	4.126	6.319	3.50		Clay	100.0			6.61	0.94	n.a.	n.a.	0.96	0.325	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.980	6.840	0.356	2747.5	2747.5	3.979	6.505	3.52		Clay	100.0			6.47	0.93	n.a.	n.a.	0.96	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.150	5.300	0.346	2768.8	2768.8	2.828	8.842	3.72		Clay	100.0			5.01	0.93	n.a.	n.a.	0.96	0.327	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	5.310	0.339	2788.8	2788.8	2.808	8.665	3.71		Clay	100.0			5.02	0.93	n.a.	n.a.	0.96	0.328	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.470	5.530	0.345	2808.8	2808.8	2.938	8.370	3.69		Clay	100.0			5.23	0.93	n.a.	n.a.	0.96	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.640	6.080	0.351	2830.0	2830.0	3.297	7.513	3.62		Clay	100.0			5.75	0.93	n.a.	n.a.	0.96	0.330	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.800	6.420	0.321	2850.0	2850.0	3.505	6.420	3.56		Clay	100.0			6.07	0.92	n.a.	n.a.	0.96	0.331	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.970	6.330	0.314	2871.3	2871.3	3.409	6.409	3.57		Clay	100.0			5.98	0.92	n.a.	n.a.	0.95	0.332	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	6.410	0.312	2891.3	2891.3	3.434	6.279	3.56		Clay	100.0			6.06	0.92	n.a.	n.a.	0.95	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.290	7.130	0.326	2911.3	2911.3	3.898	5.742	3.49		Clay	100.0			6.74	0.92	n.a.	n.a.	0.95	0.334	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.460	7.790	0.331	2932.5	2932.5	4.313	5.226	3.43		Clay	100.0			7.36	0.92	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.620	8.630	0.432	2952.5	2952.5	4.846	6.043	3.43		Clay	100.0			8.16	0.92	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.790	9.980	0.441	2973.8	2973.8	5.712	5.195	3.33		Clay	100.0			9.43	0.91	n.a.	n.a.	0.95	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	12.770	0.395	2993.8	2993.8	7.531	3.507	3.14		Clay	100.0			12.07	0.91	n.a.	n.a.	0.95	0.337	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.110	11.740	0.347	3013.8	3013.8	6.791	3.387	3.17		Clay	100.0			11.10	0.91	n.a.	n.a.	0.95	0.338	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.280	11.300	0.332	3035.0	3035.0	6.446	3.396	3.19		Clay	100.0			10.68	0.91	n.a.	n.a.	0.95	0.339	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.440	8.580	0.353	3055.0	3055.0	4.617	4.998	3.40		Clay	100.0			8.11	0.91	n.a.	n.a.	0.95	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.610	8.150	0.352	3076.3	3076.3	4.299	5.327	3.44		Clay	100.0			7.70	0.91	n.a.	n.a.	0.95	0.341	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	7.970	0.429	3096.3	3096.3	4.148	6.680	3.51		Clay	100.0			7.53	0.90	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.930	12.560	0.580	3116.3	3116.3	7.061	5.269	3.26		Clay	100.0			11.87	0.90	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.100	12.940	0.781	3137.5	3137.5	7.249	6.866	3.32		Clay	100.0			12.23	0.90	n.a.	n.a.	0.95	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.260	11.850	0.967	3157.5	3157.5	6.506	9.410	3.45		Clay	100.0			11.20	0.90	n.a.	n.a.	0.95	0.344	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	24.720	1.217	3178.8	3178.8	14.553	5.261	3.01		Clay	100.0			23.36	0.90	n.a.	n.a.	0.95	0.345	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.590	36.960	1.234	3198.8	3198.8	22.109	3.491	2.76		Clay	83.9			34.93	0.90	n.a.	n.a.	0.95	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	50.160	1.042	3218.8	3218.8	37.207	2.147	2.45		Sand	59.2	73.64	1.78	131.08	0.87	113.78	194.10	0.95	0.347	0.897	1.377	2.716	7.84	0.00	0.00
25.920	77.910	0.733	3240.0	3240.0	58.273	0.961	2.09		Sand	29.9		1.78	131.08	0.85	111.85	169.65	0.95	0.347	0.919	0.498	0.881	2.54	0.00	0.00
26.080	69.430	0.532	3260.0	3260.0	51.629	0.785	2.08		Sand	29.5	73.64	1.78	131.08	0.85	111.52	168.66	0.95	0.348	0.918	0.482	0.846	2.43	0.00	0.00
26.250	36.460	0.524	3281.3	3281.3	26.429	1.505	2.48		Sand	61.3	73.74	1.78	131.26	0.86	113.20	194.14	0.94	0.349	0.892	1.379	2.707	7.76	0.00	0.00
26.410	17.130	0.515	3301.3	3301.3	9.378	3.324	3.05		Clay	100.0			16.19	0.89	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.570	10.100	0.418	3321.3	3321.3	5.082	4.958	3.36		Clay	100.0			9.55	0.89	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	9.310	0.374	3342.5	3342.5	4.571	4.896	3.40		Clay	100.0			8.80	0.89	n.a.	n.a.	0.94	0.351	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	7.390	0.380	3362.5	3362.5	3.396	6.653	3.58		Clay	100.0			6.98	0.88	n.a.	n.a.	0.94	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	6.170	0.377	3383.8	3383.8	2.647	8.425	3.73		Clay	100.0			5.83	0.88	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	5.490	0.362	3403.8	3403.8	2.226	9.551	3.82		Clay	100.0			5.19	0.88	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	5.870	0.349	3425.0	3425.0	2.428	8.382	3.76		Clay	100.0			5.55	0.88	n.a.	n.a.	0.94	0.354	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	6.240	0.358	3445.0	3445.0	2.623	7.931	3.72		Clay	100.0			5.90	0.88	n.a.	n.a.	0.94	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	6.690	0.371	3465.0	3465.0	2.861	7.484	3.67		Clay	100.0			6.32	0.88	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.890	6.770	0.385	3486.3	3486.3	2.884	7.667	3.67		Clay	100.0			6.40	0.88	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.050	6.750	0.325	3506.0	3502.9	2.853	6.510	3.64		Clay	100.0			6.38	0.88	n.a.	n.a.	0.94	0.357	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	6.430	0.317	3526.4	3512.7	2.657	6.791	3.67		Clay	100.0			6.08	0.87	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	6.050	0.333	3545.6	3521.9	2.429	7.792	3.74		Clay	100.0			5.72	0.87	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	6.930	0.384	3564.8	3531.1	2.916	7.458	3.66		Clay	100.0			6.55	0.87	n.a.	n.a.	0.94	0.359	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	6.700	0.552	3585.2	3540.9	2.772	11.250	3.78		Clay	100.0			6.33	0.87	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	7.840	0.864	3604.4	3550.1	3.401	14.315	3.78		Clay	100.0			7.41	0.87	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	14.710	1.213	3624.8	3559.9	7.246	9.403	3.41		Clay	100.0			13.90	0.87	n.a.	n.a.	0.94	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	27.160	1.586	3644.0	3569.1	14.198	6.261	3.07		Clay	100.0			25.67	0.87	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	45.930	1.651	3663.2	3578.3	24.647	3.743	2.74		Clay	82.6			43.41	0.87	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.530	32.810	1.706	3683.6	3588.1	17.261	5.510	2.97		Clay	100.0			31.01	0.87	n.a.	n.a.	0.93	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.690	41.110	1.475	3702.8	3597.3	21.826	3.756	2.79		Clay	85.9			38.86	0.87	n.a.	n.a.	0.93	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.860	25.890	1.595	3723.2	3607.1	13.323	6.639	3.11		Clay	100.0			24.47	0.87	n.a.	n.a.	0.93	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	22.310	1.943	3742.4	3616.4	11.304	9.504	3.27		Clay	100.0			21.09	0.87	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.180	43.700	1.811	3761.6	3625.6	23.069	4.330	2.81		Clay	87.7			41.30	0.87	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.350	52.240	1.648	3782.0	3635.4	27.700	3.273	2.67		Clay	76.5			49.38	0.87	n.a.	n.a.	0.93	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.510	55.070	1.378	3801.2	3644.6	38.292	2.592	2.50		Sand	62.7			52.05	0.76	39.71	100.26	0.93	0.367	0.942	0.138	0.164	0.45	0.03	0.03
30.680	33.020	1.504	3821.6	3654.4	17.026	4.834	2.94		Clay	98.1			31.21	0.87	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.840	25.430	1.485	3840.8	3663.6	12.834	6.314	3.11		Clay	100.0			24.04	0.87	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.000	35.180	1.607	3860.0	3672.8	18.106	4.832	2.92		Clay	96.5			33.25	0.86	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.170	54.460	1.468	3880.4	3682.6	28.523	2.796	2.61		Clay	72.2			51.47	0.86	n.a.	n.a.	0.93	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.330	49.710	1.266	3899.6	3691.8	25.874	2.652	2.63		Clay	73.6			46.98	0.86	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.500	44.640	1.286	3920.0	3701.6	23.060	3.012	2.71		Clay	79.5			42.19	0.86	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.660	56.660	1.512	3939.2	3710.8	29.476	2.764	2.60		Clay	71.0			53.55	0.86	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.820	43.440	1.455	3958.4	3720.0	22.291	3.508	2.76		Clay	83.8			41.06	0.86	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.990	36.200	1.303	3978.8	3729.8	18.344	3.810	2.85		Clay	90.8			34.22	0.86	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 3

PGA (A_{max}) 0.50

Total Settlement: 0.06 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
32.150	49.900	1.184	3998.0	3739.0	25.622	2.473	2.62		Clay	72.4			47.16	0.86	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	60.240	1.467	4018.4	3748.8	41.350	2.520	2.46		Sand	60.0			56.94	0.76	43.03	103.81	0.93	0.373	0.937	0.142	0.171	0.46	0.03	0.03
32.480	58.720	1.622	4037.6	3758.0	30.176	2.861	2.60		Clay	71.2			55.50	0.86	n.a.	n.a.	0.92	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.640	45.800	1.567	4056.8	3767.3	23.238	3.581	2.75		Clay	83.2			43.29	0.86	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.810	27.930	1.437	4077.2	3777.1	13.710	5.551	3.05		Clay	100.0			26.40	0.86	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	18.640	1.070	4096.4	3786.3	8.764	6.450	3.24		Clay	100.0			17.62	0.86	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	14.820	0.904	4116.8	3796.1	6.724	7.081	3.36		Clay	100.0			14.01	0.86	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	13.070	0.812	4136.0	3805.3	5.782	7.378	3.42		Clay	100.0			12.35	0.86	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	11.320	0.725	4155.2	3814.5	4.846	7.845	3.50		Clay	100.0			10.70	0.86	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.630	10.610	0.656	4175.6	3824.3	4.457	7.701	3.52		Clay	100.0			10.03	0.86	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.790	10.400	0.622	4194.8	3833.5	4.332	7.495	3.52		Clay	100.0			9.83	0.85	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.960	10.640	0.627	4215.2	3843.3	4.440	7.348	3.51		Clay	100.0			10.06	0.85	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.120	10.820	0.675	4234.4	3852.5	4.518	7.761	3.52		Clay	100.0			10.23	0.85	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.280	11.590	0.691	4253.6	3861.7	4.901	7.304	3.47		Clay	100.0			10.95	0.85	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.450	12.510	0.720	4274.0	3871.5	5.359	6.943	3.43		Clay	100.0			11.82	0.85	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.610	13.680	0.623	4293.2	3880.7	5.944	5.403	3.33		Clay	100.0			12.93	0.85	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.780	14.010	0.667	4313.6	3890.5	6.093	5.625	3.33		Clay	100.0			13.24	0.85	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.940	14.240	0.815	4332.8	3899.7	6.192	6.749	3.37		Clay	100.0			13.46	0.85	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.100	16.710	1.250	4352.0	3909.0	7.436	8.602	3.38		Clay	100.0			15.79	0.85	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.270	21.980	1.435	4372.4	3918.8	10.102	7.252	3.23		Clay	100.0			20.78	0.85	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.430	29.590	1.339	4391.6	3928.0	13.948	4.887	3.01		Clay	100.0			27.97	0.85	n.a.	n.a.	0.92	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.600	35.710	0.964	4412.0	3937.8	17.017	2.876	2.80		Clay	86.9			33.75	0.85	n.a.	n.a.	0.91	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.760	21.410	0.688	4431.2	3947.0	9.726	3.584	3.05		Clay	100.0			20.24	0.85	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.930	14.430	0.706	4451.6	3956.8	6.169	5.782	3.33		Clay	100.0			13.64	0.85	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.090	12.940	0.821	4470.8	3966.0	5.398	7.666	3.45		Clay	100.0			12.23	0.85	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.250	22.810	0.787	4490.0	3975.2	10.347	3.824	3.05		Clay	100.0			21.56	0.85	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.420	18.680	0.717	4510.4	3985.0	8.243	4.364	3.16		Clay	100.0			17.66	0.85	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.580	13.640	0.560	4529.6	3994.2	5.696	4.926	3.32		Clay	100.0			12.89	0.85	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.750	12.290	0.510	4550.0	4004.0	5.002	5.092	3.37		Clay	100.0			11.62	0.85	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.910	10.290	0.472	4569.2	4013.2	3.990	5.897	3.49		Clay	100.0			9.73	0.84	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.070	9.570	0.440	4588.4	4022.4	3.618	6.050	3.53		Clay	100.0			9.05	0.84	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.240	8.830	0.594	4608.8	4032.2	3.237	9.107	3.68		Clay	100.0			8.35	0.84	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.400	9.150	0.772	4628.0	4041.4	3.383	11.293	3.72		Clay	100.0			8.65	0.84	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.570	18.180	1.005	4648.4	4051.2	7.828	6.338	3.28		Clay	100.0			17.18	0.84	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	23.610	1.231	4667.6	4060.4	10.480	5.785	3.15		Clay	100.0			22.32	0.84	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.890	23.260	1.323	4686.8	4069.7	10.279	6.326	3.18		Clay	100.0			21.98	0.84	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.060	21.510	1.041	4707.2	4079.5	9.392	5.435	3.17		Clay	100.0			20.33	0.84	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.220	19.840	0.629	4726.4	4088.7	8.549	3.597	3.10		Clay	100.0			18.75	0.84	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.390	13.230	0.412	4746.8	4098.5	5.298	3.792	3.28		Clay	100.0			12.50	0.84	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	8.410	0.342	4766.0	4107.7	2.935	5.676	3.59		Clay	100.0			7.95	0.84	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	7.530	0.362	4785.2	4116.9	2.496	7.042	3.70		Clay	100.0			7.12	0.84	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.880	7.750	0.379	4805.6	4126.7	2.592	7.084	3.69		Clay	100.0			7.33	0.84	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.040	8.980	0.414	4824.8	4135.9	3.176	6.304	3.59		Clay	100.0			8.49	0.84	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.210	9.940	0.438	4845.2	4145.7	3.627	5.822	3.52		Clay	100.0			9.40	0.84	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	11.030	0.465	4864.4	4154.9	4.139	5.411	3.46		Clay	100.0			10.43	0.84	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.530	11.720	0.472	4883.6	4164.1	4.456	5.085	3.42		Clay	100.0			11.08	0.84	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.700	11.930	0.477	4904.0	4173.9	4.542	5.037	3.41		Clay	100.0			11.28	0.84	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.860	12.230	0.483	4923.2	4183.1	4.670	4.945	3.39		Clay	100.0			11.56	0.84	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.030	12.760	0.516	4943.6	4192.9	4.907	5.013	3.38		Clay	100.0			12.06	0.83	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	13.680	0.510	4962.8	4202.1	5.330	4.556	3.32		Clay	100.0			12.93	0.83	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.350	13.860	0.512	4982.0	4211.4	5.399	4.500	3.32		Clay	100.0			13.10	0.83	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.520	12.810	0.499	5002.4	4221.2	4.884	4.843	3.37		Clay	100.0			12.11	0.83	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.680	12.050	0.459	5021.6	4230.4	4.510	4.812	3.40		Clay	100.0			11.39	0.83	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.850	10.260	0.389	5042.0	4240.2	3.650	5.024	3.48		Clay	100.0			9.70	0.83	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.010	8.620	0.377	5061.2	4249.4	2.866	6.193	3.62		Clay	100.0			8.15	0.83	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.170	8.220	0.311	5080.4	4258.6	2.667	5.470	3.62		Clay	100.0			7.77	0.83	n.a.	n.a.	0.89	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.340	8.320	0.326	5100.8	4268.4	2.703	5.647	3.62		Clay	100.0			7.86	0.83	n.a.	n.a.	0.89	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.500	9.360	0.408	5120.0	4277.6	3.179	5.996	3.58		Clay	100.0			8.85	0.83	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.670	11.920	0.498	5140.4	4287.4	4.362	5.324	3.43		Clay	100.0			11.27	0.83	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.830	15.380	0.851	5159.6	4296.6	5.958	6.644	3.38		Clay	100.0			14.54	0.83	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.990	22.900	1.138	5178.8	4305.8	9.434	5.604	3.18		Clay	100.0			21.64	0.83	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.160	32.210	1.135	5199.2	4315.6	13.722	3.833	2.95		Clay	98.9			30.44	0.83	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.320	30.330	0.915	5218.4	4324.8	12.819	3.302	2.93		Clay	97.6			28.67	0.83	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.490	25.140	1.128	5238.8	4334.6	10.391	5.009	3.12		Clay	100.0			23.76	0.83	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	3

PGA (A_{max})	0.50

Total Settlement:	0.06	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
42.650	20.900	1.602	5258.0	4343.8	8.412	8.769	3.34		Clay	100.0			19.75	0.83	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.810	31.650	1.939	5277.2	4353.1	13.329	6.682	3.11		Clay	100.0			29.91	0.83	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.980	83.100	1.487	5297.6	4362.8	52.957	1.848	2.29		Sand	46.5		1.8	141.38	0.77	109.45	182.42	0.89	0.397	0.843	0.802	1.440	3.63	0.00	0.00
43.140	39.760	0.956	5316.8	4372.1	16.972	2.577	2.77		Clay	84.7			37.58	0.83	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.310	20.770	0.478	5337.2	4381.9	8.262	2.643	3.04		Clay	100.0			19.63	0.83	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.470	15.320	0.389	5356.4	4391.1	5.758	3.079	3.20		Clay	100.0			14.48	0.82	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.640	13.400	0.333	5376.8	4400.9	4.868	3.112	3.27		Clay	100.0			12.67	0.82	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.800	13.780	0.395	5396.0	4410.1	5.026	3.562	3.29		Clay	100.0			13.02	0.82	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.960	14.490	0.390	5415.2	4419.3	5.332	3.312	3.25		Clay	100.0			13.70	0.82	n.a.	n.a.	0.88	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.130	14.350	0.379	5435.6	4429.1	5.253	3.262	3.25		Clay	100.0			13.56	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.290	12.130	0.356	5454.8	4438.3	4.237	3.782	3.36		Clay	100.0			11.47	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.460	11.280	0.411	5475.2	4448.1	3.841	4.810	3.46		Clay	100.0			10.66	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.620	12.210	0.738	5494.4	4457.3	4.246	7.803	3.54		Clay	100.0			11.54	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.780	13.920	1.762	5513.6	4466.5	4.999	15.785	3.68		Clay	100.0			13.16	0.82	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.950	21.460	2.969	5534.0	4476.3	8.352	15.880	3.51		Clay	100.0			20.28	0.82	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.110	128.330	2.688	5553.2	4485.5	81.507	2.141	2.20		Sand	38.9	212.12		212.12	0.82	173.98	256.73	0.88	0.400	0.775	299.587	510.532	1276.69	0.00	0.00
45.280	224.420	2.431	5573.6	4495.3	143.723	1.097	1.82		Sand	8.6			212.12	0.75	159.24	164.33	0.88	0.400	0.863	0.421	0.672	1.68	0.00	0.00
45.440	268.540	3.262	5592.8	4504.5	172.151	1.227	1.80		Sand	6.9			253.82	0.78	197.84	199.82	0.88	0.400	0.802	1.870	3.299	8.24	0.00	0.00
45.600	315.050	2.692	5612.0	4513.8	202.068	0.862	1.64		Sand	0.0			297.78	0.81	241.14	241.14	0.88	0.400	0.773	48.465	82.389	205.73	0.00	0.00
45.770	335.580	3.348	5632.4	4523.6	215.114	1.006	1.67		Sand	0.0			317.18	0.82	259.57	259.57	0.88	0.401	0.772	436.042	740.640	1848.54	0.00	0.00
45.930	229.440	2.971	5651.6	4532.8	146.345	1.311	1.87		Sand	12.5			216.86	0.77	166.07	184.83	0.88	0.401	0.831	0.888	1.603	4.00	0.00	0.00
46.100	204.850	4.114	5672.0	4542.6	130.318	2.036	2.04		Sand	26.4			193.62	0.79	152.35	212.10	0.88	0.401	0.771	4.013	6.805	16.97	0.00	0.00
46.260	202.950	6.746	5691.2	4551.8	128.955	3.371	2.21		Sand	40.1			191.82	0.80	153.85	233.04	0.88	0.401	0.770	21.686	36.746	91.59	0.00	0.00
46.420	265.140	5.044	5710.4	4561.0	168.856	1.923	1.95		Sand	19.1			250.60	0.82	204.32	252.17	0.88	0.401	0.770	169.023	286.176	712.98	0.00	0.00
46.590	493.250	5.773	5730.8	4570.8	315.365	1.177	1.62		Sand	0.0			466.21	0.82	380.49	380.49	0.88	0.402	0.769	########	########	##########	0.00	0.00
46.750	489.580	3.712	5750.0	4580.0	312.684	0.763	1.47		Sand	0.0			462.74	0.82	377.45	377.45	0.87	0.402	0.768	########	########	##########	0.00	0.00
46.920	470.380	3.661	5770.4	4589.8	300.022	0.783	1.49		Sand	0.0			444.59	0.82	362.45	362.45	0.87	0.402	0.768	########	########	##########	0.00	0.00
47.080	418.090	3.477	5789.6	4599.0	266.190	0.837	1.55		Sand	0.0			395.17	0.81	321.99	321.99	0.87	0.402	0.767	########	########	##########	0.00	0.00
47.240	394.990	3.961	5808.8	4608.2	251.123	1.010	1.63		Sand	0.0			373.34	0.81	304.03	304.03	0.87	0.402	0.767	########	########	5024406.13	0.00	0.00
47.410	404.200	3.981	5829.2	4618.0	256.743	0.992	1.61		Sand	0.0			382.04	0.81	310.95	310.95	0.87	0.402	0.766	########	########	##########	0.00	0.00
47.570	388.420	1.953	5848.4	4627.2	246.395	0.507	1.42		Sand	0.0			367.13	0.81	298.65	298.65	0.87	0.403	0.765	########	########	1526604.56	0.00	0.00
47.740	324.660	1.746	5868.8	4637.0	205.418	0.543	1.50		Sand	0.0			306.86	0.81	248.22	248.22	0.87	0.403	0.765	105.718	177.838	441.62	0.00	0.00
47.900	310.690	1.910	5888.0	4646.2	196.297	0.621	1.55		Sand	0.0			293.66	0.80	234.45	234.45	0.87	0.403	0.764	24.772	41.640	103.37	0.00	0.00
48.060	294.190	2.232	5907.2	4655.5	185.582	0.766	1.63		Sand	0.0			278.06	0.79	218.51	218.51	0.87	0.403	0.763	6.364	10.688	26.52	0.00	0.00
48.230	259.740	3.074	5927.6	4665.2	163.452	1.197	1.81		Sand	7.5			245.50	0.76	187.23	190.27	0.87	0.403	0.814	1.139	2.039	5.06	0.00	0.00
48.390	175.910	3.090	5946.8	4674.5	109.975	1.787	2.05		Sand	27.1			166.27	0.75	125.49	181.54	0.87	0.403	0.830	0.773	1.357	3.36	0.00	0.00
48.560	118.730	3.130	5967.2	4684.3	73.529	2.705	2.30		Sand	47.2	166.27		166.27	0.78	128.96	207.42	0.87	0.403	0.772	2.948	5.005	12.41	0.00	0.00
48.720	80.160	2.384	5986.4	4693.5	48.973	3.089	2.47		Sand	60.5	166.27		166.27	0.78	129.91	215.22	0.87	0.404	0.761	4.996	8.364	20.73	0.00	0.00
48.880	59.620	1.739	6005.6	4702.7	24.079	3.071	2.70		Clay	78.8			56.35	0.81	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.050	44.070	1.414	6026.0	4712.5	17.425	3.444	2.84		Clay	90.1			41.65	0.81	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.210	32.310	1.038	6045.2	4721.7	12.405	3.544	2.96		Clay	100.0			30.54	0.81	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.380	24.150	0.851	6065.6	4731.5	8.926	4.032	3.11		Clay	100.0			22.83	0.81	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.540	16.490	0.670	6084.8	4740.7	5.673	4.982	3.32		Clay	100.0			15.59	0.81	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.700	12.830	0.577	6104.0	4749.9	4.117	5.900	3.48		Clay	100.0			12.13	0.81	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.870	12.180	0.580	6124.4	4759.7	3.831	6.356	3.53		Clay	100.0			11.51	0.81	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.030	14.170	0.585	6143.6	4768.9	4.654	5.267	3.41		Clay	100.0			13.39	0.81	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	4

PGA (A_{max})	0.50

Total Settlement:	0.07	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
0.330	18.390	1.818	41.3	41.3	273.321	9.895	2.44		Unsaturated	58.6			17.38	1.70	29.55	86.16	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.490	573.150	1.922	61.3	61.3	3183.935	0.335	0.75		Unsaturated	0.0			541.73	1.70	920.94	920.94	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.660	618.690	2.577	82.5	82.5	2961.347	0.417	0.84		Unsaturated	0.0			584.77	1.70	994.11	994.11	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	464.510	1.424	102.5	102.5	1994.607	0.307	0.73		Unsaturated	0.0			439.05	1.70	746.38	746.38	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	346.850	1.764	122.5	122.5	1362.289	0.509	0.99		Unsaturated	0.0			327.84	1.70	557.32	557.32	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	192.430	1.867	143.8	143.8	697.556	0.971	1.36		Unsaturated	0.0			181.88	1.70	309.20	309.20	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	90.600	1.968	163.8	163.8	307.551	2.174	1.84		Unsaturated	10.3			85.63	1.70	145.58	155.47	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	50.620	1.767	185.0	185.0	161.515	3.496	2.17		Unsaturated	36.5			47.84	1.70	81.34	140.01	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	27.120	1.475	205.0	205.0	82.043	5.461	2.50		Unsaturated	63.0			25.63	1.70	43.58	105.31	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	20.840	1.133	225.0	225.0	60.080	5.466	2.59		Unsaturated	70.0			19.70	1.70	33.49	93.85	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	20.640	1.013	246.3	246.3	56.845	4.938	2.57		Unsaturated	68.6			19.51	1.70	33.16	93.16	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	18.510	0.933	266.3	266.3	74.122	5.074	2.50		Unsaturated	63.3			17.50	1.70	29.74	87.61	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	16.550	0.828	287.5	287.5	62.710	5.045	2.55		Unsaturated	66.9			15.64	1.70	26.59	84.35	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	16.790	0.748	307.5	307.5	60.665	4.496	2.52		Unsaturated	64.6			15.87	1.70	26.98	84.37	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	15.300	0.681	327.5	327.5	52.814	4.496	2.56		Unsaturated	67.9			14.46	1.70	24.58	81.96	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	15.170	0.692	348.8	348.8	50.070	4.615	2.59		Unsaturated	69.8			14.34	1.70	24.38	82.06	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	15.540	0.762	368.8	368.8	49.309	4.960	2.61		Unsaturated	72.0			14.69	1.70	24.97	83.22	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	16.450	0.803	390.0	390.0	50.190	4.942	2.61		Unsaturated	71.5			15.55	1.70	26.43	85.02	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	18.370	0.765	410.0	410.0	54.158	4.214	2.53		Unsaturated	65.7			17.36	1.70	29.52	87.86	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	16.850	0.745	430.0	430.0	47.970	4.480	2.59		Unsaturated	70.1			15.93	1.70	27.07	85.60	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	14.930	0.750	451.3	451.3	40.995	5.101	2.68		Unsaturated	77.1			14.11	1.70	23.99	82.78	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	14.630	0.778	471.3	471.3	38.931	5.406	2.71		Unsaturated	79.8			13.83	1.70	23.51	82.54	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	16.590	0.823	492.5	492.5	42.859	5.034	2.66		Unsaturated	75.7			15.68	1.70	26.66	86.02	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	19.420	0.869	512.5	512.5	48.873	4.533	2.59		Unsaturated	70.0			18.36	1.70	31.20	90.90	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	20.900	0.929	533.8	533.8	51.145	4.501	2.57		Unsaturated	68.7			19.75	1.70	33.58	93.73	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	20.890	1.001	553.8	553.8	49.797	4.854	2.60		Unsaturated	71.2			19.74	1.70	33.57	94.20	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	20.450	1.169	573.8	573.8	47.515	5.796	2.67		Unsaturated	76.9			19.33	1.70	32.86	94.25	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	25.160	1.129	595.0	595.0	57.116	4.540	2.54		Unsaturated	66.3			23.78	1.70	40.43	102.04	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	22.590	1.159	615.0	615.0	50.018	5.202	2.62		Unsaturated	72.9			21.35	1.70	36.30	98.03	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	20.110	1.057	636.3	636.3	43.383	5.338	2.67		Unsaturated	76.9			19.01	1.70	32.31	93.54	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	20.030	1.069	656.3	656.3	42.260	5.424	2.69		Unsaturated	78.0			18.93	1.70	32.18	93.54	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	19.570	1.047	676.3	676.3	56.878	5.445	2.60		Unsaturated	71.1			18.50	1.70	31.45	91.43	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.580	18.690	1.013	697.5	697.5	52.591	5.523	2.63		Unsaturated	73.3			17.67	1.70	30.03	89.99	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.740	17.120	0.951	717.5	717.5	46.721	5.674	2.67		Unsaturated	76.7			16.18	1.70	27.51	87.28	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.910	16.800	0.877	738.8	738.8	44.482	5.335	2.67		Unsaturated	76.3			15.88	1.70	26.99	86.55	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	16.290	0.825	758.8	758.8	41.939	5.186	2.68		Unsaturated	77.0			15.40	1.70	26.17	85.59	1.00	0.324	1.097	n.a.	n.a.	n.a.	0.00	0.00
6.230	16.110	0.762	778.8	778.8	40.374	4.849	2.67		Unsaturated	76.3			15.23	1.70	25.89	85.10	1.00	0.323	1.095	n.a.	n.a.	n.a.	0.00	0.00
6.400	15.530	0.711	800.0	800.0	37.825	4.702	2.68		Unsaturated	77.1			14.68	1.69	24.74	83.74	0.99	0.323	1.091	n.a.	n.a.	n.a.	0.00	0.00
6.560	15.250	0.666	820.0	820.0	36.195	4.491	2.68		Unsaturated	77.0			14.41	1.67	24.03	82.81	0.99	0.323	1.088	n.a.	n.a.	n.a.	0.00	0.00
6.730	15.390	0.599	841.3	841.3	35.588	3.999	2.65		Unsaturated	74.7			14.55	1.65	23.94	82.33	0.99	0.323	1.085	n.a.	n.a.	n.a.	0.00	0.00
6.890	14.480	0.697	861.3	861.3	32.626	4.958	2.74		Unsaturated	82.0			13.69	1.63	22.30	81.26	0.99	0.323	1.083	n.a.	n.a.	n.a.	0.00	0.00
7.050	14.540	0.573	881.3	881.3	31.999	4.065	2.68		Unsaturated	77.8			13.74	1.61	22.15	80.48	0.99	0.323	1.080	n.a.	n.a.	n.a.	0.00	0.00
7.220	16.210	0.643	902.5	902.5	34.922	4.082	2.66		Unsaturated	75.6			15.32	1.58	24.25	82.88	0.99	0.323	1.079	n.a.	n.a.	n.a.	0.00	0.00
7.380	23.280	0.590	922.5	922.5	32.665	2.584	2.55		Unsaturated	66.8			22.00	1.53	33.69	93.47	0.99	0.323	1.084	n.a.	n.a.	n.a.	0.00	0.00
7.550	37.850	1.103	943.8	943.8	52.901	2.952	2.43		Unsaturated	57.4			35.78	1.46	52.17	114.72	0.99	0.323	1.096	n.a.	n.a.	n.a.	0.00	0.00
7.710	36.020	1.180	963.8	963.8	49.772	3.320	2.49		Unsaturated	61.8			34.05	1.45	49.34	112.39	0.99	0.323	1.092	n.a.	n.a.	n.a.	0.00	0.00
7.870	36.850	1.055	983.8	983.8	50.400	2.901	2.44		Unsaturated	58.2			34.83	1.44	50.01	112.21	0.99	0.322	1.090	n.a.	n.a.	n.a.	0.00	0.00
8.040	26.660	0.764	1005.0	1005.0	35.874	2.922	2.55		Unsaturated	67.1			25.20	1.46	36.67	97.38	0.99	0.322	1.078	n.a.	n.a.	n.a.	0.00	0.00
8.200	24.620	0.621	1025.0	1025.0	32.739	2.576	2.55		Unsaturated	66.7			23.27	1.45	33.75	93.52	0.99	0.322	1.073	n.a.	n.a.	n.a.	0.00	0.00
8.370	28.990	0.816	1046.3	1046.3	38.264	2.868	2.53		Unsaturated	65.0			27.40	1.42	38.93	99.82	0.99	0.322	1.075	n.a.	n.a.	n.a.	0.00	0.00
8.530	32.220	0.885	1066.3	1066.3	42.191	2.792	2.49		Unsaturated	61.9			30.45	1.40	42.61	103.77	0.99	0.322	1.075	n.a.	n.a.	n.a.	0.00	0.00
8.690	41.190	1.120	1086.3	1086.3	53.621	2.755	2.41		Unsaturated	55.4			38.93	1.36	53.12	115.28	0.99	0.322	1.080	n.a.	n.a.	n.a.	0.00	0.00
8.860	56.100	0.989	1107.5	1107.5	72.570	1.780	2.18		Unsaturated	37.4			53.02	1.33	70.61	127.57	0.99	0.322	1.086	n.a.	n.a.	n.a.	0.00	0.00
9.020	80.370	0.832	1127.5	1127.5	103.336	1.042	1.91		Unsaturated	15.9			75.96	1.32	100.51	126.27	0.99	0.322	1.082	n.a.	n.a.	n.a.	0.00	0.00
9.190	94.760	0.980	1148.8	1148.8	120.821	1.040	1.86		Unsaturated	11.7			89.57	1.31	116.96	130.54	0.99	0.322	1.083	n.a.	n.a.	n.a.	0.00	0.00
9.350	124.760	0.996	1168.8	1168.8	157.924	0.802	1.70		Unsaturated	0.0			117.92	1.27	149.84	149.84	0.99	0.321	1.095	n.a.	n.a.	n.a.	0.00	0.00
9.510	146.210	1.046	1188.8	1188.8	183.626	0.718	1.62		Unsaturated	0.0			138.19	1.24	171.08	171.08	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.680	150.290	1.144	1210.0	1210.0	187.093	0.764	1.63		Unsaturated	0.0			142.05	1.23	174.25	174.25	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.840	140.950	0.879	1230.0	1230.0	173.975	0.626	1.60		Unsaturated	0.0			133.22	1.23	163.83	163.83	0.99	0.321	1.098	n.a.	n.a.	n.a.	0.00	0.00
10.010	110.980	0.690	1251.3	1251.3	135.641	0.625	1.68		Unsaturated	0.0			104.90	1.26	131.80	131.80	0.99	0.321	1.072	n.a.	n.a.	n.a.	0.00	0.00
10.170	97.460	0.740	1271.3	1271.3	118.070	0.764	1.78		Unsaturated	5.5			92.12	1.27	116.61	116.94	0.99	0.321	1.062	n.a.	n.a.	n.a.	0.00	0.00
10.330	81.670	0.718	1291.3	1291.3	98.035	0.887	1.88		Unsaturated	13.7			77.19	1.26	97.11	115.98	0.99	0.321	1.060	n.a.	n.a.	n.a.	0.00	0.00
10.500	66.640	0.724	1312.5	1312.5	79.188	1.096	2.01		Unsaturated	24.1			62.99	1.24	78.29	120.66	0.99	0.321	1.060	n.a.	n.a.	n.a.	0.00	0.00
10.660	45.930	0.740	1332.5	1332.5	53.912	1.636	2.25		Unsaturated	43.3			43.41	1.25	54.07	111.06	0.99	0.321	1.054	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	4

PGA (A_{max})	0.50

Total Settlement:	0.07	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
10.830	32.350	0.922	1353.8	1353.8	37.428	2.912	2.54		Unsaturated	65.9			30.58	1.25	38.23	99.13	0.99	0.320	1.047	n.a.	n.a.	n.a.	0.00	0.00
10.990	26.170	0.982	1373.8	1373.8	37.100	3.853	2.62		Unsaturated	72.7			24.74	1.25	30.95	91.08	0.99	0.320	1.043	n.a.	n.a.	n.a.	0.00	0.00
11.150	26.420	1.142	1393.8	1393.8	36.912	4.439	2.67		Unsaturated	76.3			24.97	1.24	30.99	91.72	0.99	0.320	1.042	n.a.	n.a.	n.a.	0.00	0.00
11.320	39.980	1.261	1415.0	1415.0	45.392	3.210	2.50		Unsaturated	63.3			37.79	1.21	45.85	108.29	0.98	0.320	1.046	n.a.	n.a.	n.a.	0.00	0.00
11.480	86.380	1.654	1435.0	1435.0	98.319	1.931	2.11		Unsaturated	31.8			81.64	1.17	95.35	152.20	0.98	0.320	1.063	n.a.	n.a.	n.a.	0.00	0.00
11.650	140.610	2.996	1456.3	1456.3	159.373	2.142	2.00		Unsaturated	23.2			132.90	1.13	150.13	202.48	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.810	185.600	2.819	1476.3	1476.3	209.189	1.525	1.81		Unsaturated	8.1			175.43	1.12	197.35	201.82	0.98	0.320	1.097	n.a.	n.a.	n.a.	0.00	0.00
11.980	244.540	2.149	1497.5	1497.5	273.909	0.881	1.56		Unsaturated	0.0			231.13	1.10	253.28	253.28	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
12.140	244.670	1.899	1517.5	1517.5	272.232	0.779	1.52		Unsaturated	0.0			231.26	1.09	252.59	252.59	0.98	0.319	1.100	n.a.	n.a.	n.a.	0.00	0.00
12.300	218.660	1.616	1537.5	1537.5	241.604	0.742	1.54		Unsaturated	0.0			206.67	1.10	227.10	227.10	0.98	0.319	1.096	n.a.	n.a.	n.a.	0.00	0.00
12.470	226.110	2.741	1558.8	1558.8	248.144	1.216	1.69		Unsaturated	0.0			213.71	1.09	233.35	233.35	0.98	0.319	1.092	n.a.	n.a.	n.a.	0.00	0.00
12.630	220.400	2.508	1578.8	1578.8	240.308	1.142	1.68		Unsaturated	0.0			208.32	1.09	227.12	227.12	0.98	0.319	1.088	n.a.	n.a.	n.a.	0.00	0.00
12.800	211.390	2.438	1600.0	1600.0	228.902	1.158	1.70		Unsaturated	0.0			199.80	1.09	217.69	217.69	0.98	0.319	1.084	n.a.	n.a.	n.a.	0.00	0.00
12.960	211.850	2.132	1620.0	1620.0	227.971	1.010	1.65		Unsaturated	0.0			200.24	1.09	217.35	217.35	0.98	0.319	1.080	n.a.	n.a.	n.a.	0.00	0.00
13.120	218.570	1.812	1640.0	1640.0	233.781	0.832	1.59		Unsaturated	0.0			206.59	1.08	223.01	223.01	0.98	0.319	1.076	n.a.	n.a.	n.a.	0.00	0.00
13.290	218.110	2.846	1661.3	1661.3	231.779	1.310	1.73		Unsaturated	1.8			206.15	1.08	221.76	221.76	0.98	0.319	1.073	n.a.	n.a.	n.a.	0.00	0.00
13.450	228.000	2.709	1681.3	1681.3	240.872	1.193	1.69		Unsaturated	0.0			215.50	1.07	230.42	230.42	0.98	0.318	1.069	n.a.	n.a.	n.a.	0.00	0.00
13.620	231.210	2.689	1702.5	1702.5	242.736	1.167	1.68		Unsaturated	0.0			218.53	1.06	232.68	232.68	0.98	0.318	1.065	n.a.	n.a.	n.a.	0.00	0.00
13.780	201.390	2.660	1722.5	1722.5	210.072	1.327	1.77		Unsaturated	4.3			190.35	1.07	203.50	203.56	0.98	0.318	1.056	n.a.	n.a.	n.a.	0.00	0.00
13.940	198.240	2.858	1742.5	1742.5	205.572	1.448	1.80		Unsaturated	7.1			187.37	1.07	199.65	201.97	0.98	0.318	1.052	n.a.	n.a.	n.a.	0.00	0.00
14.110	195.320	3.018	1763.8	1763.8	201.296	1.552	1.83		Unsaturated	9.4			184.61	1.06	195.83	204.25	0.98	0.318	1.050	n.a.	n.a.	n.a.	0.00	0.00
14.270	191.250	3.127	1783.8	1783.8	195.964	1.643	1.86		Unsaturated	11.6			180.77	1.06	190.92	207.20	0.98	0.318	1.049	n.a.	n.a.	n.a.	0.00	0.00
14.440	173.840	2.274	1805.0	1805.0	176.979	1.315	1.81		Unsaturated	8.0			164.31	1.06	173.99	177.95	0.98	0.318	1.033	n.a.	n.a.	n.a.	0.00	0.00
14.600	149.120	1.471	1825.0	1825.0	150.838	0.993	1.77		Unsaturated	5.0			140.95	1.06	149.62	149.79	0.98	0.318	1.024	n.a.	n.a.	n.a.	0.00	0.00
14.760	152.650	2.246	1845.0	1845.0	153.581	1.480	1.89		Unsaturated	14.4			144.28	1.05	151.62	176.73	0.98	0.317	1.028	n.a.	n.a.	n.a.	0.00	0.00
14.930	165.870	2.727	1866.3	1866.3	165.999	1.653	1.91		Unsaturated	15.4			156.78	1.04	163.58	193.65	0.98	0.317	1.031	n.a.	n.a.	n.a.	0.00	0.00
15.090	211.820	2.998	1886.3	1886.3	211.106	1.421	1.79		Unsaturated	6.0			200.21	1.04	207.67	208.54	0.98	0.317	1.033	n.a.	n.a.	n.a.	0.00	0.00
15.260	219.770	2.586	1907.5	1907.5	217.831	1.182	1.72		Unsaturated	0.4			207.72	1.03	214.53	214.53	0.98	0.317	1.031	n.a.	n.a.	n.a.	0.00	0.00
15.420	224.970	2.386	1927.5	1927.5	221.838	1.065	1.68		Unsaturated	0.0			212.64	1.03	218.78	218.78	0.97	0.317	1.028	n.a.	n.a.	n.a.	0.00	0.00
15.580	194.600	2.313	1947.5	1947.5	190.765	1.195	1.76		Unsaturated	3.8			183.93	1.03	189.26	189.28	0.97	0.317	1.019	n.a.	n.a.	n.a.	0.00	0.00
15.750	177.950	1.976	1968.8	1968.8	173.407	1.116	1.77		Unsaturated	4.4			168.19	1.03	172.72	172.78	0.97	0.317	1.014	n.a.	n.a.	n.a.	0.00	0.00
15.910	161.270	2.101	1988.8	1988.8	156.261	1.311	1.85		Unsaturated	10.9			152.43	1.02	156.01	168.33	0.97	0.316	1.012	n.a.	n.a.	n.a.	0.00	0.00
16.080	170.510	2.019	2010.0	2010.0	164.383	1.191	1.80		Unsaturated	7.3			161.16	1.02	164.31	166.68	0.97	0.316	1.010	n.a.	n.a.	n.a.	0.00	0.00
16.240	183.400	1.994	2030.0	2030.0	176.000	1.093	1.76		Unsaturated	3.5			173.35	1.02	175.98	175.98	0.97	0.316	1.008	n.a.	n.a.	n.a.	0.00	0.00
16.400	165.030	1.803	2050.0	2050.0	157.490	1.100	1.79		Unsaturated	6.3			155.98	1.01	157.92	158.97	0.97	0.316	1.005	n.a.	n.a.	n.a.	0.00	0.00
16.570	159.520	1.748	2071.3	2071.3	151.406	1.103	1.80		Unsaturated	7.4			150.78	1.01	152.06	154.55	0.97	0.316	1.004	n.a.	n.a.	n.a.	0.00	0.00
16.730	158.380	1.601	2091.3	2091.3	149.587	1.017	1.78		Unsaturated	5.7			149.70	1.00	150.41	150.94	0.97	0.316	1.002	n.a.	n.a.	n.a.	0.00	0.00
16.900	169.920	1.806	2112.5	2112.5	159.739	1.069	1.78		Unsaturated	5.3			160.60	1.00	160.71	161.02	0.97	0.316	1.000	n.a.	n.a.	n.a.	0.00	0.00
17.060	185.710	1.991	2132.5	2132.5	173.845	1.078	1.76		Unsaturated	3.4			175.53	1.00	175.03	175.04	0.97	0.316	0.998	n.a.	n.a.	n.a.	0.00	0.00
17.220	201.030	1.996	2152.5	2152.5	187.383	0.998	1.71		Unsaturated	0.0			190.01	0.99	188.89	188.89	0.97	0.315	0.996	n.a.	n.a.	n.a.	0.00	0.00
17.390	204.690	1.625	2173.8	2173.8	189.868	0.798	1.64		Unsaturated	0.0			193.47	0.99	191.70	191.70	0.97	0.315	0.994	n.a.	n.a.	n.a.	0.00	0.00
17.550	187.530	1.772	2193.8	2193.8	173.062	0.951	1.72		Unsaturated	0.5			177.25	0.99	174.93	174.93	0.97	0.315	0.993	n.a.	n.a.	n.a.	0.00	0.00
17.720	169.500	1.527	2215.0	2215.0	155.564	0.907	1.74		Unsaturated	2.0			160.21	0.98	157.37	157.37	0.97	0.315	0.992	n.a.	n.a.	n.a.	0.00	0.00
17.880	163.890	1.198	2235.0	2235.0	149.697	0.736	1.69		Unsaturated	0.0			154.91	0.98	151.55	151.55	0.97	0.315	0.991	n.a.	n.a.	n.a.	0.00	0.00
18.040	152.040	1.479	2255.0	2255.0	138.173	0.980	1.80		Unsaturated	6.9			143.71	0.97	139.94	141.56	0.97	0.315	0.991	n.a.	n.a.	n.a.	0.00	0.00
18.210	140.800	1.850	2276.3	2276.3	127.274	1.325	1.91		Unsaturated	16.2			133.08	0.97	129.35	158.77	0.97	0.315	0.987	n.a.	n.a.	n.a.	0.00	0.00
18.370	118.400	1.842	2296.3	2296.3	106.385	1.571	2.02		Unsaturated	24.8			111.91	0.97	108.38	157.03	0.97	0.314	0.986	n.a.	n.a.	n.a.	0.00	0.00
18.540	82.850	2.093	2317.5	2317.5	73.780	2.562	2.28		Unsaturated	45.8			78.31	0.96	75.36	139.16	0.97	0.314	0.987	n.a.	n.a.	n.a.	0.00	0.00
18.700	64.410	1.704	2337.5	2337.5	56.872	2.695	2.38		Unsaturated	53.4			60.88	0.96	58.18	120.99	0.97	0.314	0.988	n.a.	n.a.	n.a.	0.00	0.00
18.860	31.060	1.153	2357.5	2357.5	25.350	3.859	2.74		Unsaturated	82.6			29.36	0.94	27.74	88.41	0.97	0.314	0.990	n.a.	n.a.	n.a.	0.00	0.00
19.030	18.200	0.966	2378.8	2378.8	14.302	5.680	3.04		Unsaturated	100.0			17.20	0.94	16.11	75.05	0.97	0.314	0.990	n.a.	n.a.	n.a.	0.00	0.00
19.190	21.690	1.109	2398.8	2398.8	17.084	5.414	2.97		Unsaturated	100.0			20.50	0.93	19.14	79.01	0.97	0.314	0.989	n.a.	n.a.	n.a.	0.00	0.00
19.360	26.490	1.145	2420.0	2420.0	20.893	4.530	2.85		Unsaturated	91.3			25.04	0.93	23.30	83.64	0.96	0.314	0.987	n.a.	n.a.	n.a.	0.00	0.00
19.520	34.860	1.293	2440.0	2440.0	27.574	3.842	2.72		Unsaturated	80.3			32.95	0.93	30.61	91.83	0.96	0.313	0.986	n.a.	n.a.	n.a.	0.00	0.00
19.690	76.580	2.244	2461.3	2461.3	66.035	2.978	2.36		Unsaturated	52.2			72.38	0.94	67.80	132.71	0.96	0.313	0.979	n.a.	n.a.	n.a.	0.00	0.00
19.850	169.000	2.305	2481.3	2481.3	146.428	1.374	1.88		Unsaturated	13.6			159.74	0.94	150.66	172.91	0.96	0.313	0.969	n.a.	n.a.	n.a.	0.00	0.00
20.010	233.990	3.391	2501.3	2501.3	202.331	1.457	1.81		Sand	7.6			221.16	0.95	209.91	213.36	0.96	0.313	0.950	4.377	9.146	29.22	0.00	0.00
20.180	265.930	3.400	2522.5	2522.5	229.118	1.285	1.73		Sand	1.5			251.35	0.95	239.26	239.26	0.96	0.314	0.947	39.856	83.060	264.35	0.00	0.00
20.340	291.650	2.943	2542.5	2542.5	250.384	1.013	1.63		Sand	0.0			275.66	0.95	262.63	262.63	0.96	0.315	0.945	662.476	1377.162	4367.88	0.00	0.00
20.510	316.670	3.180	2563.8	2563.8	270.819	1.008	1.60		Sand	0.0			299.31	0.95	284.53	284.53	0.96	0.316	0.942	22235.198	########	145685.74	0.00	0.00
20.670	347.020	2.522	2583.8	2583.8	295.721	0.730	1.47		Sand	0.0			328.00	0.95	311.16	311.16	0.96	0.318	0.940	########	########	##########	0.00	0.00
20.830	358.030	2.702	2603.8	2603.8	303.955	0.757	1.48		Sand	0.0			338.40	0.95	320.38	320.38	0.96	0.319	0.938	########	########	##########	0.00	0.00
21.000	365.780	3.427	2625.0	2625.0	309.290	0.940	1.54		Sand	0.0			345.73	0.94	326.62	326.62	0.96	0.320	0.935	########	########	##########	0.00	0.00
21.160	364.890	4.237	2645.0	2645.0	307.358	1.165	1.62		Sand	0.0			344.89	0.94	325.17	325.17	0.96	0.321	0.933	########	########	##########	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 4

PGA (A_{max}) 0.50

Total Settlement: 0.07 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
21.330	389.850	3.530	2666.3	2666.3	327.138	0.909	1.52		Sand	0.0			368.48	0.94	346.68	346.68	0.96	0.322	0.931	########	########	##########	0.00	0.00
21.490	345.150	4.318	2686.3	2686.3	288.412	1.256	1.66		Sand	0.0			326.23	0.94	306.32	306.32	0.96	0.323	0.928	########	########	##########	0.00	0.00
21.650	296.800	4.189	2706.3	2706.3	246.926	1.418	1.74		Sand	2.5			280.53	0.94	262.90	262.90	0.96	0.324	0.926	688.231	1402.351	4330.59	0.00	0.00
21.820	323.350	3.879	2727.5	2727.5	268.057	1.205	1.67		Sand	0.0			305.62	0.94	285.83	285.83	0.96	0.325	0.924	28211.878	########	176492.32	0.00	0.00
21.980	314.820	3.220	2747.5	2747.5	259.996	1.027	1.62		Sand	0.0			297.56	0.93	277.75	277.75	0.96	0.326	0.922	6770.876	########	42129.96	0.00	0.00
22.150	377.300	3.650	2768.8	2768.8	310.614	0.971	1.55		Sand	0.0			356.62	0.93	332.20	332.20	0.96	0.327	0.919	########	########	##########	0.00	0.00
22.310	382.330	5.706	2788.8	2788.8	313.631	1.498	1.70		Sand	0.0			361.37	0.93	335.99	335.99	0.96	0.328	0.917	########	########	##########	0.00	0.00
22.470	433.650	5.944	2808.8	2808.8	354.606	1.375	1.64		Sand	0.0			409.88	0.93	380.37	380.37	0.96	0.329	0.915	########	########	##########	0.00	0.00
22.640	493.720	5.528	2829.3	2820.6	403.031	1.123	1.54		Sand	0.0			466.65	0.93	432.58	432.58	0.96	0.330	0.914	########	########	##########	0.00	0.00
22.800	429.840	5.138	2848.5	2829.8	350.156	1.199	1.60		Sand	0.0			406.28	0.93	376.28	376.28	0.96	0.331	0.913	########	########	##########	0.00	0.00
22.970	397.070	3.731	2868.9	2839.6	322.806	0.943	1.53		Sand	0.0			375.30	0.93	347.28	347.28	0.95	0.332	0.912	########	########	##########	0.00	0.00
23.130	346.300	3.126	2888.1	2848.8	280.918	0.907	1.56		Sand	0.0			327.32	0.92	302.62	302.62	0.95	0.333	0.911	########	########	5242777.55	0.00	0.00
23.290	262.170	2.399	2907.3	2858.0	212.036	0.920	1.65		Sand	0.0			247.80	0.91	226.73	226.73	0.95	0.334	0.910	12.331	24.681	73.99	0.00	0.00
23.460	227.450	2.142	2927.7	2867.8	183.476	0.948	1.70		Sand	0.0			214.98	0.90	194.01	194.01	0.95	0.335	0.925	1.370	2.790	8.34	0.00	0.00
23.620	202.730	1.605	2946.9	2877.0	163.137	0.797	1.69		Sand	0.0			191.62	0.89	171.01	171.01	0.95	0.335	0.940	0.521	0.954	2.84	0.00	0.00
23.790	165.980	1.650	2967.3	2886.8	133.113	1.003	1.82		Sand	8.4			156.88	0.88	137.85	142.23	0.95	0.336	0.954	0.245	0.369	1.10	0.01	0.01
23.950	160.780	1.800	2986.5	2896.0	128.692	1.130	1.86		Sand	12.1			151.97	0.88	133.86	149.37	0.95	0.337	0.950	0.284	0.449	1.33	0.00	0.00
24.110	170.220	1.921	3005.7	2905.2	136.095	1.138	1.85		Sand	10.8			160.89	0.88	141.83	153.39	0.95	0.338	0.948	0.313	0.506	1.50	0.00	0.00
24.280	174.630	1.381	3026.1	2915.0	139.409	0.797	1.74		Sand	1.9			165.06	0.88	144.64	144.64	0.95	0.339	0.951	0.257	0.393	1.16	0.01	0.01
24.440	158.910	1.205	3045.3	2924.2	126.542	0.766	1.76		Sand	3.6	165.06		165.06	0.88	144.44	144.45	0.95	0.340	0.951	0.256	0.391	1.15	0.01	0.01
24.610	139.660	1.774	3065.7	2934.0	110.871	1.284	1.95		Sand	18.9	165.06		165.06	0.89	147.38	187.43	0.95	0.341	0.925	0.997	2.030	5.96	0.00	0.00
24.770	114.810	2.324	3084.9	2943.3	90.775	2.052	2.15		Sand	35.2	165.06		165.06	0.91	149.46	222.32	0.95	0.342	0.901	8.557	16.962	49.65	0.00	0.00
24.930	91.410	1.942	3104.1	2952.5	71.901	2.161	2.24		Sand	42.2	165.06		165.06	0.91	149.77	229.85	0.95	0.342	0.900	16.191	32.061	93.63	0.00	0.00
25.100	59.410	1.664	3124.5	2962.3	46.211	2.877	2.47		Sand	60.2	165.06		165.06	0.91	150.31	241.26	0.95	0.343	0.899	49.047	97.014	282.59	0.00	0.00
25.260	36.920	1.280	3143.7	2971.5	23.792	3.621	2.75		Clay	82.8			34.90	0.91	n.a.	n.a.	0.95	0.344	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	26.400	1.051	3164.1	2981.3	16.649	4.233	2.91		Clay	95.8			24.95	0.91	n.a.	n.a.	0.95	0.345	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.590	27.370	0.866	3183.3	2990.5	17.240	3.360	2.84		Clay	89.8			25.87	0.91	n.a.	n.a.	0.95	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	41.190	0.827	3202.5	2999.7	31.427	2.088	2.50		Sand	63.2			38.93	0.83	32.49	91.12	0.95	0.347	0.965	0.127	0.149	0.43	0.04	0.04
25.920	30.840	0.724	3222.9	3009.5	19.424	2.478	2.71		Clay	80.1			29.15	0.91	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.080	19.480	0.658	3242.1	3018.7	11.832	3.684	2.99		Clay	100.0			18.41	0.91	n.a.	n.a.	0.95	0.348	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.250	12.650	0.561	3262.5	3028.5	7.277	5.093	3.24		Clay	100.0			11.96	0.91	n.a.	n.a.	0.94	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.410	9.970	0.508	3281.7	3037.7	5.484	6.097	3.39		Clay	100.0			9.42	0.91	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.570	8.280	0.482	3300.9	3046.9	4.352	7.269	3.51		Clay	100.0			7.83	0.91	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	7.350	0.484	3321.3	3056.7	3.723	8.509	3.61		Clay	100.0			6.95	0.91	n.a.	n.a.	0.94	0.351	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	7.540	0.497	3340.5	3065.9	3.829	8.465	3.60		Clay	100.0			7.13	0.91	n.a.	n.a.	0.94	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	7.640	0.498	3360.9	3075.7	3.875	8.353	3.59		Clay	100.0			7.22	0.91	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	7.660	0.490	3380.1	3084.9	3.870	8.201	3.59		Clay	100.0			7.24	0.91	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	7.710	0.480	3400.5	3094.7	3.884	7.984	3.58		Clay	100.0			7.29	0.90	n.a.	n.a.	0.94	0.354	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	7.800	0.385	3419.7	3104.0	3.924	6.313	3.51		Clay	100.0			7.37	0.90	n.a.	n.a.	0.94	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	7.720	0.391	3438.9	3113.2	3.855	6.508	3.53		Clay	100.0			7.30	0.90	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.890	7.810	0.383	3459.3	3123.0	3.894	6.302	3.52		Clay	100.0			7.38	0.90	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.050	9.390	0.397	3478.5	3132.2	4.885	5.186	3.39		Clay	100.0			8.88	0.90	n.a.	n.a.	0.94	0.357	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	9.210	0.527	3498.9	3142.0	4.749	7.061	3.48		Clay	100.0			8.71	0.90	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	9.690	0.544	3518.1	3151.2	5.034	6.853	3.45		Clay	100.0			9.16	0.90	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	17.170	0.640	3537.3	3160.4	9.746	4.152	3.09		Clay	100.0			16.23	0.90	n.a.	n.a.	0.94	0.359	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	18.900	1.203	3557.7	3170.2	10.801	7.028	3.20		Clay	100.0			17.86	0.90	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	14.600	2.221	3576.9	3179.4	8.059	17.337	3.55		Clay	100.0			13.80	0.90	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	52.870	3.130	3597.3	3189.2	32.028	6.129	2.81		Clay	87.7			49.97	0.90	n.a.	n.a.	0.94	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	76.820	3.703	3616.5	3198.4	46.906	4.937	2.63		Clay	73.1			72.61	0.90	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	85.580	3.662	3635.7	3207.6	64.302	4.372	2.49		Sand	62.6		1.78	143.98	0.88	126.32	211.40	0.94	0.362	0.875	3.826	7.367	20.33	0.00	0.00
29.530	81.220	2.821	3656.1	3217.4	60.855	3.553	2.44		Sand	58.6	80.89	1.78	143.98	0.88	126.07	209.57	0.93	0.363	0.876	3.387	6.531	17.99	0.00	0.00
29.690	68.660	2.167	3675.3	3226.6	51.147	3.243	2.47		Sand	60.6	80.89	1.78	143.98	0.88	126.01	210.26	0.93	0.364	0.874	3.545	6.820	18.76	0.00	0.00
29.860	64.810	1.615	3695.7	3236.4	48.119	2.565	2.42		Sand	56.5	80.89	1.78	143.98	0.87	125.75	208.28	0.93	0.364	0.877	3.114	6.006	16.49	0.00	0.00
30.020	43.010	1.148	3714.9	3245.7	25.359	2.790	2.65		Clay	75.3			40.65	0.89	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.180	25.850	0.859	3734.1	3254.9	14.737	3.580	2.91		Clay	95.5			24.43	0.89	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.350	14.860	0.890	3754.5	3264.7	7.954	6.851	3.29		Clay	100.0			14.05	0.89	n.a.	n.a.	0.93	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.510	10.820	0.890	3773.7	3273.9	5.457	9.957	3.52		Clay	100.0			10.23	0.89	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.680	15.280	0.858	3794.1	3283.7	8.151	6.408	3.26		Clay	100.0			14.44	0.89	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.840	18.930	0.759	3813.3	3292.9	10.339	4.456	3.09		Clay	100.0			17.89	0.89	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.000	17.100	0.600	3832.5	3302.1	9.196	3.951	3.10		Clay	100.0			16.16	0.89	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.170	14.130	0.560	3852.9	3311.9	7.370	4.587	3.21		Clay	100.0			13.36	0.89	n.a.	n.a.	0.93	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.330	14.070	0.521	3872.1	3321.1	7.307	4.293	3.20		Clay	100.0			13.30	0.89	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.500	10.020	0.517	3892.5	3330.9	4.848	6.403	3.44		Clay	100.0			9.47	0.89	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.660	10.580	0.544	3911.7	3340.1	5.164	6.307	3.42		Clay	100.0			10.00	0.89	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	4

PGA (A_{max})	0.50

Total Settlement:	0.07	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
31.820	9.920	0.560	3930.9	3349.3	4.750	7.039	3.48		Clay	100.0			9.38	0.89	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.990	9.800	0.560	3951.3	3359.1	4.659	7.156	3.49		Clay	100.0			9.26	0.89	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.150	10.200	0.543	3970.5	3368.3	4.878	6.609	3.45		Clay	100.0			9.64	0.88	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	10.880	0.544	3990.9	3378.1	5.260	6.118	3.40		Clay	100.0			10.28	0.88	n.a.	n.a.	0.93	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	10.970	0.540	4010.1	3387.3	5.293	6.026	3.40		Clay	100.0			10.37	0.88	n.a.	n.a.	0.92	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.640	10.510	0.547	4029.3	3396.6	5.002	6.433	3.43		Clay	100.0			9.93	0.88	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.810	10.480	0.519	4049.7	3406.4	4.964	6.137	3.42		Clay	100.0			9.91	0.88	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	9.990	0.518	4068.9	3415.6	4.658	6.512	3.46		Clay	100.0			9.44	0.88	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	9.550	0.517	4089.3	3425.4	4.382	6.894	3.50		Clay	100.0			9.03	0.88	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	9.770	0.532	4108.5	3434.6	4.493	6.898	3.49		Clay	100.0			9.23	0.88	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	9.690	0.524	4127.7	3443.8	4.429	6.872	3.49		Clay	100.0			9.16	0.88	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.630	9.210	0.514	4148.1	3453.6	4.132	7.199	3.53		Clay	100.0			8.71	0.88	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.790	9.820	0.532	4167.3	3462.8	4.468	6.877	3.49		Clay	100.0			9.28	0.88	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.960	10.690	0.511	4187.7	3472.6	4.951	5.939	3.42		Clay	100.0			10.10	0.88	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.120	10.330	0.524	4206.9	3481.8	4.725	6.374	3.45		Clay	100.0			9.76	0.88	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.280	11.020	0.572	4226.1	3491.0	5.103	6.425	3.43		Clay	100.0			10.42	0.88	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.450	11.560	0.571	4246.5	3500.8	5.391	6.048	3.39		Clay	100.0			10.93	0.88	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.610	11.690	0.490	4265.7	3510.0	5.446	5.125	3.35		Clay	100.0			11.05	0.88	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.780	14.540	0.470	4286.1	3519.8	7.044	3.789	3.18		Clay	100.0			13.74	0.87	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.940	13.600	0.482	4305.3	3529.0	6.488	4.212	3.24		Clay	100.0			12.85	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.100	11.300	0.465	4324.5	3538.3	5.165	5.087	3.36		Clay	100.0			10.68	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.270	11.570	0.457	4344.9	3548.1	5.297	4.865	3.34		Clay	100.0			10.94	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.430	11.300	0.454	4364.1	3557.3	5.126	4.984	3.36		Clay	100.0			10.68	0.87	n.a.	n.a.	0.92	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.600	10.480	0.458	4384.5	3567.1	4.647	5.523	3.42		Clay	100.0			9.91	0.87	n.a.	n.a.	0.91	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.760	10.690	0.455	4403.7	3576.3	4.747	5.358	3.41		Clay	100.0			10.10	0.87	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.930	10.790	0.467	4424.1	3586.1	4.784	5.444	3.41		Clay	100.0			10.20	0.87	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.090	10.650	0.435	4443.3	3595.3	4.689	5.161	3.40		Clay	100.0			10.07	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.250	10.980	0.442	4462.5	3604.5	4.854	5.048	3.38		Clay	100.0			10.38	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.420	11.540	0.605	4482.9	3614.3	5.145	6.507	3.43		Clay	100.0			10.91	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.580	11.020	1.227	4502.1	3623.5	4.840	13.990	3.65		Clay	100.0			10.42	0.87	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.750	14.400	1.613	4522.5	3633.3	6.682	13.289	3.53		Clay	100.0			13.61	0.87	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.910	48.790	1.957	4541.7	3642.5	25.542	4.207	2.77		Clay	84.3			46.12	0.87	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.070	93.840	1.853	4560.9	3651.7	65.876	2.024	2.25		Sand	42.9		1.8	159.65	0.84	134.45	211.25	0.91	0.386	0.836	3.788	6.969	18.06	0.00	0.00
37.240	52.590	0.880	4581.3	3661.5	36.141	1.750	2.41		Sand	55.6	88.7	1.8	159.66	0.85	135.15	219.86	0.91	0.386	0.835	7.056	12.969	33.57	0.00	0.00
37.400	30.840	0.709	4600.5	3670.7	15.550	2.483	2.79		Clay	86.4			29.15	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.570	18.880	0.704	4620.9	3680.5	9.004	4.248	3.12		Clay	100.0			17.84	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	14.590	0.767	4640.1	3689.7	6.651	6.249	3.33		Clay	100.0			13.79	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.890	16.660	0.891	4659.3	3699.0	7.748	6.220	3.27		Clay	100.0			15.75	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.060	18.890	1.007	4679.7	3708.8	8.925	6.085	3.22		Clay	100.0			17.85	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.220	23.790	1.316	4698.9	3718.0	11.533	6.139	3.14		Clay	100.0			22.49	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.390	26.210	1.725	4719.3	3727.8	12.796	7.232	3.15		Clay	100.0			24.77	0.86	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	36.750	2.316	4738.5	3737.0	18.400	6.737	3.01		Clay	100.0			34.74	0.86	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	47.710	3.164	4757.7	3746.2	24.201	6.980	2.93		Clay	97.8			45.09	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.880	55.990	3.402	4778.1	3756.0	28.542	6.347	2.85		Clay	91.4			52.92	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.040	76.630	3.569	4797.3	3765.2	39.430	4.808	2.67		Clay	76.6			72.43	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.210	62.510	3.130	4817.7	3775.0	31.842	5.207	2.76		Clay	83.8			59.08	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	50.090	2.560	4836.9	3784.2	25.195	5.369	2.84		Clay	90.4			47.34	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.530	48.660	2.450	4856.1	3793.4	24.375	5.298	2.85		Clay	90.9			45.99	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.700	43.350	2.174	4876.5	3803.2	21.514	5.313	2.89		Clay	94.2			40.97	0.86	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.860	34.130	1.843	4895.7	3812.4	16.620	5.816	3.00		Clay	100.0			32.26	0.86	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.030	31.780	1.529	4916.1	3822.2	15.343	5.214	2.99		Clay	100.0			30.04	0.86	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	29.020	1.445	4935.3	3831.4	13.860	5.442	3.04		Clay	100.0			27.43	0.86	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.350	26.300	1.366	4954.5	3840.7	12.406	5.734	3.09		Clay	100.0			24.86	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.520	24.840	1.307	4974.9	3850.5	11.610	5.847	3.12		Clay	100.0			23.48	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.680	23.900	1.302	4994.1	3859.7	11.091	6.082	3.15		Clay	100.0			22.59	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.850	24.900	1.589	5014.5	3869.5	11.574	7.096	3.17		Clay	100.0			23.53	0.85	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.010	30.200	1.929	5033.7	3878.7	14.275	6.967	3.10		Clay	100.0			28.54	0.85	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.170	37.940	2.835	5052.9	3887.9	18.217	8.005	3.06		Clay	100.0			35.86	0.85	n.a.	n.a.	0.89	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.340	72.370	2.994	5073.3	3897.7	35.833	4.287	2.66		Clay	76.2			68.40	0.85	n.a.	n.a.	0.89	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.500	62.970	2.969	5092.5	3906.9	30.932	4.913	2.75		Clay	83.1			59.52	0.85	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.670	66.520	2.785	5112.9	3916.7	32.662	4.354	2.70		Clay	78.9			62.87	0.85	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.830	103.160	2.568	5132.1	3925.9	69.803	2.553	2.30		Sand	47.0	119.74	1.66	198.77	0.85	168.86	257.55	0.89	0.395	0.815	333.521	597.694	1512.14	0.00	0.00
41.990	123.730	1.749	5151.3	3935.1	83.972	1.444	2.07		Sand	28.7	119.74	1.66	198.77	0.84	166.25	233.05	0.89	0.396	0.814	21.706	38.865	98.26	0.00	0.00
42.160	126.690	2.239	5171.7	3944.9	85.909	1.804	2.13		Sand	33.4		1.66	198.78	0.84	167.19	241.66	0.89	0.396	0.813	51.192	91.576	231.38	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 4

PGA (A_{max}) 0.50

Total Settlement: 0.07 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
42.320	123.140	2.279	5190.9	3954.1	83.348	1.890	2.15		Sand	35.3	119.74	1.66	198.77	0.84	167.41	244.44	0.89	0.396	0.812	69.053	123.422	311.64	0.00	0.00
42.490	99.300	1.944	5211.3	3963.9	66.774	2.010	2.24		Sand	42.4	119.74	1.66	198.77	0.85	168.33	253.13	0.89	0.396	0.812	190.070	339.410	856.44	0.00	0.00
42.650	58.400	1.187	5230.5	3973.1	38.479	2.128	2.44		Sand	58.1	119.74	1.66	198.77	0.85	168.33	263.38	0.89	0.397	0.811	736.852	1314.677	3315.32	0.00	0.00
42.810	29.530	0.732	5249.7	3982.4	13.512	2.720	2.87		Clay	92.2			27.91	0.85	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.980	17.100	0.595	5270.1	3992.1	7.247	4.113	3.19		Clay	100.0			16.16	0.85	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.140	13.930	0.635	5289.3	4001.4	5.641	5.628	3.36		Clay	100.0			13.17	0.85	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.310	14.210	0.583	5309.7	4011.2	5.762	5.044	3.32		Clay	100.0			13.43	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.470	14.330	0.465	5328.9	4020.4	5.803	3.988	3.26		Clay	100.0			13.54	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.640	15.430	0.419	5349.3	4030.2	6.330	3.284	3.18		Clay	100.0			14.58	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.800	15.150	0.351	5368.5	4039.4	6.172	2.813	3.16		Clay	100.0			14.32	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.960	16.030	0.469	5387.7	4048.6	6.588	3.517	3.19		Clay	100.0			15.15	0.84	n.a.	n.a.	0.88	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.130	16.270	1.006	5408.1	4058.4	6.685	7.417	3.37		Clay	100.0			15.38	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.290	21.000	2.059	5427.3	4067.6	8.991	11.261	3.39		Clay	100.0			19.85	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.460	45.440	3.045	5447.7	4077.4	20.953	7.128	2.99		Clay	100.0			42.95	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.620	80.840	4.129	5466.9	4086.6	38.226	5.286	2.71		Clay	79.7			76.41	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.780	210.310	4.409	5486.1	4095.8	141.013	2.124	2.03		Sand	25.7			198.78	0.82	163.08	223.33	0.88	0.399	0.802	9.288	16.385	41.02	0.00	0.00
44.950	403.530	5.111	5506.5	4105.6	271.948	1.275	1.68		Sand	0.0			381.41	0.84	320.22	320.22	0.88	0.400	0.801	########	########	##########	0.00	0.00
45.110	513.440	4.232	5525.7	4114.8	346.132	0.829	1.47		Sand	0.0			485.29	0.84	407.19	407.19	0.88	0.400	0.800	########	########	##########	0.00	0.00
45.280	565.660	4.568	5546.1	4124.6	381.067	0.812	1.44		Sand	0.0			534.65	0.84	448.33	448.33	0.88	0.400	0.800	########	########	##########	0.00	0.00
45.440	571.490	3.390	5565.3	4133.8	384.578	0.596	1.33		Sand	0.0			540.16	0.84	452.68	452.68	0.88	0.400	0.799	########	########	##########	0.00	0.00
45.600	547.640	3.998	5584.5	4143.1	368.033	0.734	1.41		Sand	0.0			517.62	0.84	433.54	433.54	0.88	0.400	0.798	########	########	##########	0.00	0.00
45.770	437.710	3.543	5604.9	4152.9	293.424	0.815	1.51		Sand	0.0			413.71	0.84	346.29	346.29	0.88	0.401	0.798	########	########	##########	0.00	0.00
45.930	385.850	3.515	5624.1	4162.1	258.142	0.918	1.59		Sand	0.0			364.70	0.84	305.09	305.09	0.88	0.401	0.797	########	########	6669117.54	0.00	0.00
46.100	334.420	4.051	5644.5	4171.9	223.213	1.222	1.72		Sand	0.8			316.09	0.84	264.26	264.26	0.88	0.401	0.796	833.994	1461.131	3643.42	0.00	0.00
46.260	364.040	3.073	5663.7	4181.1	242.877	0.851	1.58		Sand	0.0			344.08	0.84	287.50	287.50	0.88	0.401	0.796	38559.888	########	168241.28	0.00	0.00
46.420	398.220	2.412	5682.9	4190.3	265.560	0.610	1.45		Sand	0.0			376.39	0.84	314.31	314.31	0.88	0.401	0.795	########	########	##########	0.00	0.00
46.590	383.170	1.903	5703.3	4200.1	255.147	0.500	1.41		Sand	0.0			362.16	0.83	302.24	302.24	0.88	0.402	0.794	########	########	3482055.66	0.00	0.00
46.750	354.040	2.120	5722.5	4209.3	235.340	0.604	1.49		Sand	0.0			334.63	0.83	279.10	279.10	0.87	0.402	0.794	8519.151	########	37028.00	0.00	0.00
46.920	334.930	1.441	5742.9	4219.1	222.268	0.434	1.41		Sand	0.0			316.57	0.83	263.88	263.88	0.87	0.402	0.793	789.902	1378.015	3428.77	0.00	0.00
47.080	314.620	1.743	5762.1	4228.3	208.439	0.559	1.50		Sand	0.0			297.37	0.83	246.23	246.23	0.87	0.402	0.792	84.277	146.904	365.38	0.00	0.00
47.240	272.570	2.429	5781.3	4237.5	180.121	0.901	1.69		Sand	0.0			257.63	0.80	206.08	206.08	0.87	0.402	0.804	2.708	4.789	11.91	0.00	0.00
47.410	152.860	2.707	5801.7	4247.3	100.043	1.805	2.08		Sand	29.7			144.48	0.77	111.35	168.74	0.87	0.402	0.868	0.483	0.802	1.99	0.00	0.00
47.570	106.460	2.877	5820.9	4256.5	69.007	2.779	2.33		Sand	49.4	144.48		144.48	0.79	113.61	189.37	0.87	0.403	0.837	1.092	2.010	4.99	0.00	0.00
47.740	71.160	2.148	5841.3	4266.3	31.990	3.147	2.61		Clay	71.8			67.26	0.83	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	65.420	1.635	5860.5	4275.5	41.551	2.617	2.47		Sand	60.7	145.29		145.29	0.79	114.80	195.97	0.87	0.403	0.823	1.517	2.748	6.82	0.00	0.00
48.060	96.130	1.812	5879.7	4284.8	61.898	1.944	2.26		Sand	43.5	145.29		145.29	0.78	113.57	185.64	0.87	0.403	0.842	0.921	1.695	4.20	0.00	0.00
48.230	153.720	1.841	5900.1	4294.5	100.030	1.221	1.97		Sand	20.3			145.29	0.75	108.96	148.03	0.87	0.403	0.889	0.276	0.404	1.00	0.01	0.00
48.390	91.640	1.414	5919.3	4303.8	58.773	1.595	2.22		Sand	40.4	145.29		145.29	0.78	113.04	182.57	0.87	0.403	0.846	0.807	1.455	3.61	0.00	0.00
48.560	38.210	0.988	5939.7	4313.6	16.339	2.803	2.81		Clay	87.5			36.12	0.83	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	27.180	0.448	5958.9	4322.8	11.197	1.851	2.84		Clay	90.3			25.69	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.880	22.900	0.363	5978.1	4332.0	9.193	1.821	2.91		Clay	95.9			21.64	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.050	18.520	0.374	5998.5	4341.8	7.149	2.407	3.07		Clay	100.0			17.50	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.210	16.630	0.382	6017.7	4351.0	6.261	2.802	3.15		Clay	100.0			15.72	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.380	17.630	0.387	6038.1	4360.8	6.701	2.651	3.11		Clay	100.0			16.66	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.540	21.930	0.388	6057.3	4370.0	8.650	2.054	2.96		Clay	99.8			20.73	0.83	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.700	24.740	0.343	6076.5	4379.2	9.911	1.581	2.85		Clay	91.2			23.38	0.83	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.870	26.320	0.393	6096.9	4389.0	10.604	1.689	2.84		Clay	90.3			24.88	0.82	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.030	24.040	0.322	6116.1	4398.2	9.541	1.533	2.86		Clay	91.8			22.72	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.200	22.710	0.285	6136.5	4408.0	8.912	1.449	2.87		Clay	92.9			21.47	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.360	18.940	0.270	6155.7	4417.2	7.182	1.703	2.99		Clay	100.0			17.90	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.520	15.930	0.241	6174.9	4426.5	5.803	1.880	3.09		Clay	100.0			15.06	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.690	16.690	0.227	6195.3	4436.2	6.128	1.671	3.05		Clay	100.0			15.78	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.850	16.930	0.280	6214.5	4445.5	6.219	2.028	3.08		Clay	100.0			16.00	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.020	18.310	0.274	6234.9	4455.3	6.820	1.804	3.02		Clay	100.0			17.31	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.180	18.430	0.270	6254.1	4464.5	6.855	1.764	3.01		Clay	100.0			17.42	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.350	15.710	0.260	6274.5	4474.3	5.620	2.066	3.12		Clay	100.0			14.85	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.510	13.610	0.269	6293.7	4483.5	4.667	2.573	3.24		Clay	100.0			12.86	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.670	12.650	0.281	6312.9	4492.7	4.226	2.959	3.31		Clay	100.0			11.96	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.840	13.530	0.297	6333.3	4502.5	4.603	2.870	3.27		Clay	100.0			12.79	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.000	14.870	0.298	6352.5	4511.7	5.184	2.550	3.20		Clay	100.0			14.05	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.170	15.980	0.321	6372.9	4521.5	5.659	2.509	3.16		Clay	100.0			15.10	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.330	16.690	0.333	6392.1	4530.7	5.957	2.471	3.14		Clay	100.0			15.78	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.490	17.230	0.379	6411.3	4539.9	6.178	2.705	3.15		Clay	100.0			16.29	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.660	16.720	0.407	6431.7	4549.7	5.936	3.013	3.19		Clay	100.0			15.80	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 4

PGA (A_{max}) 0.50

Total Settlement: 0.07 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
52.820	18.480	0.390	6450.9	4558.9	6.692	2.555	3.11		Clay	100.0			17.47	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.990	21.580	0.381	6471.3	4568.7	8.030	2.075	2.99		Clay	100.0			20.40	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	19.830	0.341	6490.5	4577.9	7.246	2.054	3.03		Clay	100.0			18.74	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.310	18.110	0.306	6509.7	4587.2	6.477	2.057	3.07		Clay	100.0			17.12	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.480	17.320	0.243	6530.1	4596.9	6.115	1.730	3.05		Clay	100.0			16.37	0.81	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.640	14.590	0.256	6549.3	4606.2	4.913	2.263	3.19		Clay	100.0			13.79	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.810	13.850	0.325	6569.7	4616.0	4.578	3.075	3.29		Clay	100.0			13.09	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	15.590	0.316	6588.9	4625.2	5.317	2.572	3.19		Clay	100.0			14.74	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.130	15.310	0.268	6608.1	4634.4	5.181	2.232	3.17		Clay	100.0			14.47	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.300	14.310	0.275	6628.5	4644.2	4.735	2.499	3.23		Clay	100.0			13.53	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.460	13.020	0.292	6647.7	4653.4	4.167	3.013	3.32		Clay	100.0			12.31	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.630	12.400	0.325	6668.1	4663.2	3.888	3.589	3.38		Clay	100.0			11.72	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	13.320	0.400	6687.3	4672.4	4.270	4.010	3.37		Clay	100.0			12.59	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.950	15.390	0.465	6706.5	4681.6	5.142	3.863	3.30		Clay	100.0			14.55	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.120	17.820	0.496	6726.9	4691.4	6.163	3.434	3.20		Clay	100.0			16.84	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.280	19.950	0.580	6746.1	4700.6	7.053	3.496	3.16		Clay	100.0			18.86	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.450	22.980	0.799	6766.5	4710.4	8.321	4.075	3.14		Clay	100.0			21.72	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	25.600	0.897	6785.7	4719.6	9.411	4.039	3.09		Clay	100.0			24.20	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.770	29.680	0.882	6804.9	4728.9	11.114	3.355	2.99		Clay	100.0			28.05	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.940	29.260	0.986	6825.3	4738.6	10.909	3.815	3.03		Clay	100.0			27.66	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.100	26.250	1.455	6844.5	4747.9	9.616	6.374	3.21		Clay	100.0			24.81	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.270	27.140	2.236	6864.9	4757.7	9.966	9.432	3.31		Clay	100.0			25.65	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	51.080	2.088	6884.1	4766.9	19.987	4.383	2.86		Clay	91.7			48.28	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.590	61.400	1.349	6903.3	4776.1	24.266	2.327	2.62		Clay	72.6			58.03	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.760	34.520	0.684	6923.7	4785.9	12.979	2.201	2.83		Clay	89.2			32.63	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.920	24.780	0.679	6942.9	4795.1	8.888	3.185	3.05		Clay	100.0			23.42	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.090	21.610	0.660	6963.3	4804.9	7.546	3.639	3.15		Clay	100.0			20.43	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.250	24.130	0.659	6982.5	4814.1	8.574	3.194	3.07		Clay	100.0			22.81	0.81	n.a.	n.a.	0.84	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.410	22.160	0.646	7001.7	4823.3	7.737	3.461	3.12		Clay	100.0			20.95	0.80	n.a.	n.a.	0.84	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.580	22.440	0.626	7022.1	4833.1	7.833	3.304	3.11		Clay	100.0			21.21	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.740	21.610	0.600	7041.3	4842.3	7.471	3.316	3.13		Clay	100.0			20.43	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.910	19.440	0.535	7061.7	4852.1	6.558	3.365	3.18		Clay	100.0			18.37	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.070	16.740	0.558	7080.9	4861.3	5.430	4.230	3.30		Clay	100.0			15.82	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.230	16.350	0.612	7100.1	4870.5	5.256	4.781	3.34		Clay	100.0			15.45	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.400	18.690	0.647	7120.5	4880.3	6.200	4.278	3.26		Clay	100.0			17.67	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.560	20.930	0.683	7139.7	4889.6	7.101	3.937	3.19		Clay	100.0			19.78	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.730	21.580	0.626	7160.1	4899.3	7.348	3.478	3.14		Clay	100.0			20.40	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.890	22.300	0.651	7179.3	4908.6	7.624	3.479	3.13		Clay	100.0			21.08	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.060	21.970	0.626	7199.7	4918.4	7.470	3.407	3.13		Clay	100.0			20.77	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.220	20.830	0.572	7218.9	4927.6	6.989	3.322	3.15		Clay	100.0			19.69	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.380	20.210	0.615	7238.1	4936.8	6.721	3.706	3.19		Clay	100.0			19.10	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.550	20.620	0.839	7258.5	4946.6	6.870	4.936	3.25		Clay	100.0			19.49	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.710	23.460	1.732	7277.7	4955.8	7.999	8.740	3.36		Clay	100.0			22.17	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.880	30.520	2.131	7298.1	4965.6	10.823	7.931	3.23		Clay	100.0			28.85	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.040	44.590	1.871	7317.3	4974.8	16.455	4.571	2.93		Clay	97.8			42.15	0.80	n.a.	n.a.	0.83	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.200	52.780	1.695	7336.5	4984.0	19.708	3.452	2.80		Clay	86.8			49.89	0.80	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.370	44.980	1.703	7356.9	4993.8	16.541	4.123	2.90		Clay	95.4			42.51	0.80	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.530	41.500	2.245	7376.1	5003.0	15.116	5.936	3.04		Clay	100.0			39.22	0.80	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.700	42.640	2.750	7396.5	5012.8	15.537	7.062	3.08		Clay	100.0			40.30	0.80	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	49.870	2.591	7415.7	5022.0	18.384	5.613	2.96		Clay	99.5			47.14	0.80	n.a.	n.a.	0.82	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.020	86.580	2.573	7434.9	5031.3	50.792	3.105	2.46		Sand	59.7			81.83	0.67	55.01	119.05	0.82	0.408	0.893	0.169	0.208	0.51	0.03	0.00
61.190	108.100	3.046	7455.3	5041.0	63.914	2.918	2.37		Sand	52.5			102.17	0.69	70.56	136.33	0.82	0.408	0.876	0.219	0.293	0.72	0.02	0.00
61.350	108.210	3.382	7474.5	5050.3	63.917	3.237	2.40		Sand	55.1			102.28	0.69	70.70	137.54	0.82	0.408	0.875	0.224	0.301	0.74	0.02	0.00
61.520	113.150	2.762	7494.9	5060.1	66.869	2.524	2.31		Sand	47.8			106.95	0.69	73.98	138.51	0.82	0.408	0.874	0.228	0.308	0.76	0.02	0.00
61.680	119.050	2.231	7514.1	5069.3	70.405	1.935	2.21		Sand	40.1			112.52	0.69	77.78	138.57	0.82	0.408	0.873	0.228	0.308	0.76	0.02	0.00
61.840	119.520	2.410	7533.3	5078.5	70.622	2.082	2.23		Sand	41.8			112.97	0.69	78.24	140.31	0.82	0.408	0.871	0.236	0.321	0.79	0.02	0.00
62.010	107.610	2.739	7553.7	5088.3	63.288	2.638	2.34		Sand	50.2			101.71	0.69	69.74	134.33	0.82	0.408	0.877	0.212	0.280	0.69	0.02	0.00
62.170	87.300	2.780	7572.9	5097.5	32.767	3.329	2.62		Clay	72.5			82.51	0.79	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.340	76.130	2.725	7593.3	5107.3	28.326	3.768	2.70		Clay	79.1			71.96	0.79	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.500	84.570	2.683	7612.5	5116.5	31.570	3.322	2.63		Clay	73.4			79.93	0.79	n.a.	n.a.	0.82	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.660	85.280	2.451	7631.7	5125.7	49.472	3.008	2.46		Sand	59.6			80.60	0.66	53.54	117.14	0.82	0.407	0.892	0.165	0.201	0.49	0.03	0.00
62.830	67.710	2.118	7652.1	5135.5	24.879	3.316	2.71		Clay	79.6			64.00	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
62.990	50.640	1.974	7671.3	5144.7	18.195	4.218	2.88		Clay	93.3			47.86	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.160	40.740	1.652	7691.7	5154.5	14.315	4.477	2.98		Clay	100.0			38.51	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 4

PGA (A_{max}) 0.50

Total Settlement: 0.07 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	$q_{c1N\text{-}CS}$	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
63.320	37.170	1.677	7710.9	5163.7	12.903	5.033	3.04		Clay	100.0			35.13	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.480	49.370	1.850	7730.1	5172.9	17.593	4.066	2.88		Clay	93.4			46.66	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.650	45.070	1.905	7750.5	5182.7	15.897	4.624	2.95		Clay	99.0			42.60	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.810	36.520	1.820	7769.7	5192.0	12.571	5.577	3.08		Clay	100.0			34.52	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.980	42.870	1.574	7790.1	5201.7	14.985	4.037	2.93		Clay	97.6			40.52	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	32.260	1.047	7809.3	5211.0	10.883	3.691	3.02		Clay	100.0			30.49	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.300	25.010	0.701	7828.5	5220.2	8.082	3.322	3.10		Clay	100.0			23.64	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.470	20.360	0.597	7848.9	5230.0	6.285	3.634	3.21		Clay	100.0			19.24	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.630	18.250	0.521	7868.1	5239.2	5.465	3.639	3.26		Clay	100.0			17.25	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.800	17.510	0.368	7888.5	5249.0	5.169	2.711	3.21		Clay	100.0			16.55	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.960	17.030	0.376	7907.7	5258.2	4.974	2.874	3.24		Clay	100.0			16.10	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.120	15.590	0.390	7926.9	5267.4	4.415	3.352	3.32		Clay	100.0			14.74	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.290	17.150	0.389	7947.3	5277.2	4.994	2.955	3.25		Clay	100.0			16.21	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.450	17.160	0.419	7966.5	5286.4	4.985	3.182	3.26		Clay	100.0			16.22	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.620	17.400	0.417	7986.9	5296.2	5.063	3.109	3.25		Clay	100.0			16.45	0.79	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.780	18.410	0.458	8006.1	5305.4	5.431	3.181	3.23		Clay	100.0			17.40	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.940	20.620	0.474	8025.3	5314.6	6.250	2.852	3.16		Clay	100.0			19.49	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.110	20.850	0.453	8045.7	5324.4	6.321	2.692	3.14		Clay	100.0			19.71	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.270	20.950	0.486	8064.9	5333.7	6.344	2.874	3.15		Clay	100.0			19.80	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.440	21.060	0.569	8085.3	5343.4	6.369	3.344	3.19		Clay	100.0			19.91	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.600	21.620	0.676	8104.5	5352.7	6.564	3.850	3.21		Clay	100.0			20.43	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.770	22.260	0.800	8124.9	5362.5	6.787	4.395	3.23		Clay	100.0			21.04	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.930	27.310	0.943	8144.1	5371.7	8.652	4.058	3.12		Clay	100.0			25.81	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.090	26.880	1.688	8163.3	5380.9	8.474	7.404	3.29		Clay	100.0			25.41	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.260	29.740	1.641	8183.7	5390.7	9.516	6.397	3.21		Clay	100.0			28.11	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.420	45.480	4.081	8202.9	5399.9	15.326	9.862	3.18		Clay	100.0			42.99	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.590	81.770	6.098	8223.3	5409.7	28.711	7.852	2.92		Clay	96.5			77.29	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.750	192.890	4.344	8242.5	5418.9	111.493	2.301	2.13		Sand	33.2			182.32	0.73	133.87	200.79	0.80	0.406	0.751	1.976	3.263	8.04	0.00	0.00
67.910	227.790	4.443	8261.7	5428.1	131.988	1.986	2.03		Sand	25.5			215.30	0.75	162.00	221.53	0.80	0.406	0.717	8.036	12.682	31.24	0.00	0.00
68.080	308.840	4.650	8282.1	5437.9	179.650	1.526	1.86		Sand	11.5			291.91	0.77	224.79	242.55	0.80	0.406	0.717	56.269	88.739	218.64	0.00	0.00
68.240	400.470	4.420	8301.3	5447.1	233.471	1.115	1.68		Sand	0.0			378.52	0.78	294.95	294.95	0.80	0.406	0.716	########	########	650894.52	0.00	0.00
68.410	440.240	4.446	8321.7	5456.9	256.663	1.020	1.62		Sand	0.0			416.11	0.78	324.08	324.08	0.79	0.406	0.716	########	########	##########	0.00	0.00
68.570	415.140	3.913	8340.9	5466.1	241.681	0.952	1.62		Sand	0.0			392.38	0.78	305.47	305.47	0.79	0.406	0.715	########	########	6461972.17	0.00	0.00
68.730	422.100	3.492	8360.1	5475.3	245.561	0.836	1.57		Sand	0.0			398.96	0.78	310.45	310.45	0.79	0.406	0.715	########	########	##########	0.00	0.00
68.900	444.410	2.838	8380.5	5485.1	258.433	0.645	1.48		Sand	0.0			420.05	0.78	326.71	326.71	0.79	0.406	0.714	########	########	##########	0.00	0.00
69.060	492.680	3.651	8399.7	5494.4	286.524	0.747	1.49		Sand	0.0			465.67	0.78	362.03	362.03	0.79	0.405	0.714	########	########	##########	0.00	0.00
69.230	523.980	3.728	8420.1	5504.1	304.606	0.717	1.46		Sand	0.0			495.26	0.78	384.85	384.85	0.79	0.405	0.713	########	########	##########	0.00	0.00
69.390	489.620	4.038	8439.3	5513.4	284.226	0.832	1.53		Sand	0.0			462.78	0.78	359.46	359.46	0.79	0.405	0.713	########	########	##########	0.00	0.00
69.550	452.970	3.684	8458.5	5522.6	262.541	0.821	1.55		Sand	0.0			428.14	0.78	332.41	332.41	0.79	0.405	0.712	########	########	##########	0.00	0.00
69.720	454.030	4.035	8478.9	5532.4	262.922	0.897	1.57		Sand	0.0			429.14	0.78	333.03	333.03	0.79	0.405	0.712	########	########	##########	0.00	0.00
69.880	454.760	3.753	8498.1	5541.6	263.124	0.833	1.55		Sand	0.0			429.83	0.78	333.42	333.42	0.79	0.405	0.711	########	########	##########	0.00	0.00
70.050	485.490	3.057	8518.5	5551.4	280.818	0.635	1.45		Sand	0.0			458.88	0.78	355.78	355.78	0.79	0.405	0.711	########	########	##########	0.00	0.00
70.210	468.080	3.449	8537.7	5560.6	270.429	0.744	1.51		Sand	0.0			442.42	0.77	342.87	342.87	0.79	0.405	0.710	########	########	##########	0.00	0.00
70.370	430.100	3.009	8556.9	5569.8	248.073	0.707	1.52		Sand	0.0			406.52	0.77	314.91	314.91	0.79	0.405	0.710	########	########	##########	0.00	0.00
70.540	414.860	3.062	8577.3	5579.6	238.979	0.746	1.54		Sand	0.0			392.12	0.77	303.61	303.61	0.79	0.405	0.709	########	########	4198524.22	0.00	0.00
70.700	452.300	2.876	8596.5	5588.8	260.550	0.642	1.47		Sand	0.0			427.50	0.77	330.87	330.87	0.79	0.405	0.709	########	########	##########	0.00	0.00
70.870	528.570	3.253	8616.9	5598.6	304.635	0.620	1.41		Sand	0.0			499.59	0.77	386.49	386.49	0.79	0.405	0.708	########	########	##########	0.00	0.00
71.030	633.070	4.425	8636.1	5607.8	365.052	0.704	1.40		Sand	0.0			598.36	0.77	462.70	462.70	0.79	0.405	0.708	########	########	##########	0.00	0.00
71.190	575.940	4.321	8655.3	5617.0	331.604	0.756	1.45		Sand	0.0			544.37	0.77	420.76	420.76	0.78	0.404	0.707	########	########	##########	0.00	0.00
71.360	536.860	3.897	8675.7	5626.8	308.658	0.732	1.46		Sand	0.0			507.43	0.77	392.03	392.03	0.78	0.404	0.707	########	########	##########	0.00	0.00
71.520	539.890	3.961	8694.9	5636.1	310.155	0.740	1.46		Sand	0.0			510.29	0.77	394.07	394.07	0.78	0.404	0.706	########	########	##########	0.00	0.00
71.690	522.720	3.257	8715.3	5645.8	299.945	0.628	1.42		Sand	0.0			494.06	0.77	381.36	381.36	0.78	0.404	0.706	########	########	##########	0.00	0.00
71.850	484.570	2.734	8734.5	5655.1	277.638	0.569	1.42		Sand	0.0			458.01	0.77	353.38	353.38	0.78	0.404	0.705	########	########	##########	0.00	0.00
72.010	426.070	3.871	8753.7	5664.3	243.611	0.918	1.60		Sand	0.0			402.71	0.77	310.58	310.58	0.78	0.404	0.705	########	########	##########	0.00	0.00
72.180	315.480	3.154	8774.1	5674.1	179.562	1.014	1.73		Sand	1.1			298.19	0.74	221.33	221.33	0.78	0.404	0.704	7.914	12.259	30.34	0.00	0.00
72.340	155.330	2.107	8793.3	5683.3	87.048	1.396	2.05		Sand	27.0			146.81	0.67	98.46	149.33	0.78	0.404	0.843	0.284	0.398	0.99	0.01	0.00
72.510	40.650	0.913	8813.7	5693.1	12.732	2.520	2.87		Clay	92.4			38.42	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.670	37.050	0.666	8832.9	5702.3	11.446	2.041	2.86		Clay	91.5			35.02	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.830	39.680	0.632	8852.1	5711.5	12.345	1.792	2.80		Clay	86.8			37.50	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.000	36.040	0.629	8872.5	5721.3	11.048	1.989	2.86		Clay	92.0			34.06	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.160	32.440	0.759	8891.7	5730.5	9.770	2.713	2.98		Clay	100.0			30.66	0.77	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.330	31.370	0.631	8912.1	5740.3	9.377	2.346	2.96		Clay	99.9			29.65	0.77	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.490	34.600	0.604	8931.3	5749.5	10.482	2.004	2.88		Clay	93.7			32.70	0.77	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.650	31.380	0.553	8950.5	5758.7	9.344	2.056	2.93		Clay	97.6			29.66	0.77	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	4

PGA (A_{max})	0.50

Total Settlement:	0.07	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
73.820	28.000	0.517	8970.9	5768.5	8.153	2.199	3.00		Clay	100.0			26.47	0.77	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.980	26.450	0.455	8990.1	5777.7	7.600	2.072	3.01		Clay	100.0			25.00	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.150	24.700	0.406	9010.5	5787.5	6.979	2.012	3.04		Clay	100.0			23.35	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.310	23.960	0.376	9029.7	5796.8	6.709	1.935	3.04		Clay	100.0			22.65	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.480	22.680	0.366	9050.1	5806.5	6.253	2.014	3.08		Clay	100.0			21.44	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.640	22.130	0.445	9069.3	5815.8	6.051	2.528	3.14		Clay	100.0			20.92	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.800	22.500	0.585	9088.5	5825.0	6.165	3.255	3.19		Clay	100.0			21.27	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.970	25.370	0.624	9108.9	5834.8	7.135	2.997	3.12		Clay	100.0			23.98	0.77	n.a.	n.a.	0.77	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
0.160	0.030	0.012	20.0	20.0	2.000	57.500	4.35		Unsaturated	100.0			0.03	1.70	0.05	54.00	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.330	0.040	0.333	41.3	41.3	0.939	1719.226	5.66		Unsaturated	100.0			0.04	1.70	0.06	54.02	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.490	0.040	1.331	61.3	61.3	0.306	########	6.69		Unsaturated	100.0			0.04	1.70	0.06	54.02	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.660	16.110	1.375	82.5	82.5	147.177	8.558	2.52		Unsaturated	64.3			15.23	1.70	25.89	82.87	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	93.620	1.809	102.5	102.5	401.829	1.933	1.74		Unsaturated	2.0			88.49	1.70	150.43	150.43	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	130.810	3.778	122.5	122.5	513.620	2.889	1.84		Unsaturated	10.5			123.64	1.70	210.19	223.14	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	209.440	4.673	143.8	143.8	759.240	2.232	1.68		Unsaturated	0.0			197.96	1.70	336.53	336.53	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	369.900	4.276	163.8	163.8	1256.521	1.156	1.34		Unsaturated	0.0			349.62	1.70	594.36	594.36	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	235.020	3.723	185.0	185.0	750.966	1.585	1.54		Unsaturated	0.0			222.14	1.70	377.63	377.63	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	126.590	2.556	205.0	205.0	384.099	2.021	1.76		Unsaturated	4.1			119.65	1.70	203.41	203.44	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	108.960	2.389	225.0	225.0	315.500	2.194	1.84		Unsaturated	10.1			102.99	1.70	175.08	185.20	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	58.530	1.890	246.3	246.3	161.826	3.236	2.14		Unsaturated	34.3			55.32	1.70	94.05	153.44	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	36.970	1.383	266.3	266.3	98.154	3.754	2.32		Unsaturated	49.0			34.94	1.70	59.40	120.69	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	21.550	1.071	287.5	287.5	54.890	5.005	2.58		Unsaturated	69.7			20.37	1.70	34.63	95.28	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	15.870	0.932	307.5	307.5	57.310	5.927	2.63		Unsaturated	73.2			15.00	1.70	25.50	84.10	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	12.580	0.828	327.5	327.5	43.323	6.671	2.75		Unsaturated	82.7			11.89	1.70	20.21	78.63	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	11.150	1.099	348.8	348.8	62.943	10.015	2.78		Unsaturated	85.3			10.54	1.70	17.92	75.97	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	16.860	1.511	368.8	368.8	90.444	9.063	2.65		Unsaturated	75.1			15.94	1.70	27.09	86.49	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	28.120	1.863	390.0	390.0	86.223	6.670	2.56		Unsaturated	67.5			26.58	1.70	45.18	108.43	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	33.110	2.202	410.0	410.0	98.104	6.693	2.52		Unsaturated	64.9			31.29	1.70	53.20	118.15	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	35.220	2.543	430.0	430.0	100.943	7.264	2.55		Unsaturated	66.6			33.29	1.70	56.59	122.94	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	40.440	2.774	451.3	451.3	82.309	6.897	2.58		Unsaturated	69.4			38.22	1.70	64.98	134.39	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	40.230	2.848	471.3	471.3	80.102	7.120	2.60		Unsaturated	70.8			38.02	1.70	64.64	134.27	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	40.270	2.851	492.5	492.5	104.956	7.124	2.53		Unsaturated	65.3			38.06	1.70	64.71	133.06	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	41.530	2.876	512.5	512.5	79.268	6.968	2.59		Unsaturated	70.4			39.25	1.70	66.73	136.89	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	43.810	2.944	533.8	533.8	81.945	6.761	2.57		Unsaturated	68.9			41.41	1.70	70.39	141.27	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	45.750	3.080	553.8	553.8	84.018	6.773	2.57		Unsaturated	68.4			43.24	1.70	73.51	145.18	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	46.070	3.056	573.8	573.8	83.103	6.676	2.57		Unsaturated	68.3			43.54	1.70	74.03	145.80	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	47.720	2.775	595.0	595.0	84.528	5.852	2.52		Unsaturated	64.3			45.10	1.68	75.72	146.94	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	47.640	2.249	615.0	615.0	82.984	4.751	2.45		Unsaturated	59.0			45.03	1.67	74.98	144.39	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	49.510	2.418	636.3	636.3	84.791	4.916	2.46		Unsaturated	59.5			46.80	1.63	76.51	146.50	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	56.190	2.515	656.3	656.3	94.810	4.503	2.40		Unsaturated	54.7			53.11	1.59	84.38	154.80	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	53.070	2.533	676.3	676.3	88.164	4.803	2.44		Unsaturated	58.0			50.16	1.58	79.49	149.81	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.580	50.500	2.544	697.5	697.5	82.562	5.073	2.47		Unsaturated	60.9			47.73	1.58	75.31	145.42	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.740	51.280	2.430	717.5	717.5	82.653	4.772	2.45		Unsaturated	59.2			48.47	1.56	75.61	145.27	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.910	52.810	2.433	738.8	738.8	83.886	4.639	2.44		Unsaturated	58.1			49.91	1.54	76.78	146.40	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	52.650	2.576	758.8	758.8	82.505	4.929	2.46		Unsaturated	60.1			49.76	1.52	75.80	145.80	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.230	57.250	2.645	778.8	778.8	88.590	4.652	2.43		Unsaturated	57.0			54.11	1.49	80.82	151.16	1.00	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.400	63.700	2.518	800.0	800.0	97.304	3.977	2.35		Unsaturated	50.7			60.21	1.46	88.05	157.73	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.560	74.420	2.711	820.0	820.0	112.371	3.663	2.28		Unsaturated	45.4			70.34	1.42	100.08	169.96	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.730	84.800	2.851	841.3	841.3	126.487	3.379	2.22		Unsaturated	40.6			80.15	1.39	111.33	180.63	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.890	92.610	2.836	861.3	861.3	136.566	3.077	2.17		Unsaturated	36.4			87.53	1.37	119.60	187.01	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.050	97.970	2.151	881.3	881.3	142.843	2.205	2.04		Unsaturated	26.4			92.60	1.36	126.39	181.40	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.220	102.290	2.020	902.5	902.5	147.388	1.983	2.00		Unsaturated	22.9			96.68	1.36	131.13	179.70	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.380	113.600	2.121	922.5	922.5	161.957	1.875	1.95		Unsaturated	19.3			107.37	1.34	143.66	184.57	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.550	135.830	2.664	943.8	943.8	191.570	1.968	1.92		Unsaturated	16.9			128.38	1.30	166.99	202.92	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.710	125.680	2.453	963.8	963.8	175.343	1.959	1.95		Unsaturated	18.7			118.79	1.30	154.70	195.25	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
7.870	112.870	1.956	983.8	983.8	155.780	1.740	1.94		Unsaturated	18.2			106.68	1.32	140.58	177.86	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.040	120.520	2.919	1005.0	1005.0	164.601	2.432	2.04		Unsaturated	26.0			113.91	1.27	145.19	202.74	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.200	161.220	2.872	1025.0	1025.0	218.246	1.787	1.86		Unsaturated	11.5			152.38	1.26	191.99	208.18	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.370	249.470	3.255	1046.3	1046.3	334.627	1.307	1.64		Unsaturated	0.0			235.79	1.20	283.94	283.94	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.530	310.170	3.422	1066.3	1066.3	412.283	1.105	1.53		Unsaturated	0.0			293.17	1.20	351.27	351.27	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.690	381.090	3.609	1086.3	1086.3	502.014	0.948	1.42		Unsaturated	0.0			360.20	1.19	429.48	429.48	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
8.860	408.100	3.421	1107.5	1107.5	532.448	0.839	1.36		Unsaturated	0.0			385.73	1.19	457.57	457.57	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.020	416.910	3.479	1127.5	1127.5	539.099	0.836	1.36		Unsaturated	0.0			394.05	1.18	465.25	465.25	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.190	407.870	3.964	1148.8	1148.8	522.479	0.973	1.42		Unsaturated	0.0			385.51	1.17	452.92	452.92	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.350	415.010	4.157	1168.8	1168.8	527.057	1.003	1.43		Unsaturated	0.0			392.26	1.17	458.76	458.76	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.510	422.720	3.321	1188.8	1188.8	532.315	0.787	1.34		Unsaturated	0.0			399.55	1.16	465.20	465.20	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.680	414.930	4.530	1210.0	1210.0	517.870	1.093	1.47		Unsaturated	0.0			392.18	1.16	454.49	454.49	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.840	410.320	3.450	1230.0	1230.0	507.915	0.842	1.38		Unsaturated	0.0			387.83	1.15	447.50	447.50	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
10.010	445.090	4.437	1251.3	1251.3	546.307	0.998	1.42		Unsaturated	0.0			420.69	1.15	483.24	483.24	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
10.170	447.200	4.322	1271.3	1271.3	544.554	0.968	1.41		Unsaturated	0.0			422.68	1.14	483.50	483.50	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
10.330	423.820	3.925	1291.3	1291.3	512.019	0.927	1.41		Unsaturated	0.0			400.59	1.14	456.34	456.34	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
10.500	335.220	3.418	1312.5	1312.5	401.515	1.022	1.50		Unsaturated	0.0			316.84	1.13	359.39	359.39	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 5

PGA (A_{max}) 0.50

Total Settlement: 0.18 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
10.660	287.910	2.644	1332.5	1332.5	342.128	0.920	1.51		Unsaturated	0.0			272.13	1.13	307.44	307.44	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
10.830	245.540	2.736	1353.8	1353.8	289.352	1.117	1.62		Unsaturated	0.0			232.08	1.13	261.10	261.10	0.99	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
10.990	233.810	2.332	1373.8	1373.8	273.466	1.000	1.60		Unsaturated	0.0			220.99	1.12	248.35	248.35	0.99	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.150	250.900	2.514	1393.8	1393.8	291.389	1.005	1.58		Unsaturated	0.0			237.15	1.12	264.76	264.76	0.99	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.320	268.450	2.251	1415.0	1415.0	309.465	0.841	1.51		Unsaturated	0.0			253.73	1.11	282.15	282.15	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.480	279.970	2.648	1435.0	1435.0	320.511	0.948	1.54		Unsaturated	0.0			264.62	1.11	293.17	293.17	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.650	257.970	2.252	1456.3	1456.3	293.087	0.875	1.54		Unsaturated	0.0			243.83	1.10	269.09	269.09	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.810	244.430	2.631	1476.3	1476.3	275.761	1.080	1.62		Unsaturated	0.0			231.03	1.10	254.05	254.05	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.980	284.020	2.663	1497.5	1497.5	318.267	0.940	1.54		Unsaturated	0.0			268.45	1.10	294.09	294.09	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
12.140	274.620	2.817	1517.5	1517.5	305.660	1.029	1.58		Unsaturated	0.0			259.57	1.09	283.36	283.36	0.98	0.319	1.100	n.a.	n.a.	n.a.	0.00	0.00
12.300	290.050	2.594	1537.5	1537.5	320.763	0.897	1.52		Unsaturated	0.0			274.15	1.09	298.25	298.25	0.98	0.319	1.096	n.a.	n.a.	n.a.	0.00	0.00
12.470	303.580	2.649	1558.8	1558.8	333.458	0.875	1.50		Unsaturated	0.0			286.94	1.08	311.03	311.03	0.98	0.319	1.092	n.a.	n.a.	n.a.	0.00	0.00
12.630	315.910	2.213	1578.8	1578.8	344.820	0.702	1.42		Unsaturated	0.0			298.59	1.08	322.58	322.58	0.98	0.319	1.088	n.a.	n.a.	n.a.	0.00	0.00
12.800	289.900	1.749	1600.0	1600.0	314.239	0.605	1.40		Unsaturated	0.0			274.01	1.08	294.98	294.98	0.98	0.319	1.084	n.a.	n.a.	n.a.	0.00	0.00
12.960	265.270	1.763	1620.0	1620.0	285.677	0.667	1.46		Unsaturated	0.0			250.73	1.07	269.03	269.03	0.98	0.319	1.080	n.a.	n.a.	n.a.	0.00	0.00
13.120	220.860	1.663	1640.0	1640.0	236.239	0.756	1.55		Unsaturated	0.0			208.75	1.08	225.19	225.19	0.98	0.319	1.076	n.a.	n.a.	n.a.	0.00	0.00
13.290	175.150	1.482	1661.3	1661.3	185.952	0.850	1.66		Unsaturated	0.0			165.55	1.09	180.46	180.46	0.98	0.319	1.051	n.a.	n.a.	n.a.	0.00	0.00
13.450	155.680	1.528	1681.3	1681.3	164.186	0.987	1.75		Unsaturated	2.7			147.15	1.09	160.80	160.80	0.98	0.318	1.040	n.a.	n.a.	n.a.	0.00	0.00
13.620	142.680	1.780	1702.5	1702.5	149.449	1.255	1.85		Unsaturated	10.9			134.86	1.09	146.77	158.70	0.98	0.318	1.038	n.a.	n.a.	n.a.	0.00	0.00
13.780	139.280	1.793	1722.5	1722.5	145.007	1.296	1.87		Unsaturated	12.4			131.64	1.08	142.57	159.77	0.98	0.318	1.036	n.a.	n.a.	n.a.	0.00	0.00
13.940	162.210	2.251	1742.5	1742.5	168.045	1.395	1.85		Unsaturated	10.8			153.32	1.07	164.49	176.63	0.98	0.318	1.040	n.a.	n.a.	n.a.	0.00	0.00
14.110	237.640	2.348	1763.8	1763.8	245.109	0.992	1.63		Unsaturated	0.0			224.61	1.05	236.53	236.53	0.98	0.318	1.055	n.a.	n.a.	n.a.	0.00	0.00
14.270	300.360	2.243	1783.8	1783.8	308.287	0.749	1.47		Unsaturated	0.0			283.89	1.05	296.98	296.98	0.98	0.318	1.051	n.a.	n.a.	n.a.	0.00	0.00
14.440	292.310	2.175	1805.0	1805.0	298.218	0.746	1.48		Unsaturated	0.0			276.29	1.04	288.12	288.12	0.98	0.318	1.048	n.a.	n.a.	n.a.	0.00	0.00
14.600	262.810	2.141	1825.0	1825.0	266.546	0.818	1.54		Unsaturated	0.0			248.40	1.04	258.29	258.29	0.98	0.318	1.044	n.a.	n.a.	n.a.	0.00	0.00
14.760	247.320	2.445	1845.0	1845.0	249.408	0.992	1.62		Unsaturated	0.0			233.76	1.04	242.79	242.79	0.98	0.317	1.041	n.a.	n.a.	n.a.	0.00	0.00
14.930	249.480	2.739	1866.3	1866.3	250.147	1.102	1.66		Unsaturated	0.0			235.80	1.04	244.09	244.09	0.98	0.317	1.038	n.a.	n.a.	n.a.	0.00	0.00
15.090	303.830	2.690	1886.3	1886.3	303.217	0.888	1.53		Unsaturated	0.0			287.17	1.03	296.02	296.02	0.98	0.317	1.034	n.a.	n.a.	n.a.	0.00	0.00
15.260	308.410	2.810	1907.5	1907.5	306.072	0.914	1.54		Unsaturated	0.0			291.50	1.03	299.59	299.59	0.98	0.317	1.031	n.a.	n.a.	n.a.	0.00	0.00
15.420	308.810	2.766	1927.5	1927.5	304.866	0.898	1.53		Unsaturated	0.0			291.88	1.02	299.15	299.15	0.97	0.317	1.028	n.a.	n.a.	n.a.	0.00	0.00
15.580	301.450	2.605	1947.5	1947.5	296.035	0.867	1.53		Unsaturated	0.0			284.92	1.02	291.23	291.23	0.97	0.317	1.025	n.a.	n.a.	n.a.	0.00	0.00
15.750	294.600	2.572	1968.8	1968.8	287.711	0.876	1.54		Unsaturated	0.0			278.45	1.02	283.80	283.80	0.97	0.317	1.022	n.a.	n.a.	n.a.	0.00	0.00
15.910	274.800	2.664	1988.8	1988.8	266.947	0.973	1.60		Unsaturated	0.0			259.74	1.02	264.02	264.02	0.97	0.316	1.019	n.a.	n.a.	n.a.	0.00	0.00
16.080	262.130	3.039	2010.0	2010.0	253.234	1.164	1.67		Unsaturated	0.0			247.76	1.01	251.18	251.18	0.97	0.316	1.015	n.a.	n.a.	n.a.	0.00	0.00
16.240	243.350	2.842	2030.0	2030.0	233.852	1.173	1.70		Unsaturated	0.0			230.01	1.01	232.78	232.78	0.97	0.316	1.012	n.a.	n.a.	n.a.	0.00	0.00
16.400	249.580	2.380	2050.0	2050.0	238.681	0.958	1.62		Unsaturated	0.0			235.90	1.01	238.02	238.02	0.97	0.316	1.010	n.a.	n.a.	n.a.	0.00	0.00
16.570	213.470	2.618	2071.3	2071.3	202.946	1.233	1.75		Unsaturated	3.2			201.77	1.01	203.18	203.18	0.97	0.316	1.006	n.a.	n.a.	n.a.	0.00	0.00
16.730	208.520	2.285	2091.3	2091.3	197.258	1.101	1.72		Unsaturated	0.9			197.09	1.00	197.86	197.86	0.97	0.316	1.003	n.a.	n.a.	n.a.	0.00	0.00
16.900	223.500	1.926	2112.5	2112.5	210.423	0.866	1.63		Unsaturated	0.0			211.25	1.00	211.36	211.36	0.97	0.316	1.000	n.a.	n.a.	n.a.	0.00	0.00
17.060	228.500	1.989	2132.5	2132.5	214.132	0.875	1.63		Unsaturated	0.0			215.97	1.00	215.45	215.45	0.97	0.316	0.998	n.a.	n.a.	n.a.	0.00	0.00
17.220	206.880	1.523	2152.5	2152.5	192.865	0.740	1.61		Unsaturated	0.0			195.54	0.99	194.41	194.41	0.97	0.315	0.996	n.a.	n.a.	n.a.	0.00	0.00
17.390	176.670	1.550	2173.8	2173.8	163.738	0.883	1.71		Unsaturated	0.1			166.98	0.99	165.29	165.29	0.97	0.315	0.995	n.a.	n.a.	n.a.	0.00	0.00
17.550	153.890	2.534	2193.8	2193.8	141.835	1.658	1.95		Unsaturated	19.2			145.45	0.99	143.62	184.07	0.97	0.315	0.992	n.a.	n.a.	n.a.	0.00	0.00
17.720	116.360	1.922	2215.0	2215.0	106.472	1.668	2.04		Unsaturated	26.2			109.98	0.98	108.05	159.26	0.97	0.315	0.992	n.a.	n.a.	n.a.	0.00	0.00
17.880	96.920	1.628	2235.0	2235.0	88.107	1.699	2.10		Unsaturated	31.4			91.61	0.98	89.56	144.71	0.97	0.315	0.992	n.a.	n.a.	n.a.	0.00	0.00
18.040	59.780	0.951	2255.0	2255.0	53.701	1.622	2.25		Unsaturated	43.2			56.50	0.97	54.83	111.96	0.97	0.315	0.993	n.a.	n.a.	n.a.	0.00	0.00
18.210	22.380	0.624	2276.3	2276.3	18.664	2.937	2.77		Unsaturated	84.8			21.15	0.96	20.32	79.03	0.97	0.315	0.993	n.a.	n.a.	n.a.	0.00	0.00
18.370	12.370	0.448	2296.3	2296.3	9.774	3.990	3.08		Unsaturated	100.0			11.69	0.95	11.15	68.55	0.97	0.314	0.993	n.a.	n.a.	n.a.	0.00	0.00
18.540	8.940	0.424	2317.5	2317.5	6.715	5.444	3.29		Unsaturated	100.0			8.45	0.95	8.01	64.43	0.97	0.314	0.993	n.a.	n.a.	n.a.	0.00	0.00
18.700	8.050	0.405	2337.5	2337.5	5.888	5.881	3.35		Unsaturated	100.0			7.61	0.94	7.17	63.33	0.97	0.314	0.992	n.a.	n.a.	n.a.	0.00	0.00
18.860	7.860	0.415	2357.5	2357.5	5.668	6.211	3.38		Unsaturated	100.0			7.43	0.94	6.97	63.06	0.97	0.314	0.991	n.a.	n.a.	n.a.	0.00	0.00
19.030	8.610	0.426	2378.8	2378.8	6.239	5.743	3.33		Unsaturated	100.0			8.14	0.93	7.59	63.88	0.97	0.314	0.991	n.a.	n.a.	n.a.	0.00	0.00
19.190	9.630	0.440	2398.8	2398.8	7.029	5.219	3.26		Unsaturated	100.0			9.10	0.93	8.45	65.01	0.97	0.314	0.990	n.a.	n.a.	n.a.	0.00	0.00
19.360	10.260	0.457	2420.0	2420.0	7.479	5.054	3.23		Unsaturated	100.0			9.70	0.92	8.96	65.68	0.96	0.314	0.989	n.a.	n.a.	n.a.	0.00	0.00
19.520	10.350	0.403	2440.0	2440.0	7.484	4.413	3.20		Unsaturated	100.0			9.78	0.92	9.00	65.73	0.96	0.313	0.988	n.a.	n.a.	n.a.	0.00	0.00
19.690	10.870	0.409	2461.3	2461.3	7.833	4.241	3.17		Unsaturated	100.0			10.27	0.92	9.41	66.26	0.96	0.313	0.988	n.a.	n.a.	n.a.	0.00	0.00
19.850	11.400	0.391	2481.3	2481.3	8.189	3.848	3.13		Unsaturated	100.0			10.78	0.91	9.82	66.80	0.96	0.313	0.987	n.a.	n.a.	n.a.	0.00	0.00
20.010	15.740	0.398	2501.3	2501.3	11.586	2.748	2.92		Clay	96.8			14.88	0.96	n.a.	n.a.	0.96	0.313	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.180	16.920	0.424	2522.5	2522.5	12.415	2.706	2.89		Clay	94.5			15.99	0.95	n.a.	n.a.	0.96	0.314	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.340	12.650	0.402	2542.5	2542.5	8.951	3.529	3.08		Clay	100.0			11.96	0.95	n.a.	n.a.	0.96	0.315	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.510	10.920	0.331	2563.8	2563.8	7.519	3.437	3.13		Clay	100.0			10.32	0.95	n.a.	n.a.	0.96	0.316	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.670	10.250	0.444	2583.8	2583.8	6.934	4.953	3.25		Clay	100.0			9.69	0.95	n.a.	n.a.	0.96	0.318	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.830	9.620	0.600	2603.8	2603.8	6.389	7.216	3.38		Clay	100.0			9.09	0.95	n.a.	n.a.	0.96	0.319	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.000	11.380	1.317	2625.0	2625.0	7.670	13.078	3.48		Clay	100.0			10.76	0.94	n.a.	n.a.	0.96	0.320	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	$q_{c1N\text{-}CS}$	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5,\ s'vc\ =\ 1\ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
21.160	25.410	1.521	2645.0	2645.0	18.214	6.316	2.99		Clay	100.0			24.02	0.94	n.a.	n.a.	0.96	0.321	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.330	34.420	1.291	2666.3	2666.3	24.819	3.901	2.75		Clay	83.4			32.53	0.94	n.a.	n.a.	0.96	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	137.910	1.406	2686.3	2686.3	114.563	1.029	1.87		Sand	12.9	175.43	1.15	201.74	0.93	186.99	208.57	0.96	0.323	0.930	3.173	6.495	20.12	0.00	0.00
21.650	185.600	1.271	2706.3	2706.3	153.989	0.690	1.66		Sand	0.0		1.15	201.74	0.92	185.10	185.10	0.96	0.324	0.945	0.899	1.850	5.71	0.00	0.00
21.820	181.910	1.003	2727.5	2727.5	150.307	0.556	1.61		Sand	0.0		1.15	197.73	0.91	180.63	180.63	0.96	0.325	0.946	0.745	1.480	4.55	0.00	0.00
21.980	146.090	1.196	2747.5	2747.5	120.039	0.826	1.80		Sand	6.7		1.15	158.79	0.90	142.54	143.95	0.96	0.326	0.960	0.253	0.389	1.20	0.01	0.01
22.150	116.760	1.521	2768.8	2768.8	95.333	1.318	2.00		Sand	23.4		1.15	126.91	0.90	114.43	161.25	0.96	0.327	0.952	0.384	0.662	2.03	0.00	0.00
22.310	97.690	1.826	2788.8	2788.8	79.282	1.896	2.17		Sand	36.6		1.15	106.18	0.90	95.31	157.35	0.96	0.328	0.953	0.346	0.579	1.77	0.00	0.00
22.470	111.620	1.604	2808.8	2808.8	90.419	1.456	2.05		Sand	27.0		1.15	121.33	0.90	108.80	161.59	0.96	0.329	0.950	0.388	0.669	2.03	0.00	0.00
22.640	137.750	1.346	2830.0	2830.0	111.426	0.987	1.87		Sand	12.7		1.15	149.73	0.89	133.21	150.80	0.96	0.330	0.953	0.294	0.470	1.43	0.00	0.00
22.800	167.550	1.149	2850.0	2850.0	135.296	0.692	1.71		Sand	0.0		1.15	182.12	0.89	162.47	162.47	0.96	0.331	0.947	0.398	0.688	2.08	0.00	0.00
22.970	195.830	1.176	2871.3	2871.3	157.732	0.605	1.62		Sand	0.0		1.15	212.86	0.90	191.85	191.85	0.95	0.332	0.927	1.230	2.507	7.56	0.00	0.00
23.130	227.850	1.267	2890.6	2882.5	183.347	0.560	1.55		Sand	0.0		1.15	247.66	0.91	225.97	225.97	0.95	0.333	0.907	11.561	23.076	69.36	0.00	0.00
23.290	224.080	1.002	2909.8	2891.7	179.999	0.450	1.50		Sand	0.0	215.36	1.15	247.66	0.91	225.74	225.74	0.95	0.334	0.906	11.336	22.603	67.76	0.00	0.00
23.460	203.470	0.812	2930.2	2901.5	163.051	0.402	1.50		Sand	0.0	215.36	1.15	247.66	0.91	225.49	225.49	0.95	0.335	0.905	11.103	22.113	66.10	0.00	0.00
23.620	163.070	0.861	2949.4	2910.7	130.227	0.533	1.65		Sand	0.0	215.36	1.15	247.66	0.91	225.26	225.26	0.95	0.335	0.904	10.888	21.663	64.58	0.00	0.00
23.790	123.960	0.972	2969.8	2920.5	98.535	0.794	1.85		Sand	11.2	215.36	1.15	247.66	0.91	226.57	243.07	0.95	0.336	0.903	59.481	118.209	351.41	0.00	0.00
23.950	89.750	1.100	2989.0	2929.7	70.893	1.246	2.09		Sand	29.9	215.36	1.15	247.66	0.92	227.29	308.52	0.95	0.337	0.902	########	########	##########	0.00	0.00
24.110	59.520	1.097	3008.2	2938.9	46.529	1.890	2.34		Sand	50.4	215.36	1.15	247.66	0.92	227.10	333.56	0.95	0.338	0.901	########	########	##########	0.00	0.00
24.280	42.040	0.903	3028.6	2948.7	32.448	2.228	2.51		Sand	63.7	215.36	1.15	247.66	0.92	226.90	341.04	0.95	0.339	0.900	########	########	##########	0.00	0.00
24.440	22.290	0.695	3047.8	2957.9	14.041	3.344	2.90		Clay	95.4			21.07	0.92	n.a.	n.a.	0.95	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.610	12.400	0.541	3068.2	2967.7	7.323	4.983	3.23		Clay	100.0			11.72	0.91	n.a.	n.a.	0.95	0.341	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	9.860	0.483	3087.4	2977.0	5.587	5.802	3.37		Clay	100.0			9.32	0.91	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.930	9.410	0.482	3106.6	2986.2	5.262	6.137	3.40		Clay	100.0			8.89	0.91	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.100	8.660	0.470	3127.0	2996.0	4.737	6.626	3.46		Clay	100.0			8.19	0.91	n.a.	n.a.	0.95	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.260	8.070	0.424	3146.2	3005.2	4.324	6.529	3.49		Clay	100.0			7.63	0.91	n.a.	n.a.	0.95	0.344	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	7.800	0.405	3166.6	3015.0	4.124	6.513	3.51		Clay	100.0			7.37	0.91	n.a.	n.a.	0.95	0.345	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.590	7.870	0.386	3185.8	3024.2	4.151	6.146	3.49		Clay	100.0			7.44	0.91	n.a.	n.a.	0.95	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	8.900	0.376	3205.0	3033.4	4.811	5.147	3.39		Clay	100.0			8.41	0.91	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.920	9.110	0.394	3225.4	3043.2	4.927	5.257	3.39		Clay	100.0			8.61	0.91	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.080	8.820	0.470	3244.6	3052.4	4.716	6.523	3.46		Clay	100.0			8.34	0.91	n.a.	n.a.	0.95	0.348	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.250	9.440	0.552	3265.0	3062.2	5.099	7.069	3.45		Clay	100.0			8.92	0.91	n.a.	n.a.	0.94	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.410	15.070	0.762	3284.2	3071.4	8.744	5.675	3.21		Clay	100.0			14.24	0.91	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.570	19.700	0.672	3303.4	3080.6	11.717	3.723	3.00		Clay	100.0			18.62	0.91	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	16.190	0.549	3323.8	3090.4	9.402	3.778	3.08		Clay	100.0			15.30	0.90	n.a.	n.a.	0.94	0.351	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	14.140	0.500	3343.0	3099.6	8.045	4.012	3.15		Clay	100.0			13.36	0.90	n.a.	n.a.	0.94	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	11.670	0.793	3363.4	3109.4	6.425	7.943	3.40		Clay	100.0			11.03	0.90	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	11.110	1.484	3382.6	3118.6	6.040	15.754	3.62		Clay	100.0			10.50	0.90	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	15.960	2.286	3403.0	3128.4	9.115	16.029	3.49		Clay	100.0			15.09	0.90	n.a.	n.a.	0.94	0.354	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	48.530	2.655	3422.2	3137.7	29.843	5.670	2.81		Clay	87.5			45.87	0.90	n.a.	n.a.	0.94	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	97.310	2.797	3441.4	3146.9	74.087	2.926	2.32		Sand	49.0		1.8	165.56	0.89	147.61	232.08	0.94	0.356	0.881	19.826	38.424	108.06	0.00	0.00
27.890	87.500	2.297	3461.8	3156.7	66.373	2.678	2.33		Sand	49.4	91.98	1.8	165.56	0.89	147.49	232.22	0.94	0.356	0.880	20.084	38.883	109.13	0.00	0.00
28.050	44.980	1.666	3481.0	3165.9	27.316	3.852	2.72		Clay	80.6			42.51	0.90	n.a.	n.a.	0.94	0.357	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	24.740	1.354	3501.4	3175.7	14.478	5.891	3.05		Clay	100.0			23.38	0.90	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	17.140	1.378	3520.6	3184.9	9.658	8.957	3.30		Clay	100.0			16.20	0.90	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	19.330	1.246	3539.8	3194.1	10.995	7.093	3.19		Clay	100.0			18.27	0.90	n.a.	n.a.	0.94	0.359	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	32.910	1.237	3560.2	3203.9	19.433	3.973	2.84		Clay	90.2			31.11	0.90	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	38.600	1.504	3579.4	3213.1	22.913	4.086	2.79		Clay	86.5			36.48	0.90	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	26.670	1.546	3599.8	3222.9	15.433	6.215	3.04		Clay	100.0			25.21	0.89	n.a.	n.a.	0.94	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	34.250	1.290	3619.0	3232.1	20.074	3.977	2.83		Clay	89.4			32.37	0.89	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	69.890	1.020	3638.2	3241.3	51.984	1.498	2.24		Sand	42.3	73.39		73.39	0.82	60.32	118.30	0.94	0.362	0.948	0.168	0.218	0.60	0.03	0.03
29.530	77.650	0.960	3658.6	3251.1	57.815	1.266	2.16		Sand	35.8			73.39	0.82	59.97	113.16	0.93	0.363	0.949	0.157	0.200	0.55	0.03	0.03
29.690	66.930	1.344	3677.8	3260.3	49.564	2.065	2.35		Sand	50.7	73.39		73.39	0.82	60.37	122.68	0.93	0.364	0.945	0.177	0.236	0.65	0.03	0.03
29.860	54.820	1.605	3698.2	3270.1	40.274	3.030	2.52		Sand	65.0	73.39		73.39	0.82	60.54	127.60	0.93	0.364	0.942	0.190	0.259	0.71	0.02	0.02
30.020	41.960	1.452	3717.4	3279.4	24.457	3.620	2.74		Clay	82.0			39.66	0.89	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.180	26.900	1.078	3736.6	3288.6	15.223	4.308	2.94		Clay	98.6			25.43	0.89	n.a.	n.a.	0.93	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.350	41.270	0.829	3757.0	3298.4	29.821	2.105	2.52		Sand	64.8			39.01	0.79	30.93	89.49	0.93	0.366	0.957	0.125	0.145	0.40	0.04	0.03
30.510	31.690	0.716	3776.2	3307.6	18.020	2.402	2.73		Clay	81.6			29.95	0.89	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.680	17.390	0.643	3796.6	3317.4	9.340	4.151	3.10		Clay	100.0			16.44	0.89	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.840	10.440	0.568	3815.8	3326.6	5.130	6.656	3.43		Clay	100.0			9.87	0.89	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.000	9.370	0.547	3835.0	3335.8	4.468	7.336	3.51		Clay	100.0			8.86	0.89	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.170	8.460	0.541	3855.4	3345.6	3.905	8.276	3.59		Clay	100.0			8.00	0.89	n.a.	n.a.	0.93	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.330	7.450	0.529	3874.6	3354.8	3.286	9.600	3.68		Clay	100.0			7.04	0.89	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.500	6.990	0.540	3895.0	3364.6	2.997	10.707	3.74		Clay	100.0			6.61	0.88	n.a.	n.a.	0.93	0.370	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
31.660	7.550	0.544	3914.2	3373.8	3.315	9.732	3.68		Clay	100.0			7.14	0.88	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.820	9.100	0.552	3933.4	3383.0	4.217	7.737	3.54		Clay	100.0			8.60	0.88	n.a.	n.a.	0.93	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.990	10.310	0.566	3953.8	3392.8	4.912	6.790	3.45		Clay	100.0			9.74	0.88	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.150	10.800	0.616	3973.0	3402.0	5.181	6.988	3.44		Clay	100.0			10.21	0.88	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	10.850	0.586	3993.4	3411.8	5.190	6.622	3.43		Clay	100.0			10.26	0.88	n.a.	n.a.	0.93	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	13.880	0.566	4012.6	3421.0	6.942	4.769	3.24		Clay	100.0			13.12	0.88	n.a.	n.a.	0.92	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.640	15.140	0.604	4031.8	3430.3	7.652	4.601	3.20		Clay	100.0			14.31	0.88	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.810	11.820	0.593	4052.2	3440.1	5.694	6.059	3.37		Clay	100.0			11.17	0.88	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	12.440	0.600	4071.4	3449.3	6.033	5.768	3.34		Clay	100.0			11.76	0.88	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	13.250	0.592	4091.8	3459.1	6.478	5.284	3.29		Clay	100.0			12.52	0.88	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	11.440	0.563	4111.0	3468.3	5.412	6.000	3.39		Clay	100.0			10.81	0.88	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	10.520	0.522	4130.2	3477.5	4.863	6.177	3.43		Clay	100.0			9.94	0.88	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.630	10.220	0.438	4150.6	3487.3	4.671	5.379	3.41		Clay	100.0			9.66	0.88	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.790	9.870	0.455	4169.8	3496.5	4.453	5.843	3.45		Clay	100.0			9.33	0.88	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.960	9.680	0.497	4190.2	3506.3	4.326	6.558	3.49		Clay	100.0			9.15	0.88	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.120	12.120	0.535	4209.4	3515.5	5.698	5.345	3.34		Clay	100.0			11.46	0.87	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.280	13.280	0.572	4228.6	3524.7	6.336	5.122	3.29		Clay	100.0			12.55	0.87	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.450	13.900	0.608	4249.0	3534.5	6.663	5.162	3.28		Clay	100.0			13.14	0.87	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.610	14.810	0.642	4268.2	3543.7	7.154	5.067	3.25		Clay	100.0			14.00	0.87	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.780	15.980	0.667	4288.6	3553.5	7.787	4.824	3.21		Clay	100.0			15.10	0.87	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.940	16.360	0.669	4307.8	3562.7	7.975	4.706	3.19		Clay	100.0			15.46	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.100	16.420	0.675	4327.0	3572.0	7.982	4.731	3.19		Clay	100.0			15.52	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.270	17.250	0.730	4347.4	3581.8	8.418	4.841	3.18		Clay	100.0			16.30	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.430	17.940	0.733	4366.6	3591.0	8.776	4.653	3.15		Clay	100.0			16.96	0.87	n.a.	n.a.	0.92	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.600	17.390	0.702	4387.0	3600.8	8.441	4.616	3.17		Clay	100.0			16.44	0.87	n.a.	n.a.	0.91	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.760	16.390	0.668	4406.2	3610.0	7.860	4.706	3.20		Clay	100.0			15.49	0.87	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.930	15.790	0.628	4426.6	3619.8	7.501	4.626	3.21		Clay	100.0			14.92	0.87	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.090	14.580	0.589	4445.8	3629.0	6.810	4.764	3.25		Clay	100.0			13.78	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.250	13.230	0.554	4465.0	3638.2	6.046	5.038	3.31		Clay	100.0			12.50	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.420	12.530	0.516	4485.4	3648.0	5.640	5.014	3.33		Clay	100.0			11.84	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.580	11.610	0.498	4504.6	3657.2	5.117	5.326	3.38		Clay	100.0			10.97	0.87	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.750	11.450	0.498	4525.0	3667.0	5.011	5.418	3.39		Clay	100.0			10.82	0.86	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.910	12.160	0.523	4544.2	3676.2	5.379	5.293	3.36		Clay	100.0			11.49	0.86	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.070	12.230	0.596	4563.4	3685.4	5.399	5.993	3.39		Clay	100.0			11.56	0.86	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.240	12.540	0.690	4583.8	3695.2	5.547	6.729	3.41		Clay	100.0			11.85	0.86	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.400	16.110	0.764	4603.0	3704.4	7.455	5.531	3.26		Clay	100.0			15.23	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.570	19.210	0.814	4623.4	3714.2	9.099	4.819	3.15		Clay	100.0			18.16	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	22.220	0.894	4642.6	3723.4	10.688	4.493	3.08		Clay	100.0			21.00	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.890	22.670	0.831	4661.8	3732.7	10.898	4.083	3.04		Clay	100.0			21.43	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.060	23.040	0.674	4682.2	3742.5	11.062	3.255	2.98		Clay	100.0			21.78	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.220	21.980	0.667	4701.4	3751.7	10.464	3.396	3.01		Clay	100.0			20.78	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.390	17.370	0.670	4721.8	3761.5	7.980	4.464	3.18		Clay	100.0			16.42	0.86	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	15.130	0.643	4741.0	3770.7	6.768	5.041	3.27		Clay	100.0			14.30	0.86	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	15.650	0.651	4760.2	3779.9	7.021	4.904	3.25		Clay	100.0			14.79	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.880	14.850	0.694	4780.6	3789.7	6.576	5.567	3.30		Clay	100.0			14.04	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.040	15.050	0.746	4799.8	3798.9	6.660	5.896	3.31		Clay	100.0			14.22	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.210	15.910	0.844	4820.2	3808.7	7.089	6.250	3.31		Clay	100.0			15.04	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	17.150	0.751	4839.4	3817.9	7.716	5.095	3.22		Clay	100.0			16.21	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.530	17.500	0.706	4858.6	3827.1	7.876	4.687	3.19		Clay	100.0			16.54	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.700	17.530	0.798	4879.0	3836.9	7.866	5.286	3.23		Clay	100.0			16.57	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.860	16.570	0.792	4898.2	3846.1	7.343	5.607	3.26		Clay	100.0			15.66	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.030	20.590	1.237	4918.6	3855.9	9.404	6.821	3.23		Clay	100.0			19.46	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	20.970	1.177	4937.8	3865.1	9.573	6.360	3.21		Clay	100.0			19.82	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.350	22.900	1.163	4957.0	3874.4	10.542	5.696	3.15		Clay	100.0			21.64	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.520	40.070	1.138	4977.4	3884.2	19.351	3.028	2.77		Clay	84.4			37.87	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.680	32.970	1.027	4996.6	3893.4	15.653	3.369	2.87		Clay	92.5			31.16	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.850	31.550	0.816	5017.0	3903.2	14.881	2.811	2.84		Clay	90.2			29.82	0.85	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.010	23.820	0.555	5036.2	3912.4	10.889	2.607	2.93		Clay	97.6			22.51	0.85	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.170	16.650	0.768	5055.4	3921.6	7.202	5.441	3.26		Clay	100.0			15.74	0.85	n.a.	n.a.	0.89	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.340	14.060	1.431	5075.8	3931.4	5.862	12.416	3.56		Clay	100.0			13.29	0.85	n.a.	n.a.	0.89	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.500	20.010	1.833	5095.0	3940.6	8.863	10.496	3.37		Clay	100.0			18.91	0.85	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.670	90.670	1.765	5115.4	3950.4	60.952	2.003	2.27		Sand	44.6	92.02		92.02	0.76	70.17	132.00	0.89	0.395	0.914	0.204	0.277	0.70	0.02	0.01
41.830	97.360	2.901	5134.6	3959.6	65.497	3.060	2.38		Sand	53.1			92.02	0.77	70.45	136.44	0.89	0.395	0.911	0.220	0.305	0.77	0.02	0.01
41.990	71.810	2.926	5153.8	3968.8	34.888	4.226	2.67		Clay	76.5			67.87	0.85	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	Ic	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
42.160	109.940	3.030	5174.2	3978.6	73.998	2.823	2.31		Sand	48.1			103.91	0.77	80.27	146.59	0.89	0.396	0.902	0.268	0.393	0.99	0.01	0.01
42.320	120.040	2.816	5193.4	3987.8	80.860	2.398	2.24		Sand	41.9			113.46	0.78	88.12	152.69	0.89	0.396	0.896	0.307	0.468	1.18	0.01	0.00
42.490	183.760	3.109	5213.8	3997.6	124.571	1.716	2.00		Sand	23.1			173.69	0.80	139.63	189.97	0.89	0.396	0.851	1.123	2.101	5.30	0.00	0.00
42.650	197.660	3.197	5233.0	4006.8	133.968	1.639	1.97		Sand	20.2			186.82	0.81	150.76	195.22	0.89	0.397	0.841	1.459	2.699	6.81	0.00	0.00
42.810	250.310	3.201	5252.2	4016.1	169.930	1.292	1.82		Sand	8.5			236.59	0.81	190.98	196.48	0.89	0.397	0.838	1.559	2.874	7.24	0.00	0.00
42.980	267.900	2.651	5272.6	4025.8	181.770	0.999	1.72		Sand	0.5			253.21	0.81	205.87	205.87	0.89	0.397	0.819	2.675	4.817	12.13	0.00	0.00
43.140	293.590	4.282	5291.8	4035.1	199.139	1.472	1.82		Sand	8.3			277.50	0.83	231.00	236.28	0.89	0.397	0.806	29.591	52.495	132.14	0.00	0.00
43.310	347.530	4.983	5312.2	4044.9	235.766	1.445	1.76		Sand	4.0			328.48	0.84	276.87	276.90	0.89	0.398	0.806	5876.307	########	26200.26	0.00	0.00
43.470	378.540	4.822	5331.4	4054.1	256.666	1.283	1.70		Sand	0.0			357.79	0.84	301.39	301.39	0.89	0.398	0.805	########	########	2948554.45	0.00	0.00
43.640	253.950	3.942	5351.8	4063.9	171.376	1.569	1.88		Sand	13.3			240.03	0.82	197.05	221.21	0.89	0.398	0.804	7.835	13.863	34.83	0.00	0.00
43.800	204.210	3.819	5371.0	4073.1	137.290	1.895	2.00		Sand	23.4			193.02	0.81	156.99	210.74	0.89	0.398	0.804	3.661	6.474	16.26	0.00	0.00
43.960	197.930	3.061	5390.2	4082.3	132.855	1.568	1.95		Sand	19.3			187.08	0.80	149.46	191.05	0.88	0.398	0.844	1.182	2.195	5.51	0.00	0.00
44.130	198.210	2.136	5410.6	4092.1	132.879	1.093	1.84		Sand	10.4			187.34	0.77	144.32	154.71	0.88	0.399	0.890	0.323	0.496	1.24	0.01	0.00
44.290	242.700	2.472	5429.8	4101.3	162.928	1.030	1.76		Sand	3.9			229.40	0.79	181.34	181.36	0.88	0.399	0.858	0.767	1.391	3.49	0.00	0.00
44.460	289.400	3.188	5450.2	4111.1	194.394	1.112	1.73		Sand	1.5			273.53	0.82	224.35	224.35	0.88	0.399	0.801	10.095	17.784	44.56	0.00	0.00
44.620	317.130	3.492	5469.4	4120.3	212.953	1.111	1.70		Sand	0.0			299.74	0.84	250.82	250.82	0.88	0.399	0.800	143.618	252.793	633.12	0.00	0.00
44.780	325.390	4.175	5488.6	4129.5	218.297	1.294	1.75		Sand	2.8			307.55	0.84	257.81	257.82	0.88	0.399	0.799	345.322	607.318	1520.26	0.00	0.00
44.950	352.990	4.089	5509.0	4139.3	236.683	1.168	1.69		Sand	0.0			333.64	0.84	279.51	279.51	0.88	0.400	0.799	9133.219	########	40151.63	0.00	0.00
45.110	367.570	4.491	5528.2	4148.5	246.256	1.231	1.70		Sand	0.0			347.42	0.84	290.88	290.88	0.88	0.400	0.798	74036.843	########	325051.37	0.00	0.00
45.280	338.970	4.488	5548.6	4158.3	226.676	1.335	1.75		Sand	2.8			320.39	0.84	268.08	268.08	0.88	0.400	0.797	1458.201	2557.849	6393.14	0.00	0.00
45.440	376.320	4.134	5567.8	4167.5	251.573	1.107	1.66		Sand	0.0			355.69	0.84	297.45	297.45	0.88	0.400	0.797	########	########	1236431.91	0.00	0.00
45.600	358.220	2.854	5587.0	4176.8	239.112	0.803	1.57		Sand	0.0			338.58	0.84	282.98	282.98	0.88	0.400	0.796	16788.986	########	73416.00	0.00	0.00
45.770	349.080	2.486	5607.4	4186.6	232.684	0.718	1.54		Sand	0.0			329.94	0.84	275.59	275.59	0.88	0.401	0.795	4726.250	8269.279	20638.98	0.00	0.00
45.930	357.770	2.858	5626.6	4195.8	238.255	0.805	1.57		Sand	0.0			338.16	0.83	282.28	282.28	0.88	0.401	0.795	14833.993	########	64695.42	0.00	0.00
46.100	368.070	1.706	5647.0	4205.6	244.876	0.467	1.40		Sand	0.0			347.89	0.83	290.23	290.23	0.88	0.401	0.794	65175.509	########	283865.90	0.00	0.00
46.260	402.800	2.118	5666.2	4214.8	267.861	0.530	1.41		Sand	0.0			380.72	0.83	317.43	317.43	0.88	0.401	0.793	########	########	##########	0.00	0.00
46.420	383.700	1.039	5685.4	4224.0	254.784	0.273	1.25		Sand	0.0			362.67	0.83	302.21	302.21	0.88	0.401	0.793	########	########	3449243.04	0.00	0.00
46.590	352.520	1.380	5705.8	4233.8	233.648	0.395	1.37		Sand	0.0			333.19	0.83	277.48	277.48	0.88	0.402	0.792	6470.499	########	28073.60	0.00	0.00
46.750	249.260	2.048	5725.0	4243.0	164.464	0.831	1.69		Sand	0.0			235.60	0.78	184.60	184.60	0.87	0.402	0.846	0.879	1.613	4.01	0.00	0.00
46.920	87.200	1.698	5745.4	4252.8	56.222	2.013	2.30		Sand	46.8	235.6		235.60	0.83	195.97	291.53	0.87	0.402	0.791	84169.194	########	364257.69	0.00	0.00
47.080	47.970	1.407	5764.6	4262.0	21.158	3.121	2.75		Clay	82.6			45.34	0.83	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.240	24.710	0.703	5783.8	4271.2	10.216	3.221	3.01		Clay	100.0			23.36	0.83	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.410	19.750	0.608	5804.2	4281.0	7.871	3.608	3.13		Clay	100.0			18.67	0.83	n.a.	n.a.	0.87	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.570	19.790	0.823	5823.4	4290.2	7.868	4.878	3.20		Clay	100.0			18.71	0.83	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.740	19.400	1.679	5843.8	4300.0	7.664	10.192	3.41		Clay	100.0			18.34	0.83	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	24.870	2.268	5863.0	4309.2	10.182	10.339	3.32		Clay	100.0			23.51	0.83	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.060	52.580	2.154	5882.2	4318.5	22.989	4.339	2.81		Clay	87.8			49.70	0.83	n.a.	n.a.	0.87	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.230	96.910	1.772	5902.6	4328.2	62.094	1.886	2.25		Sand	42.8	115.66	1.78	205.87	0.83	170.45	256.12	0.87	0.403	0.785	277.030	478.619	1187.24	0.00	0.00
48.390	122.370	1.292	5921.8	4337.5	78.830	1.082	2.01		Sand	24.0		1.78	205.88	0.81	165.93	222.63	0.87	0.403	0.785	8.775	15.148	37.56	0.00	0.00
48.560	110.250	1.146	5942.2	4347.3	70.742	1.069	2.05		Sand	26.7	115.66	1.78	205.87	0.81	166.84	229.71	0.87	0.403	0.784	15.996	27.589	68.39	0.00	0.00
48.720	66.440	0.988	5961.4	4356.5	41.802	1.557	2.33		Sand	49.1	115.66	1.78	205.87	0.83	170.16	260.66	0.87	0.404	0.783	504.812	869.989	2155.83	0.00	0.00
48.880	38.420	0.829	5980.6	4365.7	16.231	2.340	2.76		Clay	84.0			36.31	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.050	26.430	0.900	6001.0	4375.5	10.709	3.840	3.03		Clay	100.0			24.98	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.210	24.060	1.253	6020.2	4384.7	9.602	5.951	3.19		Clay	100.0			22.74	0.83	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.380	30.940	1.813	6040.6	4394.5	12.707	6.494	3.12		Clay	100.0			29.24	0.82	n.a.	n.a.	0.87	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.540	52.880	2.053	6059.8	4403.7	22.640	4.119	2.80		Clay	87.0			49.98	0.82	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.700	47.120	1.737	6079.0	4412.9	19.978	3.941	2.83		Clay	89.3			44.54	0.82	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.870	34.460	1.217	6099.4	4422.7	14.204	3.873	2.94		Clay	98.2			32.57	0.82	n.a.	n.a.	0.86	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.030	26.870	0.926	6118.6	4431.9	10.745	3.891	3.04		Clay	100.0			25.40	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.200	20.770	0.717	6139.0	4441.7	7.970	4.052	3.15		Clay	100.0			19.63	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.360	15.790	0.712	6158.2	4450.9	5.712	5.598	3.35		Clay	100.0			14.92	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.520	14.310	0.738	6177.4	4460.2	5.032	6.573	3.44		Clay	100.0			13.53	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.690	16.010	0.704	6197.8	4469.9	5.777	5.453	3.34		Clay	100.0			15.13	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.850	18.750	0.623	6217.0	4479.2	6.984	3.984	3.20		Clay	100.0			17.72	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.020	18.160	0.600	6237.4	4489.0	6.701	3.986	3.21		Clay	100.0			17.16	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.180	17.260	0.607	6256.6	4498.2	6.283	4.297	3.25		Clay	100.0			16.31	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.350	19.100	0.624	6277.0	4508.0	7.081	3.909	3.19		Clay	100.0			18.05	0.82	n.a.	n.a.	0.86	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.510	20.360	0.635	6296.2	4517.2	7.621	3.691	3.15		Clay	100.0			19.24	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.670	20.310	0.659	6315.4	4526.4	7.579	3.843	3.16		Clay	100.0			19.20	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.840	20.180	0.647	6335.8	4536.2	7.501	3.804	3.16		Clay	100.0			19.07	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.000	20.750	0.653	6355.0	4545.4	7.732	3.714	3.14		Clay	100.0			19.61	0.82	n.a.	n.a.	0.86	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.170	21.790	0.646	6375.4	4555.2	8.168	3.472	3.11		Clay	100.0			20.60	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.330	20.690	0.624	6394.6	4564.4	7.665	3.566	3.13		Clay	100.0			19.56	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.490	20.410	0.597	6413.8	4573.6	7.523	3.470	3.13		Clay	100.0			19.29	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	$CRR_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
52.660	18.660	0.553	6434.2	4583.4	6.739	3.578	3.18		Clay	100.0			17.64	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.820	17.680	0.468	6453.4	4592.6	6.294	3.235	3.18		Clay	100.0			16.71	0.82	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.990	17.750	0.466	6473.8	4602.4	6.307	3.212	3.18		Clay	100.0			16.78	0.81	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	16.110	0.471	6493.0	4611.6	5.579	3.661	3.26		Clay	100.0			15.23	0.81	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.310	15.920	0.462	6512.2	4620.9	5.481	3.647	3.26		Clay	100.0			15.05	0.81	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.480	16.200	0.471	6532.6	4630.6	5.586	3.642	3.25		Clay	100.0			15.31	0.81	n.a.	n.a.	0.85	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.640	16.690	0.477	6551.8	4639.9	5.782	3.558	3.24		Clay	100.0			15.78	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.810	17.070	0.481	6572.2	4649.7	5.929	3.487	3.22		Clay	100.0			16.13	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	17.470	0.482	6591.4	4658.9	6.085	3.397	3.21		Clay	100.0			16.51	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.130	17.560	0.420	6610.6	4668.1	6.107	2.947	3.17		Clay	100.0			16.60	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.300	17.260	0.386	6631.0	4677.9	5.962	2.769	3.17		Clay	100.0			16.31	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.460	16.220	0.405	6650.2	4687.1	5.502	3.138	3.22		Clay	100.0			15.33	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.630	16.340	0.421	6670.6	4696.9	5.538	3.236	3.23		Clay	100.0			15.44	0.81	n.a.	n.a.	0.85	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	16.430	0.404	6689.8	4706.1	5.561	3.087	3.22		Clay	100.0			15.53	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.950	16.060	0.380	6709.0	4715.3	5.389	2.988	3.22		Clay	100.0			15.18	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.120	15.060	0.399	6729.4	4725.1	4.950	3.415	3.28		Clay	100.0			14.23	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.280	14.180	0.430	6748.6	4734.3	4.565	3.981	3.35		Clay	100.0			13.40	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.450	15.040	0.465	6769.0	4744.1	4.914	3.992	3.32		Clay	100.0			14.22	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	17.100	0.693	6788.2	4753.3	5.767	5.054	3.32		Clay	100.0			16.16	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.770	18.660	1.032	6807.4	4762.6	6.407	6.763	3.36		Clay	100.0			17.64	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.940	25.970	1.382	6827.8	4772.3	9.453	6.127	3.20		Clay	100.0			24.55	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.100	37.900	1.842	6847.0	4781.6	14.421	5.342	3.02		Clay	100.0			35.82	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.270	43.430	2.730	6867.4	4791.4	16.695	6.825	3.04		Clay	100.0			41.05	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	50.070	3.455	6886.6	4800.6	19.425	7.411	3.02		Clay	100.0			47.33	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.590	62.050	4.337	6905.8	4809.8	24.366	7.402	2.95		Clay	99.0			58.65	0.81	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.760	100.760	4.586	6926.2	4819.6	40.376	4.714	2.66		Clay	75.5			95.24	0.80	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.920	67.200	3.905	6945.4	4828.8	26.395	6.127	2.87		Clay	92.4			63.52	0.80	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.090	68.000	3.349	6965.8	4838.6	26.668	5.191	2.81		Clay	88.2			64.27	0.80	n.a.	n.a.	0.84	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.250	95.210	2.752	6985.0	4847.8	57.273	3.000	2.41		Sand	55.9			89.99	0.69	62.32	127.15	0.84	0.408	0.891	0.189	0.243	0.60	0.02	0.00
57.410	118.770	1.960	7004.2	4857.0	71.911	1.700	2.17		Sand	36.6			112.26	0.70	78.84	137.00	0.84	0.408	0.881	0.222	0.299	0.73	0.02	0.00
57.580	132.470	1.818	7024.6	4866.8	80.371	1.410	2.08		Sand	29.3			125.21	0.71	88.32	140.62	0.83	0.408	0.877	0.237	0.326	0.80	0.02	0.00
57.740	139.340	1.490	7043.8	4876.0	84.566	1.097	1.99		Sand	22.4			131.70	0.70	91.78	132.94	0.83	0.408	0.885	0.207	0.273	0.67	0.02	0.00
57.910	136.690	1.713	7064.2	4885.8	82.827	1.287	2.04		Sand	26.5			129.20	0.70	90.81	139.35	0.83	0.408	0.878	0.232	0.316	0.77	0.02	0.00
58.070	129.970	1.765	7083.4	4895.0	78.567	1.396	2.08		Sand	29.7			122.84	0.70	86.18	138.56	0.83	0.408	0.878	0.228	0.310	0.76	0.02	0.00
58.230	115.220	1.764	7102.6	4904.2	69.329	1.579	2.16		Sand	35.8			108.90	0.69	75.64	132.41	0.83	0.408	0.884	0.205	0.270	0.66	0.02	0.00
58.400	113.870	1.716	7123.0	4914.0	68.417	1.556	2.16		Sand	35.8			107.63	0.69	74.54	131.06	0.83	0.408	0.885	0.201	0.262	0.64	0.02	0.00
58.560	111.320	1.741	7142.2	4923.3	66.767	1.615	2.18		Sand	37.3			105.22	0.69	72.70	130.09	0.83	0.408	0.886	0.198	0.257	0.63	0.02	0.00
58.730	110.700	1.783	7162.6	4933.0	66.310	1.664	2.19		Sand	38.2			104.63	0.69	72.25	130.22	0.83	0.408	0.885	0.198	0.258	0.63	0.02	0.00
58.890	110.960	1.818	7181.8	4942.3	66.403	1.693	2.19		Sand	38.5			104.88	0.69	72.41	130.71	0.83	0.408	0.885	0.200	0.260	0.64	0.02	0.00
59.060	114.660	1.854	7202.2	4952.1	68.617	1.669	2.18		Sand	37.3			108.37	0.69	75.03	132.98	0.83	0.408	0.882	0.207	0.273	0.67	0.02	0.00
59.220	120.940	1.791	7221.4	4961.3	72.424	1.526	2.14		Sand	33.9			114.31	0.69	79.32	135.07	0.83	0.408	0.880	0.214	0.285	0.70	0.02	0.00
59.380	125.670	1.695	7240.6	4970.5	75.268	1.389	2.10		Sand	30.7			118.78	0.69	82.39	135.27	0.83	0.408	0.880	0.215	0.287	0.70	0.02	0.00
59.550	126.040	1.620	7261.0	4980.3	75.415	1.323	2.08		Sand	29.6			119.13	0.69	82.38	133.82	0.83	0.408	0.881	0.210	0.278	0.68	0.02	0.00
59.710	124.100	1.521	7280.2	4989.5	74.146	1.262	2.07		Sand	29.0			117.30	0.69	80.69	131.01	0.83	0.408	0.883	0.201	0.261	0.64	0.02	0.00
59.880	119.700	1.872	7300.6	4999.3	71.361	1.613	2.16		Sand	35.5			113.14	0.69	78.29	135.42	0.83	0.408	0.879	0.216	0.287	0.70	0.02	0.00
60.040	117.350	2.076	7319.8	5008.5	69.846	1.826	2.20		Sand	39.0			110.92	0.69	76.82	136.51	0.83	0.408	0.877	0.220	0.294	0.72	0.02	0.00
60.200	122.720	2.111	7339.0	5017.7	73.072	1.773	2.18		Sand	37.1			115.99	0.70	80.67	139.75	0.82	0.408	0.874	0.233	0.317	0.78	0.02	0.00
60.370	130.430	2.028	7359.4	5027.5	77.722	1.600	2.13		Sand	33.1			123.28	0.70	86.01	142.44	0.82	0.408	0.870	0.246	0.339	0.83	0.02	0.00
60.530	134.550	1.943	7378.6	5036.7	80.169	1.485	2.10		Sand	30.6			127.17	0.70	88.70	142.73	0.82	0.408	0.870	0.247	0.341	0.84	0.01	0.00
60.700	142.390	1.718	7399.0	5046.5	84.883	1.238	2.02		Sand	25.0			134.58	0.69	93.39	139.82	0.82	0.408	0.873	0.234	0.318	0.78	0.02	0.00
60.860	140.360	1.657	7418.2	5055.7	83.559	1.213	2.02		Sand	24.9			132.67	0.69	91.69	137.74	0.82	0.408	0.875	0.225	0.302	0.74	0.02	0.00
61.020	135.680	1.859	7437.4	5065.0	80.618	1.408	2.08		Sand	29.2			128.24	0.69	89.06	141.37	0.82	0.408	0.870	0.241	0.330	0.81	0.02	0.00
61.190	127.770	2.147	7457.8	5074.7	75.706	1.731	2.16		Sand	35.7			120.77	0.69	83.93	142.44	0.82	0.408	0.869	0.246	0.338	0.83	0.02	0.00
61.350	131.680	2.172	7477.0	5084.0	78.016	1.698	2.14		Sand	34.4			124.46	0.70	86.72	144.65	0.82	0.408	0.866	0.257	0.358	0.88	0.01	0.00
61.520	164.890	2.253	7497.4	5093.8	98.166	1.398	2.01		Sand	24.0			155.85	0.71	110.63	158.14	0.82	0.408	0.849	0.353	0.530	1.30	0.00	0.00
61.680	281.910	1.895	7516.6	5103.0	169.294	0.681	1.63		Sand	0.0			266.46	0.75	199.17	199.17	0.82	0.408	0.771	1.804	3.059	7.51	0.00	0.00
61.840	260.240	1.729	7535.8	5112.2	155.959	0.674	1.65		Sand	0.0			245.97	0.73	179.35	179.35	0.82	0.408	0.814	0.708	1.198	2.94	0.00	0.00
62.010	260.270	2.657	7556.2	5122.0	155.821	1.036	1.78		Sand	5.2			246.00	0.73	179.29	179.55	0.82	0.408	0.814	0.713	1.209	2.97	0.00	0.00
62.170	285.900	2.379	7575.4	5131.2	171.232	0.843	1.69		Sand	0.0			270.23	0.75	202.39	202.39	0.82	0.407	0.761	2.167	3.627	8.90	0.00	0.00
62.340	293.990	3.165	7595.8	5141.0	175.968	1.091	1.76		Sand	3.4			277.87	0.75	209.77	209.77	0.82	0.407	0.737	3.432	5.568	13.67	0.00	0.00
62.500	306.930	3.128	7615.0	5150.2	183.645	1.032	1.73		Sand	1.0			290.10	0.76	221.86	221.86	0.82	0.407	0.733	8.251	13.308	32.66	0.00	0.00
62.660	306.960	2.455	7634.2	5159.4	183.493	0.810	1.65		Sand	0.0			290.13	0.76	221.73	221.73	0.82	0.407	0.733	8.166	13.162	32.31	0.00	0.00
62.830	332.880	2.209	7654.6	5169.2	198.987	0.671	1.57		Sand	0.0			314.63	0.78	246.77	246.77	0.81	0.407	0.732	89.603	144.305	354.23	0.00	0.00
62.990	382.160	2.054	7673.8	5178.4	228.579	0.543	1.46		Sand	0.0			361.21	0.79	285.24	285.24	0.81	0.407	0.732	25338.700	########	100105.42	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
63.160	375.440	2.580	7694.2	5188.2	224.301	0.694	1.54		Sand	0.0			354.86	0.79	280.09	280.09	0.81	0.407	0.731	10094.098	########	39850.84	0.00	0.00
63.320	307.160	2.573	7713.4	5197.4	182.917	0.848	1.67		Sand	0.0			290.32	0.76	221.27	221.27	0.81	0.407	0.730	7.875	12.655	31.07	0.00	0.00
63.480	258.450	2.468	7732.6	5206.6	153.399	0.969	1.76		Sand	4.0			244.28	0.72	176.24	176.26	0.81	0.407	0.816	0.628	1.041	2.56	0.00	0.00
63.650	239.690	2.151	7753.0	5216.4	141.956	0.912	1.77		Sand	4.5			226.55	0.70	159.70	159.78	0.81	0.407	0.843	0.369	0.556	1.37	0.00	0.00
63.810	247.000	1.963	7772.2	5225.7	146.222	0.807	1.72		Sand	0.9			233.46	0.71	165.86	165.86	0.81	0.407	0.833	0.441	0.688	1.69	0.00	0.00
63.980	259.950	1.645	7792.6	5235.4	153.860	0.643	1.64		Sand	0.0			245.70	0.72	177.10	177.10	0.81	0.407	0.814	0.649	1.078	2.65	0.00	0.00
64.140	255.040	1.384	7811.8	5244.7	150.771	0.551	1.61		Sand	0.0			241.06	0.72	172.61	172.61	0.81	0.407	0.821	0.550	0.892	2.19	0.00	0.00
64.300	227.920	1.941	7831.0	5253.9	134.366	0.867	1.77		Sand	4.8			215.43	0.69	149.12	149.24	0.81	0.407	0.856	0.284	0.403	0.99	0.01	0.00
64.470	200.680	2.778	7851.4	5263.7	117.910	1.412	1.96		Sand	19.6			189.68	0.72	136.50	177.31	0.81	0.407	0.812	0.654	1.086	2.67	0.00	0.00
64.630	142.110	2.778	7870.6	5272.9	82.733	2.010	2.17		Sand	37.0			134.32	0.70	93.74	155.74	0.81	0.407	0.846	0.331	0.488	1.20	0.01	0.00
64.800	87.690	2.506	7891.0	5282.7	50.096	2.993	2.45		Sand	59.1			82.88	0.66	54.39	118.09	0.81	0.407	0.888	0.167	0.204	0.50	0.03	0.00
64.960	59.490	1.999	7910.2	5291.9	20.989	3.599	2.79		Clay	86.0			56.23	0.79	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.120	42.270	1.364	7929.4	5301.1	14.452	3.560	2.91		Clay	95.9			39.95	0.78	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.290	31.160	0.928	7949.8	5310.9	10.237	3.415	3.02		Clay	100.0			29.45	0.78	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.450	27.830	0.845	7969.0	5320.1	8.964	3.544	3.08		Clay	100.0			26.30	0.78	n.a.	n.a.	0.81	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.620	25.350	0.903	7989.4	5329.9	8.013	4.227	3.16		Clay	100.0			23.96	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.780	24.800	0.809	8008.6	5339.1	7.790	3.892	3.15		Clay	100.0			23.44	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.940	28.450	0.749	8027.8	5348.3	9.138	3.064	3.03		Clay	100.0			26.89	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.110	26.400	0.685	8048.2	5358.1	8.352	3.059	3.07		Clay	100.0			24.95	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.270	24.410	0.611	8067.4	5367.4	7.593	2.999	3.10		Clay	100.0			23.07	0.78	n.a.	n.a.	0.80	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.440	23.360	0.550	8087.8	5377.1	7.185	2.849	3.10		Clay	100.0			22.08	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.600	22.220	0.526	8107.0	5386.4	6.745	2.896	3.13		Clay	100.0			21.00	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.770	20.800	0.528	8127.4	5396.2	6.203	3.155	3.18		Clay	100.0			19.66	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.930	19.290	0.535	8146.6	5405.4	5.630	3.519	3.24		Clay	100.0			18.23	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.090	19.470	0.559	8165.8	5414.6	5.684	3.631	3.25		Clay	100.0			18.40	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.260	22.610	0.555	8186.2	5424.4	6.827	2.996	3.13		Clay	100.0			21.37	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.420	22.300	0.539	8205.4	5433.6	6.698	2.964	3.14		Clay	100.0			21.08	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.590	21.340	0.508	8225.8	5443.4	6.330	2.949	3.16		Clay	100.0			20.17	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.750	21.500	0.509	8245.0	5452.6	6.374	2.930	3.15		Clay	100.0			20.32	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.910	21.130	0.555	8264.2	5461.8	6.224	3.265	3.19		Clay	100.0			19.97	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.080	21.800	0.738	8284.6	5471.6	6.454	4.181	3.24		Clay	100.0			20.60	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.240	22.240	1.032	8303.8	5480.8	6.601	5.708	3.31		Clay	100.0			21.02	0.78	n.a.	n.a.	0.80	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.410	23.550	1.325	8324.2	5490.6	7.062	6.836	3.33		Clay	100.0			22.26	0.78	n.a.	n.a.	0.79	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.570	40.350	1.901	8343.4	5499.8	13.156	5.255	3.05		Clay	100.0			38.14	0.78	n.a.	n.a.	0.79	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.730	112.740	2.329	8362.6	5509.0	63.591	2.145	2.28		Sand	45.2			106.56	0.66	70.40	132.59	0.79	0.406	0.868	0.206	0.266	0.66	0.02	0.00
68.900	127.790	2.455	8383.0	5518.8	72.337	1.986	2.21		Sand	40.1			120.78	0.67	81.09	142.63	0.79	0.406	0.856	0.247	0.335	0.83	0.02	0.00
69.060	105.190	2.474	8402.2	5528.1	59.055	2.450	2.34		Sand	50.2			99.42	0.65	65.11	128.45	0.79	0.405	0.872	0.193	0.244	0.60	0.02	0.00
69.230	56.960	2.367	8422.6	5537.8	19.050	4.487	2.88		Clay	93.5			53.84	0.78	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	44.520	2.145	8441.8	5547.1	14.530	5.323	3.02		Clay	100.0			42.08	0.78	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.550	45.910	1.841	8461.0	5556.3	15.003	4.418	2.96		Clay	99.5			43.39	0.78	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.720	35.090	1.256	8481.4	5566.1	11.085	4.071	3.04		Clay	100.0			33.17	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.880	24.950	0.951	8500.6	5575.3	7.426	4.594	3.21		Clay	100.0			23.58	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.050	20.030	0.810	8521.0	5585.1	5.647	5.136	3.33		Clay	100.0			18.93	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	17.130	0.768	8540.2	5594.3	4.598	5.968	3.44		Clay	100.0			16.19	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.370	16.780	0.761	8559.4	5603.5	4.462	6.087	3.46		Clay	100.0			15.86	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.540	16.800	0.771	8579.8	5613.3	4.457	6.161	3.46		Clay	100.0			15.88	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.700	17.430	0.760	8599.0	5622.5	4.671	5.790	3.43		Clay	100.0			16.47	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.870	18.080	0.772	8619.4	5632.3	4.890	5.604	3.41		Clay	100.0			17.09	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	18.440	0.771	8638.6	5641.5	5.006	5.461	3.39		Clay	100.0			17.43	0.77	n.a.	n.a.	0.79	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.190	19.310	0.808	8657.8	5650.7	5.302	5.395	3.37		Clay	100.0			18.25	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.360	19.350	0.867	8678.2	5660.5	5.304	5.772	3.39		Clay	100.0			18.29	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.520	20.560	0.970	8697.4	5669.8	5.719	5.984	3.37		Clay	100.0			19.43	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.690	22.240	1.227	8717.8	5679.5	6.297	6.859	3.37		Clay	100.0			21.02	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.850	24.870	1.545	8737.0	5688.8	7.208	7.537	3.35		Clay	100.0			23.51	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.010	27.230	1.775	8756.2	5698.0	8.021	7.769	3.32		Clay	100.0			25.74	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.180	36.100	2.280	8776.6	5707.8	11.112	7.190	3.19		Clay	100.0			34.12	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.340	43.320	2.904	8795.8	5717.0	13.616	7.461	3.14		Clay	100.0			40.95	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.510	80.720	2.479	8816.2	5726.8	26.651	3.249	2.68		Clay	77.3			76.29	0.77	n.a.	n.a.	0.78	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.670	155.240	2.352	8835.4	5736.0	86.583	1.559	2.08		Sand	29.8			146.73	0.67	98.74	153.71	0.78	0.404	0.835	0.315	0.451	1.12	0.01	0.00
72.830	181.450	2.354	8854.6	5745.2	101.543	1.329	1.99		Sand	21.9			171.50	0.68	116.61	160.62	0.78	0.404	0.824	0.378	0.561	1.39	0.00	0.00
73.000	233.480	2.628	8875.0	5755.0	131.270	1.147	1.86		Sand	11.9			220.68	0.69	151.52	167.39	0.78	0.404	0.813	0.462	0.712	1.76	0.00	0.00
73.160	274.310	2.461	8894.2	5764.2	154.542	0.912	1.74		Sand	2.3			259.27	0.70	181.71	181.71	0.78	0.403	0.784	0.778	1.293	3.20	0.00	0.00
73.330	257.910	2.678	8914.6	5774.0	145.021	1.056	1.81		Sand	7.4			243.77	0.69	168.00	170.67	0.78	0.403	0.806	0.515	0.806	2.00	0.00	0.00
73.490	164.670	2.831	8933.8	5783.2	91.592	1.767	2.10		Sand	31.3			155.64	0.68	106.26	164.87	0.78	0.403	0.816	0.428	0.649	1.61	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	5

PGA (A_{max})	0.50

Total Settlement:	0.18	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
73.650	99.430	2.332	8953.0	5792.4	54.244	2.456	2.37		Sand	52.4			93.98	0.63	59.61	122.41	0.78	0.403	0.872	0.177	0.217	0.54	0.03	0.00
73.820	61.300	1.805	8973.4	5802.2	19.583	3.177	2.78		Clay	85.1			57.94	0.77	n.a.	n.a.	0.78	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.980	30.020	0.999	8992.6	5811.4	8.784	3.914	3.11		Clay	100.0			28.37	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.150	21.920	0.730	9013.0	5821.2	5.983	4.194	3.26		Clay	100.0			20.72	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.310	17.640	0.651	9032.2	5830.5	4.502	4.960	3.41		Clay	100.0			16.67	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.480	16.140	0.636	9052.6	5840.2	3.977	5.475	3.47		Clay	100.0			15.26	0.77	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.640	17.670	0.652	9071.8	5849.5	4.491	4.963	3.41		Clay	100.0			16.70	0.76	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.800	19.120	0.620	9091.0	5858.7	4.975	4.253	3.33		Clay	100.0			18.07	0.76	n.a.	n.a.	0.77	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 6

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
0.660	5.830	2.084	82.5	82.5	140.333	35.992	3.08		Unsaturated	100.0			5.51	1.70	9.37	66.21	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	88.270	2.612	102.5	102.5	378.853	2.961	1.91		Unsaturated	16.0			83.43	1.70	141.83	171.76	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	92.130	2.621	122.5	122.5	361.673	2.847	1.91		Unsaturated	15.5			87.08	1.70	148.03	177.00	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	81.670	1.714	143.8	143.8	295.902	2.101	1.84		Unsaturated	10.0			77.19	1.70	131.23	139.82	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	104.700	1.801	163.8	163.8	355.458	1.721	1.72		Unsaturated	0.7			98.96	1.70	168.23	168.23	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	134.330	1.768	185.0	185.0	429.102	1.317	1.58		Unsaturated	0.0			126.97	1.70	215.84	215.84	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	139.190	1.638	205.0	205.0	422.361	1.178	1.54		Unsaturated	0.0			131.56	1.70	223.65	223.65	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	84.730	1.762	225.0	225.0	245.268	2.082	1.88		Unsaturated	13.4			80.09	1.70	136.14	156.53	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	48.640	1.384	246.3	246.3	134.424	2.853	2.15		Unsaturated	34.7			45.97	1.70	78.16	134.46	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	27.380	1.161	266.3	266.3	72.601	4.262	2.45		Unsaturated	59.1			25.88	1.70	43.99	104.79	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	19.400	1.474	287.5	287.5	73.604	7.656	2.65		Unsaturated	74.6			18.34	1.70	31.17	91.69	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	25.120	1.433	307.5	307.5	61.902	5.738	2.59		Unsaturated	70.6			23.74	1.70	40.36	102.85	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	43.240	1.520	327.5	327.5	103.491	3.528	2.29		Unsaturated	46.2			40.87	1.70	69.48	131.98	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	22.960	1.009	348.8	348.8	53.049	4.428	2.56		Unsaturated	67.4			21.70	1.70	36.89	97.73	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	23.510	1.139	368.8	368.8	52.813	4.883	2.59		Unsaturated	70.0			22.22	1.70	37.78	99.40	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	18.760	1.101	390.0	390.0	57.322	5.933	2.63		Unsaturated	73.2			17.73	1.70	30.14	90.12	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	20.350	1.084	410.0	410.0	60.061	5.380	2.58		Unsaturated	69.6			19.23	1.70	32.70	92.76	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	15.050	1.045	430.0	430.0	69.000	7.045	2.63		Unsaturated	73.7			14.22	1.70	24.18	82.49	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	14.570	1.187	451.3	451.3	63.576	8.277	2.71		Unsaturated	79.9			13.77	1.70	23.41	82.42	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	15.890	1.415	471.3	471.3	66.438	9.040	2.73		Unsaturated	81.4			15.02	1.70	25.53	85.38	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	17.090	1.626	492.5	492.5	68.401	9.652	2.74		Unsaturated	82.6			16.15	1.70	27.46	88.05	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	18.730	1.697	512.5	512.5	72.093	9.185	2.71		Unsaturated	80.1			17.70	1.70	30.10	91.14	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	19.900	1.665	533.8	533.8	73.567	8.480	2.68		Unsaturated	77.5			18.81	1.70	31.98	93.19	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	21.230	1.563	553.8	553.8	75.677	7.460	2.63		Unsaturated	73.3			20.07	1.70	34.11	95.28	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	22.660	1.536	573.8	573.8	52.723	6.866	2.70		Unsaturated	78.9			21.42	1.70	36.41	99.17	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	22.880	1.543	595.0	595.0	51.878	6.832	2.70		Unsaturated	79.2			21.63	1.70	36.76	99.66	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	23.970	1.571	615.0	615.0	53.116	6.637	2.69		Unsaturated	77.9			22.66	1.70	38.52	101.74	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	25.410	1.507	636.3	636.3	55.001	6.005	2.64		Unsaturated	74.4			24.02	1.70	40.83	104.17	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	25.080	1.446	656.3	656.3	53.093	5.842	2.64		Unsaturated	74.5			23.71	1.70	40.30	103.50	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	23.230	1.516	676.3	676.3	67.702	6.622	2.62		Unsaturated	72.4			21.96	1.70	37.33	99.28	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.580	22.230	1.558	697.5	697.5	62.742	7.118	2.66		Unsaturated	76.0			21.01	1.70	35.72	97.82	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.740	22.050	1.503	717.5	717.5	60.463	6.927	2.66		Unsaturated	76.1			20.84	1.70	35.43	97.46	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.910	20.750	1.423	738.8	738.8	55.176	6.984	2.69		Unsaturated	78.4			19.61	1.70	33.34	95.10	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	19.260	1.376	758.8	758.8	49.768	7.289	2.74		Unsaturated	81.8			18.20	1.70	30.89	92.41	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.230	18.030	1.385	778.8	778.8	45.305	7.852	2.79		Unsaturated	85.9			17.04	1.68	28.69	90.07	1.00	0.323	1.098	n.a.	n.a.	n.a.	0.00	0.00
6.400	17.650	1.406	800.0	800.0	43.125	8.152	2.81		Unsaturated	88.0			16.68	1.66	27.75	89.10	0.99	0.323	1.095	n.a.	n.a.	n.a.	0.00	0.00
6.560	17.370	1.430	820.0	820.0	41.366	8.432	2.84		Unsaturated	89.8			16.42	1.65	27.01	88.34	0.99	0.323	1.092	n.a.	n.a.	n.a.	0.00	0.00
6.730	17.130	1.402	841.3	841.3	39.725	8.392	2.85		Unsaturated	90.6			16.19	1.63	26.33	87.53	0.99	0.323	1.089	n.a.	n.a.	n.a.	0.00	0.00
6.890	16.910	1.343	861.3	861.3	38.269	8.147	2.85		Unsaturated	90.7			15.98	1.61	25.72	86.74	0.99	0.323	1.086	n.a.	n.a.	n.a.	0.00	0.00
7.050	16.690	1.255	881.3	881.3	36.878	7.725	2.84		Unsaturated	90.2			15.78	1.59	25.12	85.91	0.99	0.323	1.083	n.a.	n.a.	n.a.	0.00	0.00
7.220	15.930	1.247	902.5	902.5	34.302	8.055	2.87		Unsaturated	93.0			15.06	1.58	23.75	84.41	0.99	0.323	1.080	n.a.	n.a.	n.a.	0.00	0.00
7.380	15.190	1.244	922.5	922.5	31.932	8.443	2.91		Unsaturated	95.8			14.36	1.56	22.45	82.98	0.99	0.323	1.077	n.a.	n.a.	n.a.	0.00	0.00
7.550	15.340	1.208	943.8	943.8	31.509	8.121	2.90		Unsaturated	95.2			14.50	1.55	22.40	82.86	0.99	0.323	1.075	n.a.	n.a.	n.a.	0.00	0.00
7.710	15.610	1.183	963.8	963.8	31.394	7.817	2.89		Unsaturated	94.3			14.75	1.53	22.54	82.95	0.99	0.323	1.073	n.a.	n.a.	n.a.	0.00	0.00
7.870	15.200	1.171	983.8	983.8	29.902	7.963	2.91		Unsaturated	95.9			14.37	1.51	21.74	82.06	0.99	0.322	1.071	n.a.	n.a.	n.a.	0.00	0.00
8.040	15.350	1.094	1005.0	1005.0	29.547	7.368	2.89		Unsaturated	94.2			14.51	1.50	21.71	81.86	0.99	0.322	1.069	n.a.	n.a.	n.a.	0.00	0.00
8.200	15.050	1.083	1025.0	1025.0	28.366	7.452	2.91		Unsaturated	95.5			14.22	1.48	21.09	81.17	0.99	0.322	1.066	n.a.	n.a.	n.a.	0.00	0.00
8.370	15.980	1.057	1046.3	1046.3	29.547	6.840	2.87		Unsaturated	92.4			15.10	1.46	22.10	82.19	0.99	0.322	1.065	n.a.	n.a.	n.a.	0.00	0.00
8.530	19.200	0.905	1066.3	1066.3	35.014	4.850	2.71		Unsaturated	79.7			18.15	1.44	26.12	85.92	0.99	0.322	1.065	n.a.	n.a.	n.a.	0.00	0.00
8.690	21.740	0.888	1086.3	1086.3	39.028	4.188	2.63		Unsaturated	73.5			20.55	1.42	29.14	88.87	0.99	0.322	1.065	n.a.	n.a.	n.a.	0.00	0.00
8.860	27.410	0.828	1107.5	1107.5	35.087	3.082	2.57		Unsaturated	68.9			25.91	1.39	35.93	96.80	0.99	0.322	1.067	n.a.	n.a.	n.a.	0.00	0.00
9.020	35.560	1.095	1127.5	1127.5	45.314	3.128	2.50		Unsaturated	62.7			33.61	1.35	45.51	107.72	0.99	0.322	1.071	n.a.	n.a.	n.a.	0.00	0.00
9.190	53.730	1.405	1148.8	1148.8	68.188	2.643	2.32		Unsaturated	48.5			50.78	1.31	66.41	129.29	0.99	0.322	1.082	n.a.	n.a.	n.a.	0.00	0.00
9.350	77.250	1.461	1168.8	1168.8	97.502	1.906	2.11		Unsaturated	31.6			73.02	1.27	92.85	149.03	0.99	0.321	1.094	n.a.	n.a.	n.a.	0.00	0.00
9.510	94.130	1.839	1188.8	1188.8	117.952	1.966	2.06		Unsaturated	27.9			88.97	1.24	110.71	165.20	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
9.680	92.840	1.360	1210.0	1210.0	115.286	1.474	1.98		Unsaturated	21.2			87.75	1.25	109.82	151.13	0.99	0.321	1.090	n.a.	n.a.	n.a.	0.00	0.00
9.840	105.700	1.200	1230.0	1230.0	130.275	1.142	1.86		Unsaturated	12.0			99.91	1.26	125.45	140.30	0.99	0.321	1.080	n.a.	n.a.	n.a.	0.00	0.00
10.010	112.040	1.129	1251.3	1251.3	136.943	1.013	1.81		Unsaturated	7.9			105.90	1.25	132.56	135.81	0.99	0.321	1.074	n.a.	n.a.	n.a.	0.00	0.00
10.170	130.530	1.016	1271.3	1271.3	158.397	0.782	1.69		Unsaturated	0.0			123.37	1.23	151.35	151.35	0.99	0.321	1.082	n.a.	n.a.	n.a.	0.00	0.00
10.330	115.780	0.896	1291.3	1291.3	139.307	0.778	1.73		Unsaturated	1.4			109.43	1.24	135.23	135.23	0.99	0.321	1.070	n.a.	n.a.	n.a.	0.00	0.00
10.500	93.940	1.156	1312.5	1312.5	111.951	1.240	1.93		Unsaturated	17.8			88.79	1.22	108.46	140.67	0.99	0.321	1.070	n.a.	n.a.	n.a.	0.00	0.00
10.660	88.060	1.514	1332.5	1332.5	104.092	1.732	2.06		Unsaturated	27.7			83.23	1.20	100.12	152.32	0.99	0.321	1.075	n.a.	n.a.	n.a.	0.00	0.00
10.830	100.810	1.607	1353.8	1353.8	118.326	1.605	2.00		Unsaturated	22.7			95.28	1.19	113.39	158.56	0.99	0.320	1.077	n.a.	n.a.	n.a.	0.00	0.00
10.990	133.570	1.421	1373.8	1373.8	155.879	1.070	1.79		Unsaturated	5.9			126.25	1.19	150.18	150.84	0.99	0.320	1.070	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 6

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
11.150	203.850	1.196	1393.8	1393.8	236.594	0.589	1.48		Unsaturated	0.0			192.67	1.14	218.86	218.86	0.99	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.320	238.340	1.189	1415.0	1415.0	274.663	0.500	1.38		Unsaturated	0.0			225.27	1.11	250.86	250.86	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.480	236.890	1.747	1435.0	1435.0	271.066	0.740	1.50		Unsaturated	0.0			223.90	1.11	248.64	248.64	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.650	227.510	1.660	1456.3	1456.3	258.382	0.732	1.51		Unsaturated	0.0			215.04	1.11	238.86	238.86	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
11.810	122.950	1.752	1476.3	1476.3	138.295	1.434	1.91		Unsaturated	16.1			116.21	1.15	133.38	162.91	0.98	0.320	1.065	n.a.	n.a.	n.a.	0.00	0.00
11.980	213.890	1.804	1497.5	1497.5	239.473	0.846	1.58		Unsaturated	0.0			202.16	1.11	224.16	224.16	0.98	0.320	1.100	n.a.	n.a.	n.a.	0.00	0.00
12.140	215.300	1.693	1517.5	1517.5	239.452	0.789	1.56		Unsaturated	0.0			203.50	1.10	224.69	224.69	0.98	0.319	1.100	n.a.	n.a.	n.a.	0.00	0.00
12.300	219.500	1.474	1537.5	1537.5	242.536	0.674	1.51		Unsaturated	0.0			207.47	1.10	227.90	227.90	0.98	0.319	1.096	n.a.	n.a.	n.a.	0.00	0.00
12.470	219.340	1.727	1558.8	1558.8	240.689	0.790	1.56		Unsaturated	0.0			207.32	1.09	226.90	226.90	0.98	0.319	1.092	n.a.	n.a.	n.a.	0.00	0.00
12.630	227.720	2.018	1578.8	1578.8	248.318	0.889	1.59		Unsaturated	0.0			215.24	1.09	234.09	234.09	0.98	0.319	1.088	n.a.	n.a.	n.a.	0.00	0.00
12.800	227.350	2.527	1600.0	1600.0	246.250	1.115	1.66		Unsaturated	0.0			214.89	1.08	232.91	232.91	0.98	0.319	1.084	n.a.	n.a.	n.a.	0.00	0.00
12.960	233.280	2.893	1620.0	1620.0	251.120	1.245	1.70		Unsaturated	0.0			220.49	1.08	237.77	237.77	0.98	0.319	1.080	n.a.	n.a.	n.a.	0.00	0.00
13.120	255.480	3.084	1640.0	1640.0	273.408	1.211	1.66		Unsaturated	0.0			241.47	1.07	258.27	258.27	0.98	0.319	1.076	n.a.	n.a.	n.a.	0.00	0.00
13.290	274.430	3.313	1661.3	1661.3	291.857	1.211	1.65		Unsaturated	0.0			259.39	1.07	276.48	276.48	0.98	0.319	1.073	n.a.	n.a.	n.a.	0.00	0.00
13.450	277.600	2.512	1681.3	1681.3	293.466	0.908	1.55		Unsaturated	0.0			262.38	1.06	278.80	278.80	0.98	0.318	1.069	n.a.	n.a.	n.a.	0.00	0.00
13.620	254.830	2.469	1702.5	1702.5	267.625	0.972	1.60		Unsaturated	0.0			240.86	1.06	255.08	255.08	0.98	0.318	1.065	n.a.	n.a.	n.a.	0.00	0.00
13.780	251.330	2.290	1722.5	1722.5	262.389	0.914	1.58		Unsaturated	0.0			237.55	1.06	250.98	250.98	0.98	0.318	1.062	n.a.	n.a.	n.a.	0.00	0.00
13.940	232.680	2.446	1742.5	1742.5	241.444	1.055	1.65		Unsaturated	0.0			219.92	1.06	232.60	232.60	0.98	0.318	1.058	n.a.	n.a.	n.a.	0.00	0.00
14.110	206.540	3.734	1763.8	1763.8	212.912	1.816	1.87		Unsaturated	12.5			195.22	1.06	206.00	226.97	0.98	0.318	1.055	n.a.	n.a.	n.a.	0.00	0.00
14.270	243.740	3.370	1783.8	1783.8	250.000	1.388	1.73		Unsaturated	1.7			230.38	1.05	241.58	241.58	0.98	0.318	1.051	n.a.	n.a.	n.a.	0.00	0.00
14.440	295.000	3.273	1805.0	1805.0	300.971	1.113	1.61		Unsaturated	0.0			278.83	1.04	290.77	290.77	0.98	0.318	1.048	n.a.	n.a.	n.a.	0.00	0.00
14.600	310.460	2.315	1825.0	1825.0	315.042	0.748	1.46		Unsaturated	0.0			293.44	1.04	305.12	305.12	0.98	0.318	1.044	n.a.	n.a.	n.a.	0.00	0.00
14.760	322.350	2.305	1845.0	1845.0	325.355	0.717	1.44		Unsaturated	0.0			304.68	1.04	315.90	315.90	0.98	0.317	1.041	n.a.	n.a.	n.a.	0.00	0.00
14.930	342.260	2.036	1866.3	1866.3	343.525	0.597	1.37		Unsaturated	0.0			323.50	1.03	334.40	334.40	0.98	0.317	1.038	n.a.	n.a.	n.a.	0.00	0.00
15.090	348.630	2.433	1886.3	1886.3	348.065	0.700	1.41		Unsaturated	0.0			329.52	1.03	339.66	339.66	0.98	0.317	1.034	n.a.	n.a.	n.a.	0.00	0.00
15.260	315.490	2.548	1907.5	1907.5	313.120	0.810	1.49		Unsaturated	0.0			298.19	1.03	306.47	306.47	0.98	0.317	1.031	n.a.	n.a.	n.a.	0.00	0.00
15.420	224.340	2.554	1927.5	1927.5	221.214	1.143	1.70		Unsaturated	0.0			212.04	1.03	218.18	218.18	0.97	0.317	1.028	n.a.	n.a.	n.a.	0.00	0.00
15.580	225.810	2.532	1947.5	1947.5	221.513	1.126	1.70		Unsaturated	0.0			213.43	1.03	218.90	218.90	0.97	0.317	1.025	n.a.	n.a.	n.a.	0.00	0.00
15.750	279.540	2.793	1968.8	1968.8	272.954	1.003	1.60		Unsaturated	0.0			264.22	1.02	269.29	269.29	0.97	0.317	1.022	n.a.	n.a.	n.a.	0.00	0.00
15.910	303.460	5.566	1988.8	1988.8	294.889	1.840	1.79		Unsaturated	6.2			286.82	1.02	291.56	292.87	0.97	0.316	1.019	n.a.	n.a.	n.a.	0.00	0.00
16.080	286.640	5.561	2010.0	2010.0	277.004	1.947	1.83		Unsaturated	9.1			270.93	1.01	274.62	283.37	0.97	0.316	1.015	n.a.	n.a.	n.a.	0.00	0.00
16.240	314.700	4.668	2030.0	2030.0	302.704	1.488	1.71		Unsaturated	0.0			297.45	1.01	300.72	300.72	0.97	0.316	1.012	n.a.	n.a.	n.a.	0.00	0.00
16.400	276.960	3.576	2050.0	2050.0	264.973	1.296	1.69		Unsaturated	0.0			261.78	1.01	263.97	263.97	0.97	0.316	1.010	n.a.	n.a.	n.a.	0.00	0.00
16.570	352.870	4.279	2071.3	2071.3	336.120	1.216	1.61		Unsaturated	0.0			333.53	1.01	335.41	335.41	0.97	0.316	1.006	n.a.	n.a.	n.a.	0.00	0.00
16.730	446.890	4.690	2091.3	2091.3	423.889	1.052	1.50		Unsaturated	0.0			422.39	1.00	423.70	423.70	0.97	0.316	1.004	n.a.	n.a.	n.a.	0.00	0.00
16.900	501.590	5.711	2112.5	2112.5	473.486	1.141	1.50		Unsaturated	0.0			474.09	1.00	474.30	474.30	0.97	0.316	1.000	n.a.	n.a.	n.a.	0.00	0.00
17.060	512.730	6.524	2132.5	2132.5	481.740	1.275	1.54		Unsaturated	0.0			484.62	1.00	483.63	483.63	0.97	0.316	0.998	n.a.	n.a.	n.a.	0.00	0.00
17.220	484.780	6.072	2152.5	2152.5	453.294	1.255	1.55		Unsaturated	0.0			458.20	1.00	456.14	456.14	0.97	0.315	0.995	n.a.	n.a.	n.a.	0.00	0.00
17.390	431.920	5.144	2173.8	2173.8	401.769	1.194	1.56		Unsaturated	0.0			408.24	0.99	405.35	405.35	0.97	0.315	0.992	n.a.	n.a.	n.a.	0.00	0.00
17.550	382.600	2.982	2193.8	2193.8	354.141	0.782	1.44		Unsaturated	0.0			361.63	0.99	358.20	358.20	0.97	0.315	0.989	n.a.	n.a.	n.a.	0.00	0.00
17.720	323.680	4.152	2215.0	2215.0	297.998	1.287	1.66		Unsaturated	0.0			305.94	0.99	302.27	302.27	0.97	0.315	0.986	n.a.	n.a.	n.a.	0.00	0.00
17.880	278.220	3.450	2235.0	2235.0	254.844	1.245	1.69		Unsaturated	0.0			262.97	0.99	259.20	259.20	0.97	0.315	0.984	n.a.	n.a.	n.a.	0.00	0.00
18.040	288.400	1.998	2255.0	2255.0	263.023	0.696	1.49		Unsaturated	0.0			272.59	0.98	268.05	268.05	0.97	0.315	0.981	n.a.	n.a.	n.a.	0.00	0.00
18.210	300.470	2.703	2276.3	2276.3	272.782	0.903	1.57		Unsaturated	0.0			284.00	0.98	278.58	278.58	0.97	0.315	0.978	n.a.	n.a.	n.a.	0.00	0.00
18.370	333.250	3.934	2296.3	2296.3	301.324	1.184	1.63		Unsaturated	0.0			314.98	0.98	308.26	308.26	0.97	0.314	0.975	n.a.	n.a.	n.a.	0.00	0.00
18.540	314.670	4.464	2317.5	2317.5	283.149	1.424	1.71		Unsaturated	0.0			297.42	0.98	290.37	290.37	0.97	0.314	0.973	n.a.	n.a.	n.a.	0.00	0.00
18.700	364.890	5.331	2337.5	2337.5	327.088	1.466	1.68		Unsaturated	0.0			344.89	0.97	335.95	335.95	0.97	0.314	0.970	n.a.	n.a.	n.a.	0.00	0.00
18.860	350.740	5.259	2357.5	2357.5	313.018	1.504	1.70		Unsaturated	0.0			331.51	0.97	322.19	322.19	0.97	0.314	0.968	n.a.	n.a.	n.a.	0.00	0.00
19.030	345.510	4.639	2378.8	2378.8	306.945	1.347	1.67		Unsaturated	0.0			326.57	0.97	316.64	316.64	0.97	0.314	0.965	n.a.	n.a.	n.a.	0.00	0.00
19.190	359.090	4.156	2398.8	2398.8	317.709	1.161	1.61		Unsaturated	0.0			339.40	0.97	328.36	328.36	0.97	0.314	0.962	n.a.	n.a.	n.a.	0.00	0.00
19.360	357.130	4.109	2420.0	2420.0	314.570	1.155	1.61		Unsaturated	0.0			337.55	0.97	325.81	325.81	0.96	0.314	0.960	n.a.	n.a.	n.a.	0.00	0.00
19.520	373.950	3.174	2440.0	2440.0	328.074	0.852	1.49		Unsaturated	0.0			353.45	0.96	340.41	340.41	0.96	0.313	0.957	n.a.	n.a.	n.a.	0.00	0.00
19.690	395.840	3.536	2461.3	2461.3	345.829	0.896	1.50		Unsaturated	0.0			374.14	0.96	359.51	359.51	0.96	0.313	0.955	n.a.	n.a.	n.a.	0.00	0.00
19.850	355.390	3.448	2481.3	2481.3	309.117	0.974	1.56		Unsaturated	0.0			335.91	0.96	322.09	322.09	0.96	0.313	0.952	n.a.	n.a.	n.a.	0.00	0.00
20.010	286.310	3.317	2501.3	2501.3	247.816	1.164	1.68		Sand	0.0			270.61	0.96	258.93	258.93	0.96	0.313	0.950	400.285	836.439	2672.04	0.00	0.00
20.180	175.030	3.267	2522.5	2522.5	150.428	1.880	1.98		Sand	21.1	270.61		270.61	0.95	258.35	320.73	0.96	0.314	0.947	########	########	##########	0.00	0.00
20.340	75.690	2.687	2542.5	2542.5	64.169	3.611	2.43		Sand	57.7	270.61		270.61	0.95	257.81	377.49	0.96	0.315	0.945	########	########	##########	0.00	0.00
20.510	66.100	2.676	2563.8	2563.8	55.658	4.128	2.52		Sand	64.5	270.61		270.61	0.95	257.25	380.40	0.96	0.316	0.942	########	########	##########	0.00	0.00
20.670	39.670	2.445	2583.8	2583.8	29.707	6.371	2.84		Clay	90.5			37.50	0.95	n.a.	n.a.	0.96	0.318	n.a.	n.a.	n.a.	n.a.	0.00	0.00
20.830	41.990	1.907	2603.8	2603.8	31.253	4.688	2.73		Clay	81.8			39.69	0.95	n.a.	n.a.	0.96	0.319	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.000	25.280	1.270	2625.0	2625.0	18.261	5.297	2.94		Clay	98.4			23.89	0.94	n.a.	n.a.	0.96	0.320	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.160	16.210	1.030	2645.0	2645.0	11.257	6.919	3.18		Clay	100.0			15.32	0.94	n.a.	n.a.	0.96	0.321	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.330	12.690	0.953	2666.3	2666.3	8.519	8.391	3.32		Clay	100.0			11.99	0.94	n.a.	n.a.	0.96	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	11.450	0.715	2686.3	2686.3	7.525	7.074	3.32		Clay	100.0			10.82	0.94	n.a.	n.a.	0.96	0.323	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No.	6

PGA (A_{max})	0.50

Total Settlement:	0.16	(Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
21.650	13.330	0.588	2706.3	2706.3	8.851	4.905	3.16		Clay	100.0			12.60	0.94	n.a.	n.a.	0.96	0.324	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.820	13.790	0.493	2727.5	2727.5	9.112	3.970	3.10		Clay	100.0			13.03	0.94	n.a.	n.a.	0.96	0.325	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.980	12.080	0.526	2747.5	2747.5	7.793	4.915	3.21		Clay	100.0			11.42	0.93	n.a.	n.a.	0.96	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.150	10.600	0.602	2768.8	2768.8	6.657	6.529	3.34		Clay	100.0			10.02	0.93	n.a.	n.a.	0.96	0.327	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	10.180	0.590	2788.8	2788.8	6.301	6.710	3.36		Clay	100.0			9.62	0.93	n.a.	n.a.	0.96	0.328	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.470	10.070	0.527	2808.8	2808.8	6.170	6.076	3.35		Clay	100.0			9.52	0.93	n.a.	n.a.	0.96	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.640	8.300	0.489	2830.0	2830.0	4.866	7.099	3.47		Clay	100.0			7.84	0.93	n.a.	n.a.	0.96	0.330	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.800	7.710	0.463	2850.0	2850.0	4.411	7.373	3.51		Clay	100.0			7.29	0.92	n.a.	n.a.	0.96	0.331	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.970	8.820	0.457	2871.3	2871.3	5.144	6.185	3.41		Clay	100.0			8.34	0.92	n.a.	n.a.	0.95	0.332	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	9.110	0.441	2890.6	2882.5	5.318	5.748	3.38		Clay	100.0			8.61	0.92	n.a.	n.a.	0.95	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.290	8.870	0.456	2909.8	2891.7	5.129	6.152	3.41		Clay	100.0			8.38	0.92	n.a.	n.a.	0.95	0.334	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.460	8.630	0.442	2930.2	2901.5	4.939	6.163	3.43		Clay	100.0			8.16	0.92	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.620	8.800	0.467	2949.4	2910.7	5.033	6.372	3.43		Clay	100.0			8.32	0.92	n.a.	n.a.	0.95	0.335	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.790	9.290	0.474	2969.8	2920.5	5.345	6.076	3.40		Clay	100.0			8.78	0.92	n.a.	n.a.	0.95	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	10.180	0.457	2989.0	2929.7	5.929	5.263	3.32		Clay	100.0			9.62	0.92	n.a.	n.a.	0.95	0.337	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.110	10.150	0.463	3008.2	2938.9	5.884	5.353	3.33		Clay	100.0			9.59	0.92	n.a.	n.a.	0.95	0.338	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.280	11.490	0.499	3028.6	2948.7	6.766	5.006	3.26		Clay	100.0			10.86	0.92	n.a.	n.a.	0.95	0.339	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.440	13.730	0.466	3047.8	2957.9	8.253	3.816	3.12		Clay	100.0			12.98	0.92	n.a.	n.a.	0.95	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.610	12.350	0.421	3068.2	2967.7	7.289	3.896	3.17		Clay	100.0			11.67	0.91	n.a.	n.a.	0.95	0.341	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	9.530	0.511	3087.4	2977.0	5.365	6.392	3.41		Clay	100.0			9.01	0.91	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.930	7.990	0.799	3106.6	2986.2	4.311	12.405	3.66		Clay	100.0			7.55	0.91	n.a.	n.a.	0.95	0.342	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.100	8.170	1.118	3127.0	2996.0	4.410	16.921	3.74		Clay	100.0			7.72	0.91	n.a.	n.a.	0.95	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.260	31.430	1.297	3146.2	3005.2	19.870	4.344	2.86		Clay	91.6			29.71	0.91	n.a.	n.a.	0.95	0.344	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	55.930	1.553	3166.6	3015.0	43.033	2.857	2.49		Sand	61.9			52.86	0.84	44.53	106.24	0.95	0.345	0.960	0.146	0.182	0.53	0.03	0.03
25.590	50.840	1.680	3185.8	3024.2	32.569	3.412	2.63		Clay	73.2			48.05	0.91	n.a.	n.a.	0.95	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	46.560	1.676	3205.0	3033.4	29.642	3.728	2.68		Clay	77.7			44.01	0.91	n.a.	n.a.	0.95	0.347	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.920	50.580	1.383	3225.4	3043.2	38.593	2.825	2.52		Sand	64.4	62.14		62.14	0.85	52.53	117.17	0.95	0.347	0.956	0.165	0.216	0.62	0.03	0.03
26.080	60.910	0.935	3244.6	3052.4	46.657	1.577	2.29		Sand	46.4	62.14		62.14	0.84	52.19	110.36	0.95	0.348	0.958	0.153	0.193	0.55	0.03	0.03
26.250	65.740	0.790	3265.0	3062.2	50.369	1.232	2.20		Sand	39.0			62.14	0.84	51.93	105.73	0.94	0.349	0.959	0.145	0.180	0.52	0.03	0.03
26.410	55.640	0.750	3284.2	3071.4	42.362	1.389	2.29		Sand	46.4	62.14		62.14	0.84	52.03	110.16	0.94	0.350	0.957	0.152	0.192	0.55	0.03	0.03
26.570	33.460	0.578	3303.4	3080.6	20.651	1.817	2.61		Clay	72.1			31.63	0.91	n.a.	n.a.	0.94	0.350	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	18.210	0.425	3323.8	3090.4	10.709	2.566	2.93		Clay	97.7			17.21	0.90	n.a.	n.a.	0.94	0.351	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	11.830	0.386	3343.0	3099.6	6.555	3.795	3.21		Clay	100.0			11.18	0.90	n.a.	n.a.	0.94	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	9.450	0.423	3363.4	3109.4	4.997	5.441	3.39		Clay	100.0			8.93	0.90	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	7.880	0.430	3382.6	3118.6	3.969	6.953	3.54		Clay	100.0			7.45	0.90	n.a.	n.a.	0.94	0.353	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	6.710	0.395	3403.0	3128.4	3.202	7.881	3.64		Clay	100.0			6.34	0.90	n.a.	n.a.	0.94	0.354	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	6.200	0.368	3422.2	3137.7	2.861	8.198	3.69		Clay	100.0			5.86	0.90	n.a.	n.a.	0.94	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	6.300	0.371	3441.4	3146.9	2.910	8.099	3.68		Clay	100.0			5.95	0.90	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.890	6.840	0.342	3461.8	3156.7	3.237	6.688	3.60		Clay	100.0			6.47	0.90	n.a.	n.a.	0.94	0.356	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.050	6.850	0.349	3481.0	3165.9	3.228	6.826	3.60		Clay	100.0			6.47	0.90	n.a.	n.a.	0.94	0.357	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	6.570	0.345	3501.4	3175.7	3.035	7.152	3.64		Clay	100.0			6.21	0.90	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	7.110	0.345	3520.6	3184.9	3.359	6.443	3.58		Clay	100.0			6.72	0.90	n.a.	n.a.	0.94	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	6.980	0.338	3539.8	3194.1	3.262	6.491	3.59		Clay	100.0			6.60	0.90	n.a.	n.a.	0.94	0.359	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	6.830	0.333	3560.2	3203.9	3.152	6.584	3.60		Clay	100.0			6.46	0.90	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	6.450	0.331	3579.4	3213.1	2.901	7.105	3.65		Clay	100.0			6.10	0.90	n.a.	n.a.	0.94	0.360	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	6.040	0.347	3599.8	3222.9	2.631	8.193	3.72		Clay	100.0			5.71	0.89	n.a.	n.a.	0.94	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	6.400	0.351	3619.0	3232.1	2.841	7.651	3.68		Clay	100.0			6.05	0.89	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	6.970	0.411	3638.2	3241.3	3.178	7.979	3.65		Clay	100.0			6.59	0.89	n.a.	n.a.	0.94	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.530	8.070	0.852	3658.6	3251.1	3.839	13.644	3.72		Clay	100.0			7.63	0.89	n.a.	n.a.	0.93	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.690	9.490	1.209	3677.8	3260.3	4.693	15.799	3.70		Clay	100.0			8.97	0.89	n.a.	n.a.	0.93	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.860	27.880	1.428	3698.2	3270.1	15.920	5.487	3.00		Clay	100.0			26.35	0.89	n.a.	n.a.	0.93	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	63.730	1.552	3717.4	3279.4	46.975	2.509	2.42		Sand	56.6	76.11	1.8	137.00	0.87	118.52	199.10	0.93	0.365	0.886	1.797	3.503	9.60	0.00	0.00
30.180	80.520	1.481	3736.6	3288.6	59.632	1.883	2.26		Sand	43.8		1.8	136.99	0.86	117.84	191.16	0.93	0.365	0.895	1.189	2.341	6.41	0.00	0.00
30.350	45.860	1.524	3757.0	3298.4	26.669	3.464	2.70		Clay	78.8			43.35	0.89	n.a.	n.a.	0.93	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.510	29.640	1.567	3776.2	3307.6	16.781	5.646	2.99		Clay	100.0			28.02	0.89	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.680	30.020	1.843	3796.6	3317.4	16.954	6.554	3.03		Clay	100.0			28.37	0.89	n.a.	n.a.	0.93	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.840	30.060	2.245	3815.8	3326.6	16.926	7.973	3.09		Clay	100.0			28.41	0.89	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.000	37.570	1.721	3835.0	3335.8	21.376	4.826	2.86		Clay	92.1			35.51	0.89	n.a.	n.a.	0.93	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.170	53.940	0.978	3855.4	3345.6	39.097	1.881	2.40		Sand	55.0	132.32	1.66	219.65	0.89	194.65	295.33	0.93	0.369	0.863	########	########	932971.14	0.00	0.00
31.330	108.500	0.737	3874.6	3354.8	79.991	0.691	1.89		Sand	14.3	132.32	1.66	219.65	0.87	190.81	218.74	0.93	0.370	0.862	6.475	12.276	33.22	0.00	0.00
31.500	139.990	0.751	3895.0	3364.6	103.471	0.544	1.74		Sand	2.3		1.66	219.64	0.85	186.97	186.97	0.93	0.370	0.894	0.977	1.922	5.19	0.00	0.00
31.660	117.320	0.792	3914.2	3373.8	86.353	0.686	1.86		Sand	12.0	132.32	1.66	219.65	0.86	189.19	207.19	0.93	0.371	0.866	2.904	5.536	14.94	0.00	0.00
31.820	94.490	1.020	3933.4	3383.0	69.162	1.103	2.06		Sand	27.9	132.32	1.66	219.65	0.88	194.07	264.73	0.93	0.371	0.859	892.714	1687.495	4546.34	0.00	0.00
31.990	62.090	1.051	3953.8	3392.8	44.870	1.748	2.33		Sand	49.7	132.32	1.66	219.65	0.88	193.93	291.06	0.93	0.372	0.858	76673.786	########	389493.69	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 6

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
32.150	36.600	1.140	3973.0	3402.0	20.349	3.293	2.77		Clay	84.9			34.59	0.88	n.a.	n.a.	0.93	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	19.840	0.862	3993.4	3411.8	10.460	4.830	3.10		Clay	100.0			18.75	0.88	n.a.	n.a.	0.93	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	16.970	0.591	4012.6	3421.0	8.748	3.952	3.11		Clay	100.0			16.04	0.88	n.a.	n.a.	0.92	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.640	14.890	0.481	4031.8	3430.3	7.506	3.733	3.15		Clay	100.0			14.07	0.88	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.810	11.900	0.446	4052.2	3440.1	5.741	4.513	3.30		Clay	100.0			11.25	0.88	n.a.	n.a.	0.92	0.374	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	12.000	0.454	4071.4	3449.3	5.778	4.554	3.30		Clay	100.0			11.34	0.88	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	13.000	0.472	4091.8	3459.1	6.334	4.310	3.25		Clay	100.0			12.29	0.88	n.a.	n.a.	0.92	0.375	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	12.580	0.470	4111.0	3468.3	6.069	4.470	3.27		Clay	100.0			11.89	0.88	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	12.840	0.479	4130.2	3477.5	6.197	4.447	3.27		Clay	100.0			12.14	0.88	n.a.	n.a.	0.92	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.630	14.500	0.461	4150.6	3487.3	7.126	3.709	3.17		Clay	100.0			13.71	0.88	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.790	15.420	0.454	4169.8	3496.5	7.628	3.403	3.12		Clay	100.0			14.57	0.88	n.a.	n.a.	0.92	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.960	14.460	0.464	4190.2	3506.3	7.053	3.754	3.18		Clay	100.0			13.67	0.88	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.120	14.040	0.452	4209.4	3515.5	6.790	3.787	3.19		Clay	100.0			13.27	0.87	n.a.	n.a.	0.92	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.280	13.760	0.425	4228.6	3524.7	6.608	3.653	3.19		Clay	100.0			13.01	0.87	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.450	12.090	0.412	4249.0	3534.5	5.639	4.129	3.28		Clay	100.0			11.43	0.87	n.a.	n.a.	0.92	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.610	10.540	0.331	4268.2	3543.7	4.744	3.933	3.33		Clay	100.0			9.96	0.87	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.780	9.770	0.328	4288.6	3553.5	4.292	4.300	3.39		Clay	100.0			9.23	0.87	n.a.	n.a.	0.92	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.940	9.530	0.320	4307.8	3562.7	4.141	4.333	3.40		Clay	100.0			9.01	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.100	10.740	0.309	4327.0	3572.0	4.802	3.604	3.31		Clay	100.0			10.15	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.270	10.130	0.288	4347.4	3581.8	4.443	3.622	3.34		Clay	100.0			9.57	0.87	n.a.	n.a.	0.92	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.430	9.660	0.281	4366.6	3591.0	4.164	3.760	3.37		Clay	100.0			9.13	0.87	n.a.	n.a.	0.92	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.600	9.390	0.280	4387.0	3600.8	3.997	3.896	3.39		Clay	100.0			8.88	0.87	n.a.	n.a.	0.91	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.760	9.400	0.274	4406.2	3610.0	3.987	3.802	3.39		Clay	100.0			8.88	0.87	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.930	9.480	0.277	4426.6	3619.8	4.015	3.816	3.39		Clay	100.0			8.96	0.87	n.a.	n.a.	0.91	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.090	9.190	0.275	4445.8	3629.0	3.840	3.947	3.41		Clay	100.0			8.69	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.250	8.870	0.273	4465.0	3638.2	3.649	4.113	3.44		Clay	100.0			8.38	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.420	8.640	0.278	4485.4	3648.0	3.507	4.341	3.47		Clay	100.0			8.17	0.87	n.a.	n.a.	0.91	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.580	8.550	0.298	4504.6	3657.2	3.444	4.730	3.49		Clay	100.0			8.08	0.87	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.750	8.900	0.320	4525.0	3667.0	3.620	4.814	3.48		Clay	100.0			8.41	0.86	n.a.	n.a.	0.91	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.910	9.690	0.339	4544.2	3676.2	4.036	4.573	3.43		Clay	100.0			9.16	0.86	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.070	11.120	0.470	4563.4	3685.4	4.796	5.322	3.40		Clay	100.0			10.51	0.86	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.240	13.860	0.534	4583.8	3695.2	6.261	4.612	3.27		Clay	100.0			13.10	0.86	n.a.	n.a.	0.91	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.400	16.590	0.456	4603.0	3704.4	7.714	3.193	3.11		Clay	100.0			15.68	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.570	15.790	0.443	4623.4	3714.2	7.258	3.290	3.13		Clay	100.0			14.92	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	12.750	0.409	4642.6	3723.4	5.602	3.921	3.27		Clay	100.0			12.05	0.86	n.a.	n.a.	0.91	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.890	10.930	0.399	4661.8	3732.7	4.607	4.645	3.38		Clay	100.0			10.33	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.060	10.590	0.399	4682.2	3742.5	4.408	4.837	3.41		Clay	100.0			10.01	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.220	11.740	0.403	4701.4	3751.7	5.005	4.292	3.33		Clay	100.0			11.10	0.86	n.a.	n.a.	0.91	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.390	11.970	0.507	4721.8	3761.5	5.109	5.273	3.38		Clay	100.0			11.31	0.86	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	12.370	0.988	4741.0	3770.7	5.304	9.878	3.53		Clay	100.0			11.69	0.86	n.a.	n.a.	0.90	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	17.940	1.196	4760.2	3779.9	8.233	7.684	3.31		Clay	100.0			16.96	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.880	31.480	1.215	4780.6	3789.7	15.352	4.177	2.93		Clay	97.7			29.75	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.040	30.620	1.073	4799.8	3798.9	14.857	3.804	2.92		Clay	96.5			28.94	0.86	n.a.	n.a.	0.90	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.210	26.690	0.744	4820.2	3808.7	12.750	3.066	2.92		Clay	96.3			25.23	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	17.090	0.539	4839.4	3817.9	7.685	3.676	3.14		Clay	100.0			16.15	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.530	12.320	0.467	4858.6	3827.1	5.169	4.722	3.34		Clay	100.0			11.64	0.86	n.a.	n.a.	0.90	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.700	9.610	0.421	4879.0	3836.9	3.738	5.867	3.51		Clay	100.0			9.08	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.860	9.450	0.454	4898.2	3846.1	3.640	6.489	3.55		Clay	100.0			8.93	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.030	11.120	0.458	4918.6	3855.9	4.492	5.284	3.42		Clay	100.0			10.51	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	11.410	0.468	4937.8	3865.1	4.627	5.232	3.41		Clay	100.0			10.78	0.85	n.a.	n.a.	0.90	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.350	11.200	0.479	4957.0	3874.4	4.502	5.491	3.43		Clay	100.0			10.59	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.520	11.130	0.657	4977.4	3884.2	4.450	7.597	3.52		Clay	100.0			10.52	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.680	11.460	0.894	4996.6	3893.4	4.604	9.974	3.58		Clay	100.0			10.83	0.85	n.a.	n.a.	0.90	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.850	12.000	2.008	5017.0	3903.2	4.863	21.159	3.77		Clay	100.0			11.34	0.85	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.010	78.470	3.152	5036.2	3912.4	38.826	4.149	2.63		Clay	73.4			74.17	0.85	n.a.	n.a.	0.90	0.394	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.170	188.720	2.617	5055.4	3921.6	129.271	1.405	1.93		Sand	17.2			178.37	0.80	142.71	176.99	0.89	0.394	0.873	0.646	1.151	2.92	0.00	0.00
41.340	173.870	3.302	5075.8	3931.4	118.806	1.927	2.05		Sand	27.2			164.34	0.81	132.93	190.47	0.89	0.394	0.854	1.150	2.160	5.48	0.00	0.00
41.500	128.120	3.622	5095.0	3940.6	86.973	2.885	2.27		Sand	44.8			121.10	0.79	95.55	163.93	0.89	0.395	0.887	0.416	0.681	1.72	0.00	0.00
41.670	90.330	3.323	5115.4	3950.4	60.717	3.785	2.47		Sand	60.2	121.1		121.10	0.79	96.19	171.95	0.89	0.395	0.878	0.538	0.927	2.35	0.00	0.00
41.830	62.400	2.802	5134.6	3959.6	30.222	4.683	2.74		Clay	82.6			58.98	0.85	n.a.	n.a.	0.89	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
41.990	55.220	2.747	5153.8	3968.8	26.528	5.218	2.82		Clay	88.4			52.19	0.85	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.160	57.700	2.829	5174.2	3978.6	27.705	5.133	2.80		Clay	87.0			54.54	0.85	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.320	60.250	3.179	5193.4	3987.8	28.915	5.514	2.81		Clay	87.6			56.95	0.85	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.490	63.110	3.401	5213.8	3997.6	30.270	5.621	2.80		Clay	86.9			59.65	0.85	n.a.	n.a.	0.89	0.396	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CORNERSTONE EARTH GROUP

CPT No. 6

PGA (A_{max}) 0.50

Total Settlement: 0.16 (Inches)

Depth (ft)	q_c (tsf)	f_s (tsf)	S_{vc} (psf)	Insitu S'_{vc} (psf)	Q	F (%)	I_c	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q_{cN} near interfaces (soft layer)	Thin Layer Factor (K_H)	Interpreted q_{cN}	C_N	q_{c1N}	q_{c1N-CS}	Stress Reduction Coeff, r_d	CSR	K_s for Sand	CRR$_{M=7.5, s'vc = 1 atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε_v	Settlement (Inches)
42.650	74.240	2.923	5233.0	4006.8	35.751	4.080	2.65		Clay	75.0			70.17	0.84	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.810	64.070	2.540	5252.2	4016.1	30.599	4.133	2.70		Clay	79.3			60.56	0.84	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.980	48.650	2.484	5272.6	4025.8	22.859	5.398	2.88		Clay	93.0			45.98	0.84	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.140	47.760	2.830	5291.8	4035.1	22.361	6.272	2.93		Clay	97.1			45.14	0.84	n.a.	n.a.	0.89	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.310	60.180	2.829	5312.2	4044.9	28.443	4.919	2.78		Clay	85.3			56.88	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.470	67.890	2.114	5331.4	4054.1	32.177	3.242	2.62		Clay	72.3			64.17	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.640	43.090	1.240	5351.8	4063.9	19.889	3.068	2.76		Clay	84.0			40.73	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.800	24.920	0.812	5371.0	4073.1	10.918	3.652	3.02		Clay	100.0			23.55	0.84	n.a.	n.a.	0.89	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.960	14.720	0.694	5390.2	4082.3	5.891	5.775	3.35		Clay	100.0			13.91	0.84	n.a.	n.a.	0.88	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.130	12.760	1.218	5410.6	4092.1	4.914	12.118	3.61		Clay	100.0			12.06	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.290	20.950	1.641	5429.8	4101.3	8.892	8.998	3.33		Clay	100.0			19.80	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.460	45.860	2.002	5450.2	4111.1	20.985	4.641	2.86		Clay	91.7			43.35	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.620	68.950	2.650	5469.4	4120.3	32.141	4.002	2.68		Clay	77.3			65.17	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.780	91.010	4.259	5488.6	4129.5	42.749	4.825	2.65		Clay	74.7			86.02	0.84	n.a.	n.a.	0.88	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.950	122.960	4.504	5509.0	4139.3	81.233	3.747	2.38		Sand	53.2			116.22	0.77	89.72	160.97	0.88	0.400	0.882	0.381	0.607	1.52	0.00	0.00
45.110	121.050	4.102	5528.2	4148.5	79.847	3.468	2.36		Sand	51.6	116.22		116.22	0.77	89.55	160.03	0.88	0.400	0.882	0.372	0.588	1.47	0.00	0.00
45.280	91.680	4.106	5548.6	4158.3	42.760	4.618	2.63		Clay	73.6			86.65	0.84	n.a.	n.a.	0.88	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	97.490	4.021	5567.8	4167.5	63.784	4.246	2.49		Sand	62.0	139.46		139.46	0.79	110.64	191.08	0.88	0.400	0.839	1.185	2.186	5.46	0.00	0.00
45.600	147.550	4.186	5587.0	4176.8	97.385	2.892	2.24		Sand	42.3			139.46	0.78	109.33	179.41	0.88	0.400	0.857	0.709	1.264	3.16	0.00	0.00
45.770	156.110	4.934	5607.4	4186.6	103.016	3.218	2.26		Sand	43.8			147.55	0.79	116.73	189.79	0.88	0.401	0.840	1.113	2.057	5.13	0.00	0.00
45.930	174.050	4.248	5626.6	4195.8	114.938	2.481	2.14		Sand	34.5			164.51	0.80	131.17	199.04	0.88	0.401	0.822	1.791	3.239	8.08	0.00	0.00
46.100	199.280	3.475	5647.0	4205.6	131.712	1.769	1.99		Sand	22.5			188.36	0.80	150.35	201.05	0.88	0.401	0.817	2.005	3.606	8.99	0.00	0.00
46.260	210.990	2.376	5666.2	4214.8	139.404	1.141	1.84		Sand	10.3			199.42	0.77	153.28	163.41	0.88	0.401	0.876	0.409	0.659	1.64	0.00	0.00
46.420	221.560	2.181	5685.4	4224.0	146.317	0.997	1.79		Sand	5.8			209.41	0.77	160.41	161.02	0.88	0.401	0.878	0.382	0.606	1.51	0.00	0.00
46.590	218.480	2.063	5705.8	4233.8	144.082	0.957	1.78		Sand	5.2			206.50	0.76	157.48	157.76	0.88	0.402	0.881	0.349	0.543	1.35	0.00	0.00
46.750	222.810	2.206	5725.0	4243.0	146.810	1.003	1.79		Sand	5.9			210.60	0.77	161.18	161.83	0.87	0.402	0.876	0.391	0.622	1.55	0.00	0.00
46.920	226.580	2.414	5745.4	4252.8	149.147	1.079	1.80		Sand	7.2			214.16	0.77	164.67	166.97	0.87	0.402	0.870	0.456	0.750	1.86	0.00	0.00
47.080	229.800	2.462	5764.6	4262.0	151.124	1.085	1.80		Sand	7.0			217.20	0.77	167.28	169.29	0.87	0.402	0.867	0.492	0.819	2.04	0.00	0.00
47.240	250.160	2.728	5783.8	4271.2	164.499	1.103	1.78		Sand	5.4			236.45	0.78	184.96	185.32	0.87	0.402	0.843	0.907	1.669	4.15	0.00	0.00
47.410	286.060	3.248	5804.2	4281.0	188.160	1.147	1.75		Sand	3.1			270.38	0.81	217.86	217.86	0.87	0.402	0.789	6.063	10.518	26.14	0.00	0.00
47.570	320.020	2.936	5823.4	4290.2	210.494	0.926	1.65		Sand	0.0			302.48	0.83	250.28	250.28	0.87	0.403	0.788	134.611	233.348	579.70	0.00	0.00
47.740	378.540	3.574	5843.8	4300.0	249.048	0.952	1.61		Sand	0.0			357.79	0.83	296.74	296.74	0.87	0.403	0.787	########	########	1046815.57	0.00	0.00
47.900	402.190	4.144	5863.0	4309.2	264.439	1.038	1.62		Sand	0.0			380.14	0.83	315.10	315.10	0.87	0.403	0.787	########	########	##########	0.00	0.00
48.060	381.390	4.121	5882.2	4318.5	250.389	1.089	1.65		Sand	0.0			360.48	0.83	298.64	298.64	0.87	0.403	0.786	########	########	1561693.74	0.00	0.00
48.230	393.200	4.714	5902.6	4328.2	257.904	1.208	1.68		Sand	0.0			371.64	0.83	307.70	307.70	0.87	0.403	0.785	########	########	##########	0.00	0.00
48.390	405.990	4.203	5921.8	4337.5	266.067	1.043	1.62		Sand	0.0			383.73	0.83	317.53	317.53	0.87	0.403	0.785	########	########	##########	0.00	0.00
48.560	424.480	2.434	5942.2	4347.3	277.953	0.577	1.42		Sand	0.0			401.21	0.83	331.80	331.80	0.87	0.403	0.784	########	########	##########	0.00	0.00
48.720	426.960	2.652	5961.4	4356.5	279.286	0.626	1.44		Sand	0.0			403.55	0.83	333.55	333.55	0.87	0.404	0.783	########	########	##########	0.00	0.00
48.880	436.940	2.099	5980.6	4365.7	285.552	0.484	1.36		Sand	0.0			412.99	0.83	341.16	341.16	0.87	0.404	0.783	########	########	##########	0.00	0.00
49.050	452.630	2.682	6001.0	4375.5	295.539	0.596	1.41		Sand	0.0			427.82	0.83	353.20	353.20	0.87	0.404	0.782	########	########	##########	0.00	0.00
49.210	437.090	2.676	6020.2	4384.7	285.018	0.617	1.43		Sand	0.0			413.13	0.83	340.88	340.88	0.87	0.404	0.781	########	########	##########	0.00	0.00
49.380	381.620	2.030	6040.6	4394.5	248.312	0.536	1.43		Sand	0.0			360.70	0.82	297.45	297.45	0.87	0.404	0.781	########	########	1200091.19	0.00	0.00
49.540	312.770	1.196	6059.8	4403.7	202.937	0.386	1.42		Sand	0.0			295.62	0.82	241.03	241.03	0.86	0.404	0.780	47.867	82.153	203.25	0.00	0.00
49.700	290.050	1.000	6079.0	4412.9	187.848	0.348	1.42		Sand	0.0			274.15	0.80	219.10	219.10	0.86	0.404	0.779	6.659	11.419	28.24	0.00	0.00
49.870	281.280	2.374	6099.4	4422.7	181.900	0.853	1.67		Sand	0.0			265.86	0.79	210.68	210.68	0.86	0.404	0.779	3.645	6.250	15.45	0.00	0.00
50.030	261.900	3.486	6118.6	4431.9	169.047	1.347	1.83		Sand	9.7			247.54	0.79	194.81	204.14	0.86	0.405	0.796	2.405	4.211	10.41	0.00	0.00
50.200	155.230	3.146	6139.0	4441.7	99.266	2.068	2.13		Sand	33.2			146.72	0.76	111.86	174.02	0.86	0.405	0.852	0.579	0.983	2.43	0.00	0.00

CORNERSTONE EARTH GROUP

APPENDIX D: PREIOUS EXPLORATION LOGS AND LAB DATA

Berlogar Geotechnical Consultants (2007 and 2008)

N

0 50

1"=50'

DUPONT STREET

CPT-2

CPT-1

OFFICE (2-STORY) 4500

WAREHOUSE / SHOP 12,402 sq. ft.

OPEN SPACE

(E) BLDG TO REMAIN (N.I.C.)

(E) BLDG TO (N.I.C.)

DUPONT STREET

MC EVOY STREET

EXPLANATION

CPT-2 ▼ LOCATION OF CONE PENETROMETER TEST

FOOTPRINT OF EXISTING BUILDINGS TO BE DEMOLISHED

SITE PLAN
WAREHOUSE/OFFICE ADDITION

236 MCEVOY STREET
SAN JOSE, CALIFORNIA
FOR
AUTUMN LLC

Berlogar Geotechnical Consultants
SOIL ENGINEERS * ENGINEERING GEOLOGISTS

BASE: SITE PLAN PROVIDED VIA EMAIL BY BANDUCCI ASSOCIATES ARCHITECTS INC., RECEIVED 10-22-07

PLATE 2

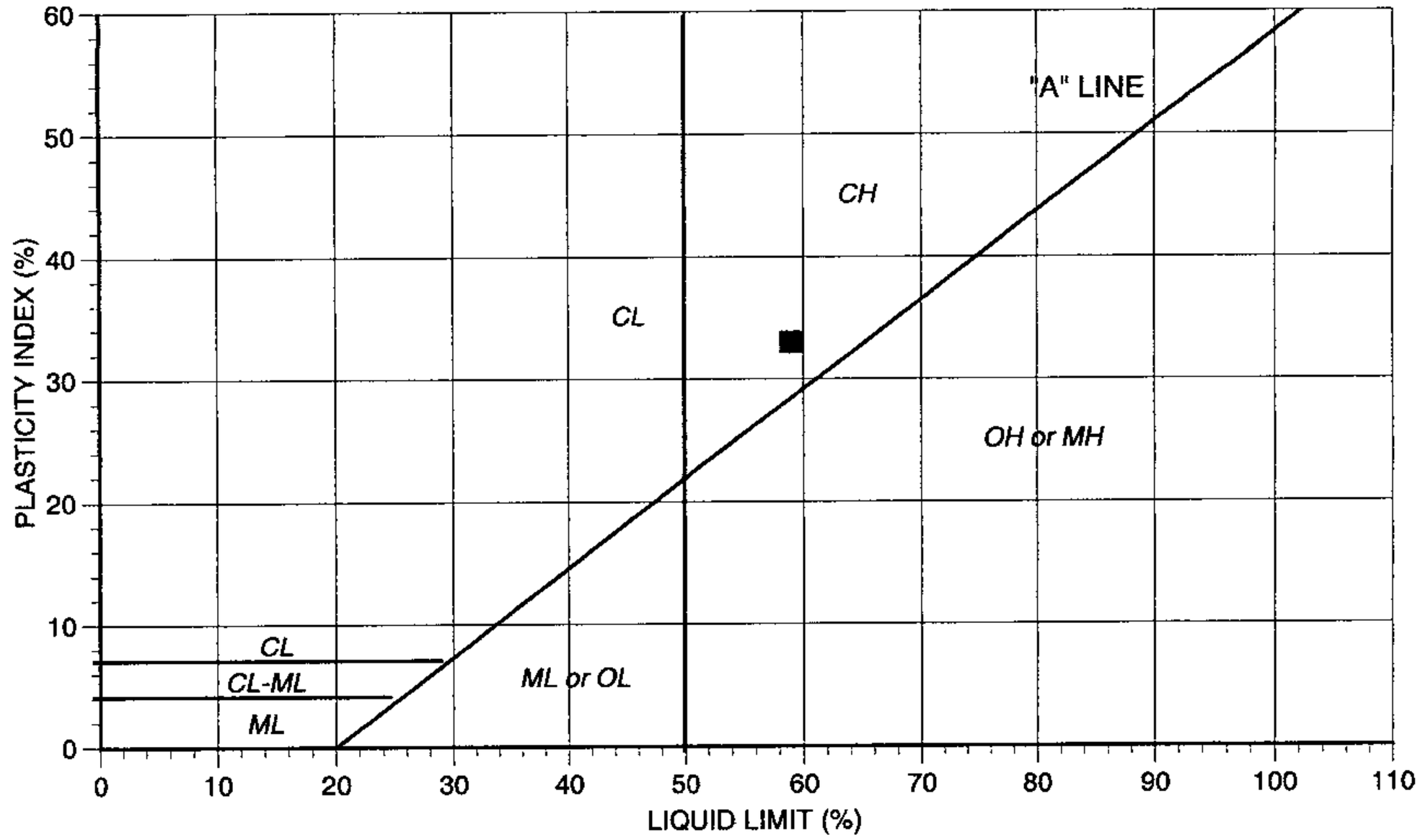
HAND-AUGERED BORING LOGS

Location	Depth (feet)	Description
CPT-1	0-1	Pavement Section: 3-inch asphalt concrete over 9-inch aggregate baserock (yellow brown clayey sand with gravel).
	1-2½	Silty Clay, very dark gray to black, moist, stiff, some fine sand, trace brick fragments (fill).
	2½-5	Silty Clay, very dark gray, moist, stiff.
		Total Depth 5 feet Groundwater not encountered
CPT-2	0 – 1	Pavement Section: 3-inch asphalt concrete over 9-inch aggregate baserock (yellow brown clayey sand with gravel).
	1-2½	Silty Clay, very dark gray to black, moist, stiff, some fine sand, trace brick fragments (fill).
	2½-4	Silty Clay, very dark gray, moist, stiff, some fine sand.
		Total Depth 4 feet Groundwater not encountered

BY: CC

DATE: 10-30-07

JOB NUMBER: 3023.200



SYMBOLS	LOCATION	LIQUID LIMIT	PLASTICITY INDEX	USCS CLASSIFICATION
■	CPT-1	59	33	C H

ATTERBERG LIMITS TEST DATA

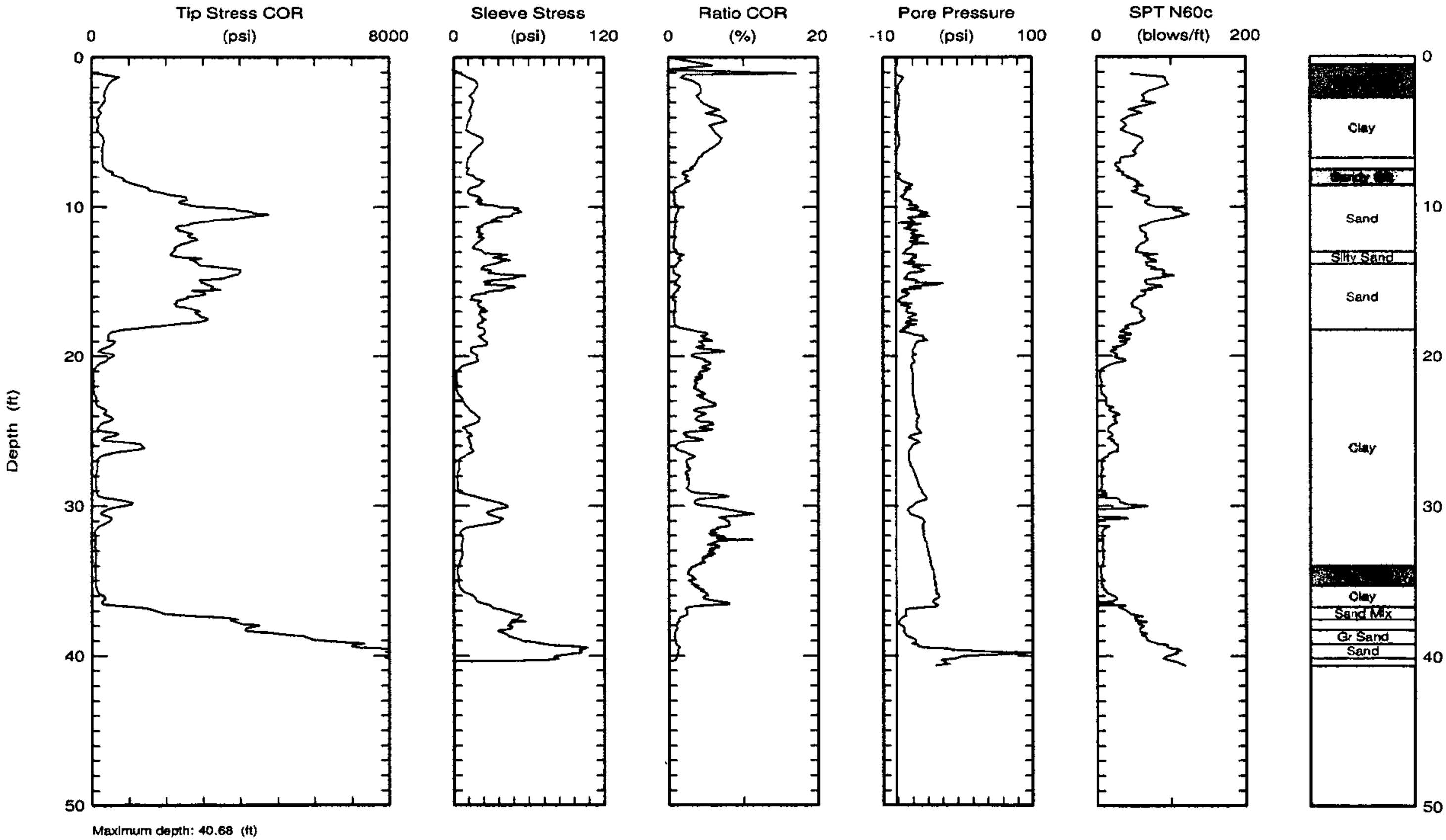
PLATE 4

BERLOGAR GEOTECHNICAL CONSULTANTS

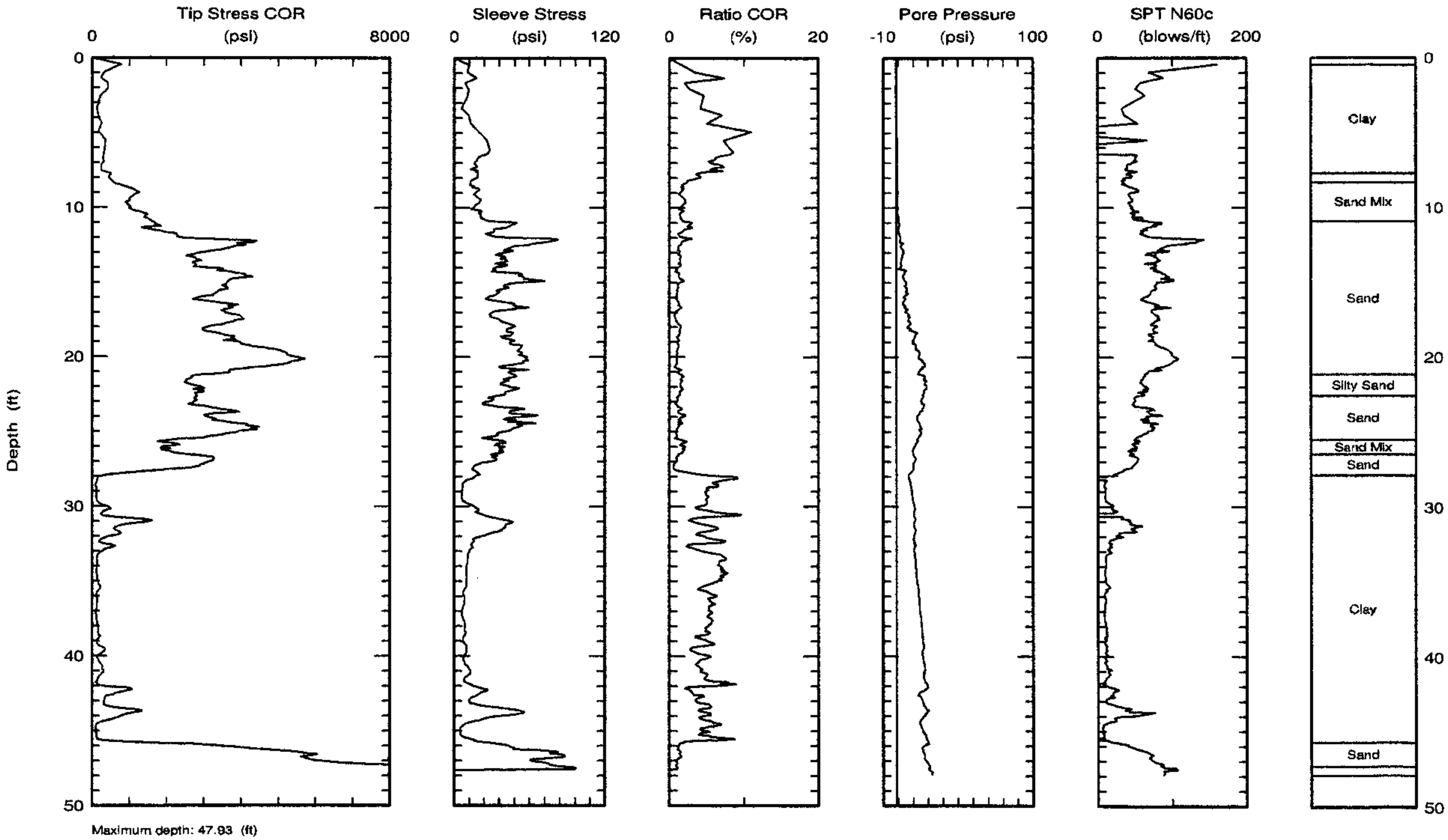
APPENDIX A

Cone Penetrometer Test Data

Test America Inc. Anaheim CA 714-939-6850 www.tadrillingcorp.com	Northing: Easting: Elevation:	Date: 15/Oct/2007 Test ID: cpt-01 Project: 07-2962
	Client: Berlogar Job Site:	



Test America Inc. Anaheim CA 714-939-6850 www.tadrillingcorp.com	Northing: Easting: Elevation:	Date: 15/Oct/2007 Test ID: cpt-02 Project: 07-2962
	Client: Berlogar Job Site:	

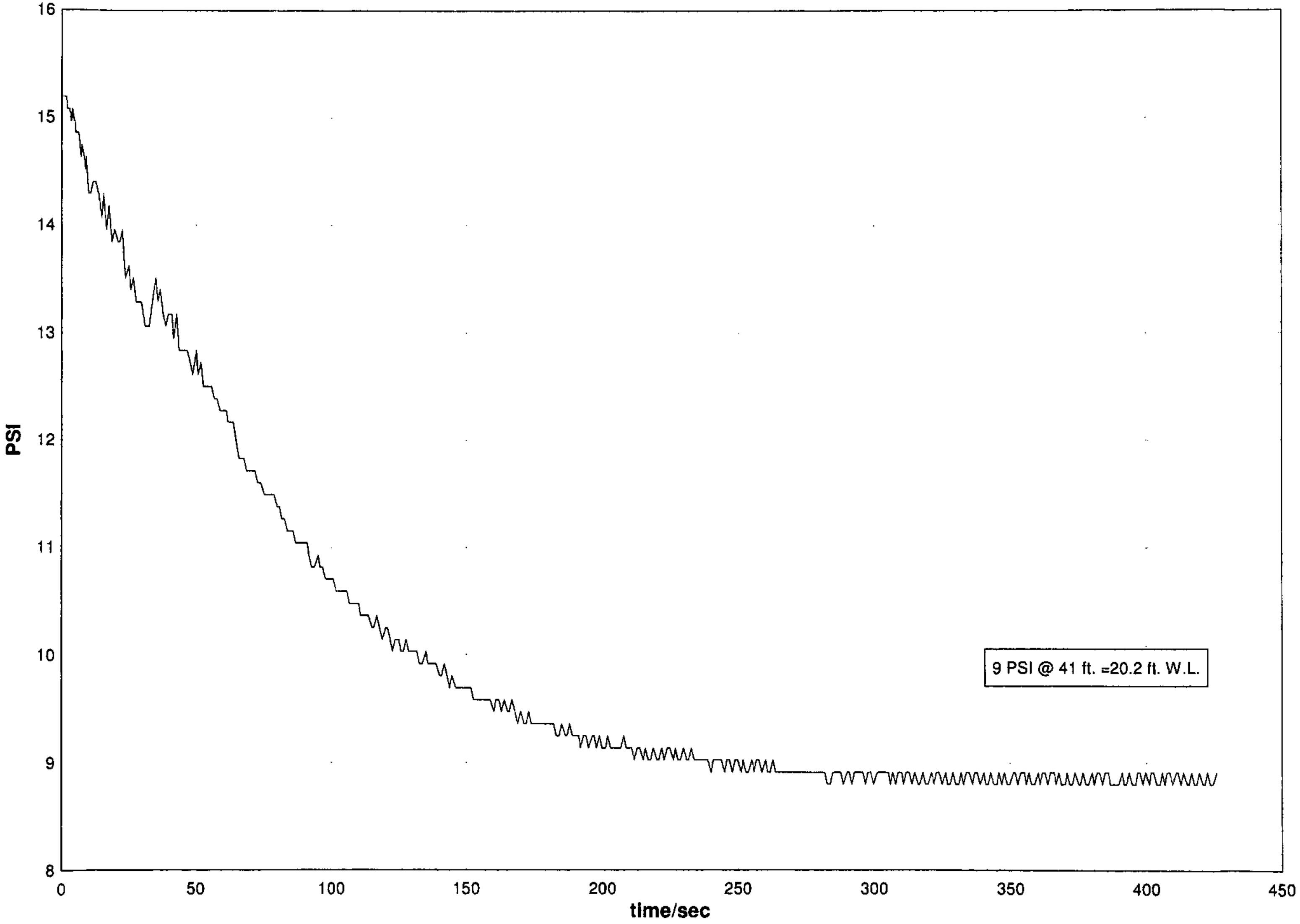


Maximum depth: 47.93 (ft)

Test America Drilling

Cone Penetrometer Test

Pore pressure dissipation test, depth 41 ft.



TestAmerica
DRILLING CORPORATION

1016 East Katella Avenue
Anaheim, CA 92805
(714) 939-6850
FAX (714) 939-6759

236 Mcevoy
San Jose, CA

October, 15 2007

Berlogar

Job # 07-2962

All work on site was completed using a Hogentogler 20-ton CPT rig. Soundings or logging of holes are achieved using a 1.75-inch piezocone. Vertec software was used to acquire and process data. Soil classification is defined based on Robertson 1986. Electronic data is presented as finished graphs in PDF format, and raw and processed data in Excel spreadsheets.

The work completed on site is as listed.
Cpt-01, 40ft.
Cpt-02, 48 ft

Water levels were not apparent based on dynamic pore pressure. Pore pressure dissipation tests indicate water levels at 22 ft. furthermore, both holes were measured for standing water, cpt-01 was at 22 ft., cpt-02 at 23 ft.

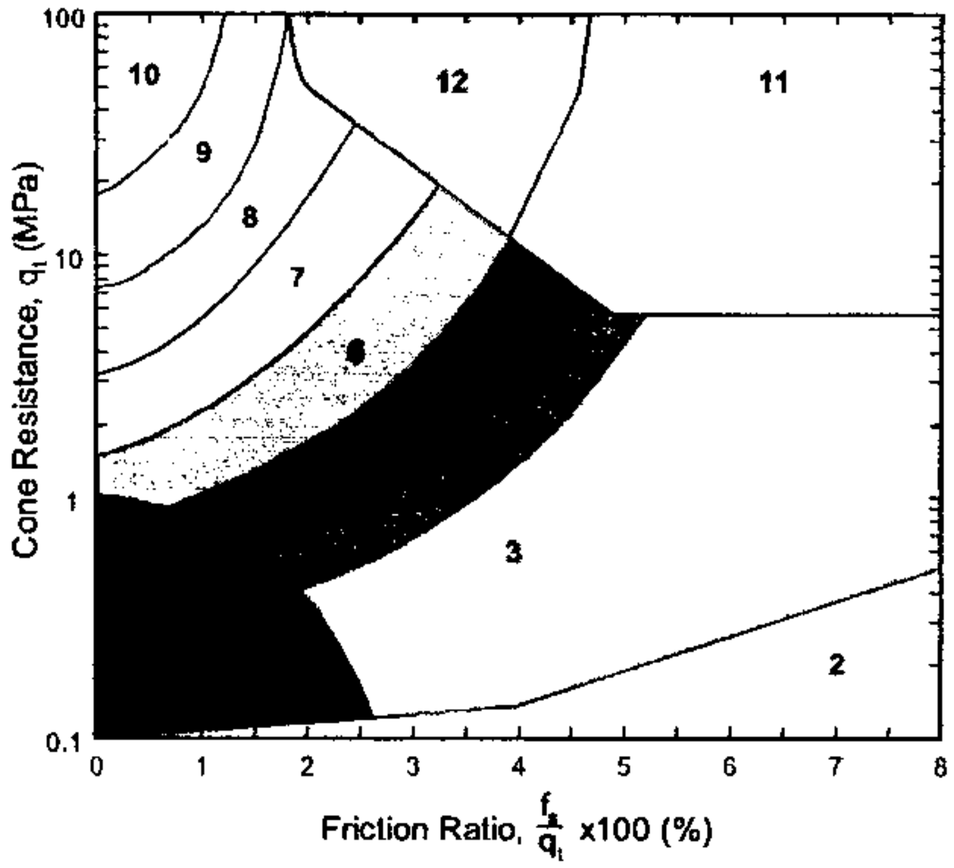
All holes were backfilled to surface with Portland cement using tremie pipe, and surface completion with ac patch.

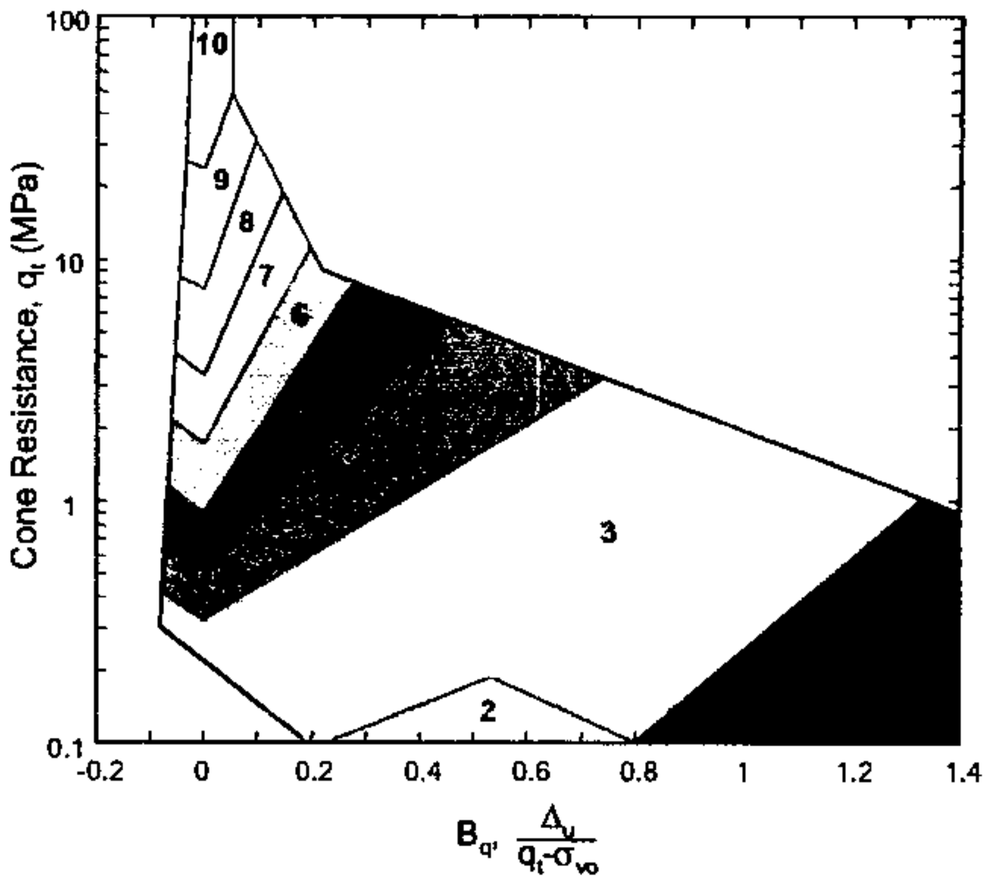
Note: Depths achieved may vary depending on equipment required for a particular task. Subsurface conditions can create serious hazards during cone penetration. Caution must be exercised or damage to equipment and crew is possible. Conditions for refusal may include one or more of the following: tip load, local friction load, excess pore pressure, rod friction, rod rebound, rig\ site instability, and rapid deviation of the cone.

Respectfully Submitted,

Bruce Bucknam, CPT Operator

CPT Soil Behavior Type Legend
(Robertson et al. 1986)





Zone		Soil Behavior Type
1		Sensitive, Fine Grained
2		Organic Material
3		Clay
4		Silty Clay to Clay
5		Clayey Silt to Silty Clay
6		Sandy Silt to Clayey Silt
7		Silty Sand to Sandy Silt
8		Sand to Silty Sand
9		Sand
10		Gravelly Sand to Sand
11		Very Stiff Fine Grained*
12		Sand to Clayey Sand*

*Overconsolidated or cemented

IMPORTANT!

Soil classification charts are generalized global charts that provide a guide to soil behavior types*. Post processing programs cannot provide site specific predictions of soil classification. However, site specific knowledge can help to further classify soils. It should be understood that derived frictions are averaged over 150 cm. and interbedding may not be described in detail. Fines content may also be affected by friction averaging. Other interpretation errors can occur from soil anomalies; Test America Drilling follows manufacture and ASTM guidelines to ensure the raw data obtained on site is accurate as possible. Caution must be exercised when interpreting information based on CPT data. Test America Drilling assumes no responsibility for errors in interpretation.

Depths achieved may vary depending on equipment required for a particular task. Subsurface conditions can create serious hazards during cone penetration. Caution must be exercised or damage to equipment and crew is possible. Conditions for refusal may include one or more of the following: tip load, local friction load, excess pore pressure, rod friction, rod rebound, rig\ site instability, and rapid deviation of the cone.

* "Soil behavior types" describe soils based on physical reaction of soil on the cone instrumentation, relative to CPT guidelines.

BORING LOG B-1

Job No.: 3023.201		**Client:** AUTUMN, LLC	**Elevation:**
Job Name: 236 McEVOY OFFICE AND WAREHOUSE		**Drill Method:** Hollowstem Auger	**Date Drilled:** 9-23-08

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
			0			
						ASPHALT CONCRETE 3 INCHES THICK UNDERLAIN BY AGGREGATE BASE
		13	5		CL	SANDY CLAY, light to medium brown-gray, moist, stiff, fine-grained sand, limonite stains
			10			
		28	15		SP	GRAVELLY SAND, light to medium gray-brown, moist, medium dense, fine-to medium-grained sand, fine to coarse gravel, trace silt and clay gravel up to ½ inch diameter
		25	20		SM	SILTY SAND, gray-brown, moist, medium dense, fine-grained sand

PLATE-9

BORING LOG B-1

Job No.: 3023.201	Client: AUTUMN, LLC	Elevation:
Job Name: 236 McEVOY OFFICE AND WAREHOUSE	Drill Method: Hollowstem Auger	Date Drilled: 9-23-08

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
		25	20		SM	SILTY SAND, gray-brown, moist, medium dense, fine-grained sand
		8	25		SC/CH	CLAYEY SAND and SANDY CLAY, mottled gray-brown and light brown-gray, moist, stiff to medium dense, fine-grained sand
		14	30		CL	SILTY and SANDY CLAY, brown-gray, moist to wet, stiff, fine-grained sand
		11	35		CL	SILTY CLAY, light brown-gray, moist to wet, stiff, trace fine-grained sand
		44			ML	SANDY SILT, gray-brown, saturated, dense, fine-to medium-grained sand
		65	40		SP	GRAVELLY SAND, gray-brown, saturated, very dense, fine-to coarse-grained sand, fine to coarse gravel

PLATE 10

BORING LOG B-1

Job No.:	3023.201	**Client:**	AUTUMN, LLC	**Elevation:**	
Job Name:	236 McEVOY OFFICE AND WAREHOUSE	**Drill Method:**	Hollowstem Auger	**Date Drilled:**	9-23-08

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
		65	40		SP	GRAVELLY SAND, gray-brown, saturated, very dense, fine-to coarse-grained sand, fine to coarse gravel
		37			SP	SAND, medium to dark gray-brown, saturated, dense, fine-to coarse-grained sand
			45			Boring terminated at 45 feet Groundwater encountered at 36-1/2 feet
			50			
			55			
			60			

PLATE 11

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			CLASSIFICATION SYMBOL	TYPICAL NAMES
COARSE GRAINED SOILS MORE THAN HALF OF THE MATERIAL IS LARGER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE TO NO FINES	GW	WELL GRADED GRAVELS, GRAVEL/SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL/SAND MIXTURES
		GRAVEL WITH OVER 12% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL/SAND/SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL/SAND/CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE TO NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, POORLY GRADED SAND/SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND/CLAY MIXTURES
FINE GRAINED SOILS MORE THAN HALF OF THE MATERIAL IS SMALLER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SILTS

KEY TO BORING LOG SYMBOLS

Depth in Feet	Moisture Content (%)	Dry Unit Weight (pcf)	Blows per foot	Unified Soil Classification System	
					Bulk Sample
					2.5-inch I.D. Split Barrel Sample
					2.8-inch I.D. Shelby Tube Sample
					No Sample recovered
					Standard Penetration Test interval
					Well-defined stratum changel
					Gradual stratum change
					Interpreted stratum change
					Apparent ground water level measured at date noted; seasonal weather conditions, site topography, etc., may cause fluctuations in water level indicated on boring logs
					Stabilized ground water level rneasured at date noted

Note: Soils described as dry, moist, and wet are estimated to be dry of optimum, near optimum, and more wet than optimum moisture content, respectively. Saturated soils are estimated to be within areas of free groundwater.

BY: CC

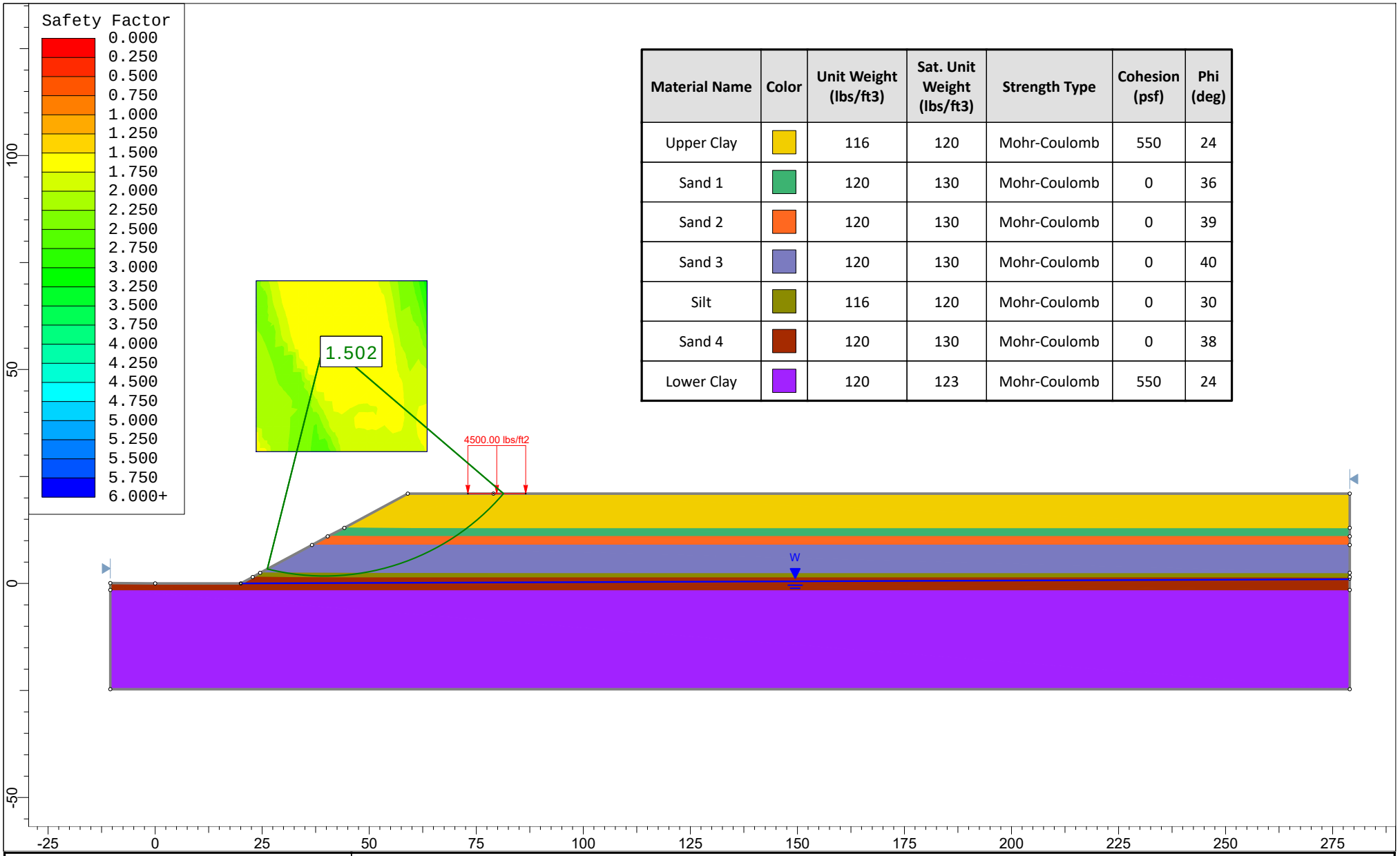
DATE: 09-25-08

JOB NUMBER: 3023.201

PLATE 12

CORNERSTONE EARTH GROUP

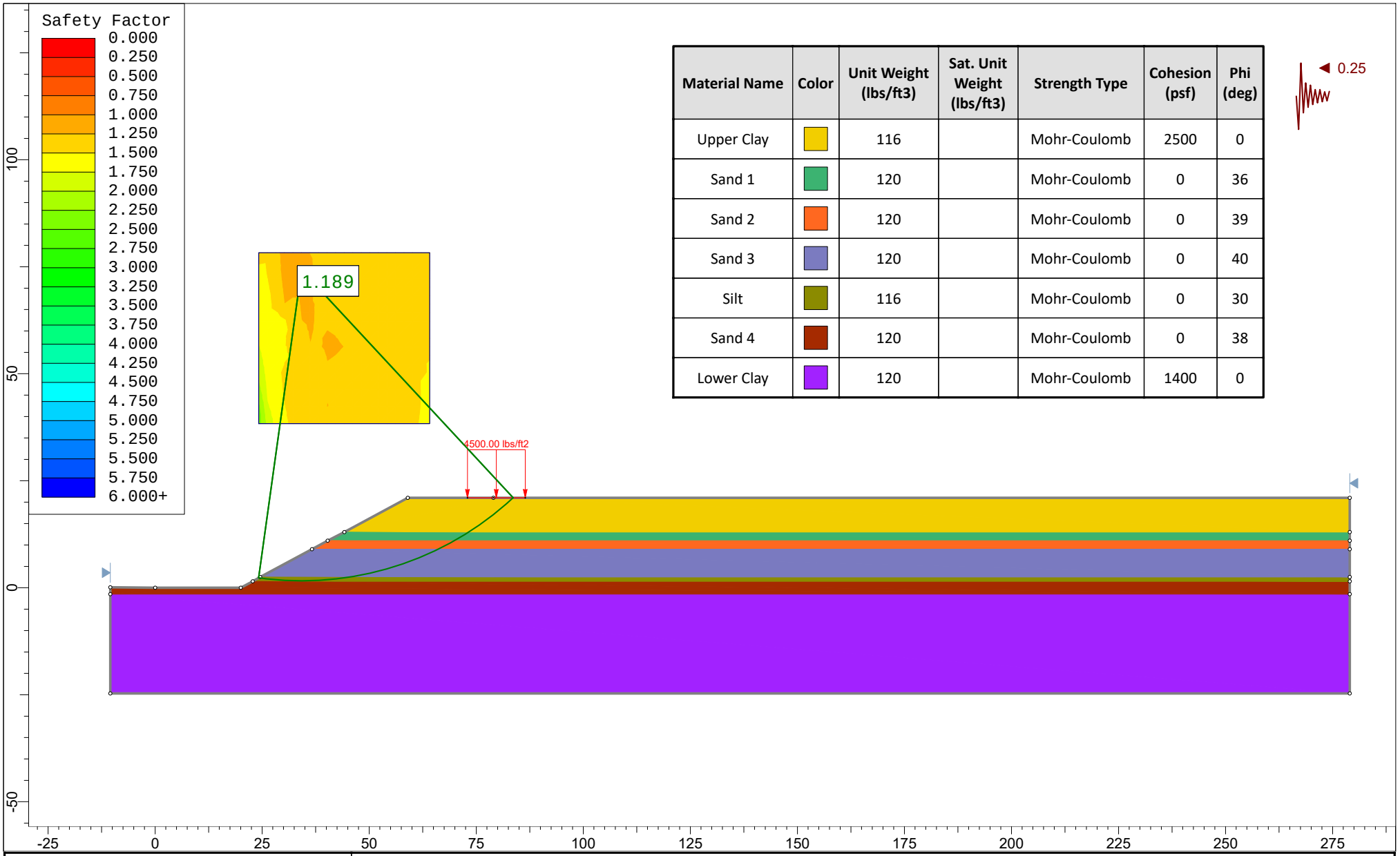
APPENDIX E: GRAPHICAL SLOPE STABILITY OUTPUT



Material Name	Color	Unit Weight (lbs/ft3)	Sat. Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Upper Clay		116	120	Mohr-Coulomb	550	24
Sand 1		120	130	Mohr-Coulomb	0	36
Sand 2		120	130	Mohr-Coulomb	0	39
Sand 3		120	130	Mohr-Coulomb	0	40
Silt		116	120	Mohr-Coulomb	0	30
Sand 4		120	130	Mohr-Coulomb	0	38
Lower Clay		120	123	Mohr-Coulomb	550	24

SLIDEINTERPRET 8.010

Project	Dupont Village		
Analysis Description	Northeast Slope Static		
Drawn By	MJS	Scale 1:372	Company Cornerstone Earth Group
Date	6-21-18		File Name Northeast Slope Static.slmd



Material Name	Color	Unit Weight (lbs/ft3)	Sat. Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Upper Clay		116		Mohr-Coulomb	2500	0
Sand 1		120		Mohr-Coulomb	0	36
Sand 2		120		Mohr-Coulomb	0	39
Sand 3		120		Mohr-Coulomb	0	40
Silt		116		Mohr-Coulomb	0	30
Sand 4		120		Mohr-Coulomb	0	38
Lower Clay		120		Mohr-Coulomb	1400	0

rocscience

SLIDEINTERPRET 8.010

Project	Dupont Village		
Analysis Description	Seismic Analysis		
Drawn By	MJS	*Scale* 1:372	*Company* Cornerstone Earth Group
Date	6-19-18		*File Name* Northeast Slope Seismic.slmd