REVISED UPDATE GEOTECHNICAL EVALUATION TENTATIVE TRACT MAP NO. 38541, 33 ACRES OF VACANT LAND AT THE SOUTHEAST CORNER OF WINEVILLE AVENUE AND LIMONITE AVENUE CITY OF JURUPA VALLEY, RIVERSIDE COUNTY, CALIFORNIA

DIVERSIFIED PACIFIC COMMUNITIES

July 16, 2024
J.N. 21-392
REVISION 1

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DIVERSIFIED PACIFIC COMMUNITIES
10621 Civic Center Drive
Rancho Cucamonga, California 91730

Attention: Mr. Jason Holt

Subject: **Revised Update Geotechnical Evaluation, Tentative Tract Map No. 38541, 33 Acres of Vacant Land at the Southeast Corner of Wineville Avenue and Limonite Avenue, City of Jurupa Valley, Riverside County, California**

References: See Attached List

Dear Mr. Holt:

Petra Geosciences, Inc. (Petra) is submitting herewith an update geotechnical evaluation for development of the proposed subject residential project, located in the city of Jurupa Valley, Riverside County, California. The update was performed in general accordance with the scope of services outlined in our Proposal No. 21-392P, dated September 30, 2021, and Amendment No. 5 dated September 5, 2023. This report is in response to second plan check comments, dated June 19, 2023 (received August 28, 2023), by a third-party reviewer for the City of Jurupa Valley (Ninyo and Moore), and updating recommendations and seismic design parameters in accordance with the 2022 California Building Code (CBC). This revision is based upon 3rd plan check comments by the City of Jurupa Valley, dated June 21, 2024 (received June 26, 2024) and third-party geotechnical review comments by Ninyo & Moore dated June 11, 2024 (received June 26, 2024). This revised report incorporates and supersedes the findings, conclusions and recommendations, as appropriate, presented in our previous reports dated July 8, 2022 and November 7, 2023.

It has been a pleasure to be of service to you on this project. Should you have any questions regarding the contents of this report, or should you require additional information, please do not hesitate to contact us.

Respectfully submitted,

PETRA GEOSCIENCES, INC.

Edward Lump, CEG
Associate Geologist

Grayson R. Walker, GE
Principal Engineer

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ATTACHMENTS

FIGURE 1 – SITE LOCATION MAP

FIGURES 2 - 4 – GEOTECHNICAL MAPS

APPENDIX A – BORING AND TEST PIT LOGS

APPENDIX B – CPT RESULTS AND LIQUEFACTION ANALYSIS

APPENDIX C – SEISMIC DESIGN PARAMETERS

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REVISED UPDATE GEOTECHNICAL EVALUATION
TENTATIVE TRACT MAP NO. 38541, 33 ACRES OF VACANT LAND AT THE SOUTHEAST CORNER OF WINEVILLE AVENUE AND LIMONITE AVENUE
CITY OF JURUPA VALLEY, RIVERSIDE COUNTY, CALIFORNIA

PURPOSE AND SCOPE OF SERVICES

Petra Geosciences, Inc. (Petra) is presenting herein the results of our revised update geotechnical evaluation for the subject property. The purposes of evaluation initially were to: 1) supplement information regarding surface and subsurface geologic conditions within the subject property; 2) evaluate engineering properties of the onsite soil materials; and 3) provide conclusions and recommendations for design and construction of the proposed development. In addition, the update included: 1) response to third-party plan check comments; 2) update recommendations and seismic design parameters in accordance with the 2022 CBC; and 3) review of updated conceptual grading plans of the project. Our total scope of services to date included the following:

1. Reviewed available published and unpublished literature and maps pertaining to regional faulting, seismic hazards and soil and geologic conditions within and adjacent to the site that could have an impact on the proposed development.

2. Reviewed data presented in our design phase geotechnical evaluation report on the subject property (dated July 8, 2022), and a preliminary geotechnical report on the subject property by LGC Inland, Inc., dated September 28, 2005.

3. Reviewed City of Jurupa Plan Check Comments (3rd Submittal), dated June 21, 2024.

4. Reviewed updated conceptual grading plans by Madole and Associates, Inc, dated February 24, 2023.

5. Excavated, sampled, and logged 12 exploratory test pits to a maximum depth of 6 feet below the ground surface. Test pits were excavated using a rubber-tired backhoe. In addition, 5 Cone Penetration Test (CPT) soundings were advanced to a maximum depth of approximately 45 feet below the ground surface within the subject site, where practical refusal was achieved.

6. Performed laboratory testing of representative disturbed bulk samples of earth materials obtained from the test pits to determine their engineering properties.

7. Performed engineering and geologic analyses of the field and laboratory data, as they pertain to the proposed construction of a pedestrian bridge over the south edge of Day Creek Channel.

8. Updated our evaluation of faulting and seismicity of the region in accordance with the 2022 CBC, including an assessment of liquefaction and dynamic settlement associated with the potential impact of strong ground motion on the site and the proposed development. With the exception of a slope stability analysis, items requested in the second plan check comments are incorporated in this report.

9. Evaluated faulting and seismicity of the region, including an assessment of liquefaction and dynamic settlement associated with the potential impact of strong ground motion on the site and the proposed development.

10. Prepared this report presenting our findings, conclusions and recommendations for remedial site grading and design of the residential building foundation systems, only.

LOCATION AND SITE DESCRIPTION

The subject site is rectangular in shape, located at the southeast corner of Limonite Avenue and Wineville Avenue in the city of Jurupa Valley, Riverside County, California. The property is bounded by 63rd Street to the south, Wineville Avenue to the west and by Limonite Avenue to the north. Commercial development bounds the subject property on the east. Topographically, the subject site slopes toward Day Creek Channel with a central rim elevation of approximately 645 feet above mean sea level (msl). A knoll is situated on the western end of the subject property with a peak elevation of approximately 665 feet above msl. The eastern portion of the subject property slopes upward from the improved drainage channel to approximately 660 feet above msl within the east central portion of the subject site. A site location map is included as Figure 1.

Day Creek Channel divides the subject property into west and east portions of similar area. The site is approximately 33 acres of vacant land, comprising Assessor's Parcel Numbers (APNs) 157-250-011 (east parcel) and -13 (west parcel). A thin to locally thick layer of native vegetation covers a majority of the subject property. Dirt roads exist in proximity to Day Creek Channel, including what appears to be an off-road track and a small horse training track. Vegetation clearings were observed along the northern and southern edges of the subject site. Sewer manholes exists within a raised fill embankment extending north from Dana Avenue to Limonite Avenue. An aerial photograph showing surficial conditions of the subject site is included as Figure 2.

PROPOSED DEVELOPMENT

Construction and Grading

A Site Development Permit with Conceptual Grading Plan prepared by Madole and Associates, Inc., dated February 24, 2023, depicts Day Creek Channel separating the subject property into two areas of development: the west portion, which includes residential and retail development, and the east portion, which consists of entirely of residential development. Improvements to Limonite Avenue, Wineville Avenue, and 63rd Street are planned. Individual retaining walls, anticipated to be up to 4 to 5 feet in height, are proposed locally along the perimeter of the market area; however, a two-tiered retaining wall system is proposed along the northern boundary of the commercial site with an overall slope height of approximately 8 to 10 feet.

Conceptual plans depict four retail buildings proposed with parking lot areas, drive isles, and an underground infiltration area for the western portion of the subject property. A graded slope is planned along the west side of the retail site, descending to Wineville Avenue on the west. Pad elevations of the retail building pads are provided on the conceptual plans by Madole (dated February 24, 2023), ranging from 64.6 feet above mean sea level (msl) to 61.8 feet above msl. The conceptual grading plans show graded slopes will be on the order of 10 feet in maximum height. Access to the commercial area will be via an interior street (A Street) intersecting both Limonite Avenue and 63rd Street. A buried water quality chamber is planned for the parking area of the retail site. Residential development is planned east of A Street.

C Street will also provide access to the residential development west of Day Creek Channel. An existing sewer main is located in/near the alignment of C Street, continuing south in an easement between building pads to the offsite intersection of Dana Avenue and 63rs Street. A "tot lot" is planned at the south end of C Street, with a "hitching area" proposed to the southwest near Day Creek Channel and 63rd Avenue. The conceptual grading Plan prepared by Madole and Associates, dated February 24, 2023, depicts a community pool and recreation area proposed east of A Street. Overall, the residential development includes 34 single- and multi-family residential building pads west of Day Creek Channel and 79 single-family residential pads to the east.

Along the south site boundary, 63rd Street will end at existing Dana Avenue west of Dry Creek Channel and a cul-de-sac will be created to the end of 63rd Street east of the channel. A "dog park and community garden" is planned for the north side of the cul-de-sac. A pedestrian bridge will link the two sides of 63rd Street. East of Dry Creek Channel, Lucretia Avenue will be extended north from 63rd Street to Limonite Avenue. In the northeast portion of the subject site, E Street will provide access to Limonite Avenue. A "tot lot" is planned for the south end of E Street.

A typical grading detail on the residential plans shows detached units will be constructed with slightly variable pad elevations along the southern portion of the subject property. Attached units are planned for the central and north portions of the subject site. A typical detail on the conceptual grading plans show alley streets driveway will be provided for each set of attached-units residences. Proposed residences are assumed to be of wood-frame construction with first floor slabs constructed on-grade. The development will also consist of interior streets, underground infrastructure including sewer, storm drain, water, and joint utility lines, as well as concrete sidewalks/flatwork and landscaped areas. Buried water quality chambers are planned for the southwest and southeast sides of Dry Creek Channel.

Conceptual residential building pad elevations are also provided, ranging from approximately 650 feet msl to 671 feet msl east of Dry Creek Channel. West of Dry Creek Channel, proposed grades within the

residential area range from approximately 51 feet to 58 feet above msl. A three-foot maximum height retaining wall is planned intermittently along the north boundary of the residential portion of the development. We do not anticipate significant slopes to be constructed over 5 feet in height within the residential portion of the subject development.

Infiltration Systems

Residential Area

Within the residential portion of the subject property, one underground infiltration chamber is proposed for the dog park and community garden area on the east side of Dry Creek Channel and north of 63rd Street. The second underground infiltration chamber is planned for "Hitching Area West" on the west side of Dry Creek Channel.

Preliminary design of the infiltration chambers is provided in the Preliminary Water Quality Management Plan (WQMP) for the subject property by Madole and Associates, Inc., dated February 17, 2023. Infiltration rates have been calculated for these areas by percolation testing (Petra, 2022). Results are summarized herein in Table 5 and presented in Appendix E. Favorable subsurface infiltration rates were measured in the residential area, which is underlain by young alluvium.

As shown on the WQMP, Contech pretreatment clarifiers are to be constructed prior to runoff entering the chambers. The clarifier removes the first flush debris from the stormwater before it reaches the underground chamber system. The buried chambers are Contech CMP Retention/Infiltration Systems consisting of a perforated retention pipe holding the water quality runoff volume while the underlying gravel and soils filter the water via infiltration into the surrounding soils. The pipes will be 118 feet in length on the west side of Dry Creek Chanel and 100 feet in length on the east side. The diameter of the pipes is proposed as 96-inches. A non-woven geotextile layer will be placed between the specified granular backfill and overlying native soil fill, and below the gravel bottom. Flows exceeding the system retention volume will be routed to the adjacent existing concrete channel. From a conceptual standpoint, the system will be approximately 13 to 14 feet below the proposed finish grade, and consist of 2 feet of surface cover, 1 foot of rock, 8-foot diameter pipe, and 2 feet of a gravel bed.

The preliminary infiltration system design depth on the west side of Dry Creek Channel is 636 feet above msl at a distance of approximately 85 linear feet from the closest channel wall. The system depth on the east side of Dry Creek Channel is 639 feet above msl at a distance of approximately 140 linear feet from the closest channel wall. The elevation of the flowline of the channel is approximately 634 to 636 feet above msl. The unfactored infiltration rate on the west side of the channel is 11.3 inches per hour and 4.3 inches

per hour on the east. Considering the depth and distance of the system relative to the channel walls, we do not anticipate infiltration water to build up behind the channel retaining walls.

Retail Area

Within the retail portion of the subject property, one underground infiltration chamber is proposed for the parking lot area south of the Retail 2 building. Compared to the residential area, slower infiltration rates were measured in the retail area, which is underlain by old alluvium (Petra, 2022). It is our understanding that the type and design of this system will be similar to that described above, except the pipe length is 66 feet in length.

LITERATURE REVIEW

General

Petra researched and reviewed available published and unpublished geologic data pertaining to regional geology, faulting and geologic hazards that may affect the site. The results of this review are included within this report.

Previous Reports

Petra was provided a Preliminary Geotechnical Investigation report for the subject property prepared by LGC Inland, Inc. (LGC), dated September 28, 2005, as well as a Grading Plan Review and Response to the County of Riverside by LGC, dated December 20, 2006. A summary of pertinent information provided in these reports is provided below. *Pertinent comments by Petra are provided within the summary.*

LGC, September 28, 2005

The purposes of this preliminary geotechnical investigation were to determine the nature of surface and subsurface soil conditions, evaluate their in-place characteristics, and then provide preliminary grading and foundation design recommendations based on the accompanying site map provided by the client, Ben Chai Group.

Location and Site Description

The subject site is located along the south side of Limonite A venue between Wineville A venue and Lorena A venue in the Mira Loma area of Riverside County, California. The topography of the site is relatively flat, with slopes descending into Day Creek just west of Lucretia Avenue. The general elevation of the property ranges approximately from 657 to 675 feet above mean sea level (msl), with local drainage generally being directed to the south.

No underground structures are known to exist at the site. The site is currently an undeveloped parcel. A concrete-lined drainage ditch (Day Creek) cuts south across the middle of the property. The site is bounded by Limonite Avenue to the north, Wineville Avenue to the west, 63rd Street to the south and an open parcel

to the east. Charles Avenue is just west of the eastern boundary of the site. Existing residential properties are present to the north and south of the site. Vegetation consists of a light cover of annual weeds/grasses.

Proposed Development and Grading

The proposed residential development is expected to consist of wood framed one- and two-story structures utilizing slab on ground construction with associated streets, landscape areas, and utilities. The proposed development includes 45 lots scattered throughout the site.

The proposed commercial section of the development is expected to consist of concrete tilt-up slab-on-ground structure(s) to be constructed within the portion of the subject property west of Frank Avenue. Formal plans have not been prepared and await the conclusions and recommendations of this report.

Since the site has never been rough graded and due to the elevations of the existing development to the south, LGC assumes that existing grade elevations will remain essentially unchanged. Cuts and fills should be less than about 10 feet in height.

Investigation and Laboratory Testing

Subsurface exploration within the subject site was performed on August 16th and August 17th, 2005 for the exploratory borings. A hollow-stem-auger drill rig was utilized to drill 14 borings throughout the site to depths ranging from 26 to 51 feet.

Associated with the subsurface exploration was the collection of bulk (disturbed) samples and relatively undisturbed samples of soil materials for laboratory testing.

No strong geomorphic lineaments were interpreted to project through the site during our review of aerial photographs of the subject property. Geomorphic evidence of active landsliding was not observed on the site.

Findings

Local Geology and Soil Conditions

The earth materials on the site are primarily comprised of Quaternary young and old alluvial channel deposits and old alluvial fan deposits.

- Quaternary Young Alluvial Channel Deposits (map symbol Qya): Quaternary young alluvial channel deposits were encountered along the central and eastern portions of the property. This alluvial unit consists predominately of yellow brown to olive brown, fine to medium grained silty sand, fine to coarse grained sand, and sandy silt. This unit is generally moist and loose to medium dense (medium stiff) in condition.

- Quaternary Old Alluvial Channel Deposits {map symbol Qoa): Quaternary old alluvial channel deposits were encountered within the proposed commercial development in the western portion of the site. These materials primarily consisted of clayey sand, silty sand, sandy clay, and some sandy silt that were generally orange to yellowish brown, and medium dense to very dense.

- Quaternary Old Alluvial Fan Deposits (map symbol Qof): Quaternary old alluvial fan deposits were encountered mantling the majority of the site. The very old fan deposits consist predominately of reddish brown to yellow brown, clayey sand, sand and sandy silt, and occasional sandy clay. This unit is generally moist to very moist and medium dense to dense (hard) in condition.

Groundwater

Groundwater was not encountered to the maximum depth explored, approximately 51 feet.

Faulting

The geologic structure of the entire Southern California area is dominated by northwest-trending faults associated with the San Andreas Fault system. Faults, such as .the Newport-Inglewood, Whittier-Elsinore, San Jacinto and San Andreas are major faults in this system, and all are known to be active. In addition, the San Andreas, Elsinore, and San Jacinto faults are known to have ruptured the ground surface in historic times.

Based on our review of published and unpublished geologic maps and literature pertaining to the site and regional geology, the closest active fault producing the highest anticipated peak ground acceleration at site is the Chino-Central Avenue Fault located approximately 12.2 kilometers to the southwest. This fault is capable of producing a moderate magnitude earthquake. No active faults are known to project through the site and the site does not lie within an Alquist-Priolo Earthquake Fault Zone (previously called an Alquist-Priolo Special Studies Zone).

Landslides

No landslide debris was noted during our subsurface exploration and no ancient landslides are known to exist on the site.

Conclusions and Recommendations

Site Suitability

From a soils engineering and engineering geologic point of view, the subject property is considered suitable for the proposed development, provided the following conclusions and recommendations are incorporated into the design criteria and project specifications.

Earthwork

- All earthwork and grading should be performed in accordance with all applicable requirements of the Grading and Excavation Code and the Grading Manual of the appropriate reviewing agency, in addition to the provisions of the 1997 Uniform Building Code (UBC), including Appendix Chapter 33.

- All existing low density and potentially collapsible soil materials, such as topsoil, loose manmade fill, and the upper loose alluvium, old fan deposits, and/or older alluvium should be removed to underlying competent alluvium, old alluvial fan deposits, or older alluvium, from each area to receive compacted fill. Dense native soils are subject to verification by the project engineer, geologist, or their representative. Prior to placing structural fills, the exposed bottom surfaces in each removal area should first be scarified to a depth of 6 inches or more, watered or air dried as necessary to achieve near-optimum moisture conditions and then re-compacted in place to a minimum relative compaction of 90 percent.

- In general, the anticipated removal depths should vary from 5 to 12 feet. However, actual depths and horizontal limits of any removals will have to be determined during grading on the basis of in-grading observations and testing performed by the geotechnical consultant and/or engineering geologist.

- Oversize rock is not expected to be encountered during grading. However, if encountered, oversize rock, (i.e., rock exceeding a maximum dimension of 12 inches) will require special handling, such as offsite disposal or stockpiled onsite and crushed for future use.

- Any fill should be placed in 6- to 8-inch maximum (uncompacted) lifts, watered or air dried as necessary to achieve uniform near optimum moisture content (preferred at or slightly above optimum moisture content) and then compacted in-place to a minimum of 90 percent relative compaction. The laboratory maximum dry density and optimum moisture content for each change in soil type should be determined in accordance with ASTM Test Method D1557-00.

- Fills in excess of 30 feet will require the placement of settlement monuments. Monuments will be required at the base and surface of the deep fills in order to monitor post construction settlement of alluvial soils and consolidation of fill materials.

- Surface monuments may consist of 5± foot lengths of 1-inch diameter pipe driven into the ground and furnished with a suitable, well defined measuring point. Locations of settlement monuments will be determined when detailed grading plans are available.

- Elevation readings of survey monuments should be made weekly for the first four (4) weeks, bi-weekly for eight (8) weeks, and then monthly until observed settlement has reached tolerable limits. Construction timing in areas of deep fill will be evaluated on a continuing basis, as survey data are available.

Expansive Soil Conditions

Results of preliminary laboratory tests indicate onsite earth materials exhibit expansion potentials ranging from VERY LOW to LOW as classified in accordance with 1997 UBC Table 18-I-B. Accordingly, expansive soil conditions should be evaluated for individual lots during and at the completion of rough grading. The design and construction details herein are intended to provide recommendations for the various levels of expansion potential, which may be evident at the completion of rough grading.

Corrosivity to Concrete and Metal

The National Association of Corrosion Engineers (NACE) defines corrosion as "a deterioration of a substance or its properties because of a reaction with its environment." From a geotechnical viewpoint, the "environment" is the prevailing foundation soils and the "substances" are the reinforced concrete foundations.

In general, soil environments that are detrimental to concrete have high concentrations of soluble sulfates and/or pH values of less than 5.5. Table 19-A-4 of the U.B.C., 1997, provides specific guidelines for the concrete mix design when the soluble sulfate content of the soils exceeds 0.1 percent by weight.

Based on testing performed within the project area, the onsite soils are classified as having a negligible sulfate exposure condition in accordance with Table 19-A-4, of U.B.C., 1997. Therefore, in accordance with Table 19-A-4 structural concrete in contact with earth materials should have cement of Type I or II.

(Petra: Seismic design considerations and foundation design recommendations summaries are not provided in this summary due to the outdated nature of the report and subsequent changes to the California Building Code (CBC).)

LGC, December 20, 2006

LGC Inland, Inc. (LGC) submits herewith our grading plan review and response to the County of Riverside, Department of Building and· Safety, Geotechnical Report review letter dated October 11, 2006. To compile this report, the geotechnical data from the original report, dated September 28, 2005 has been incorporated with the current 100-scale grading plans. This report presents the results of our previous field investigations, laboratory testing and our engineering judgment, opinions, conclusions, and recommendations pertaining to the geotechnical design aspects of the current proposed development.

The following eight response comments by the County of Riverside are listed below followed by LGC's response to each comment. The following changes and clarifications should be considered part of and attached to the above referenced report. (*Petra: Due to the administrative nature of three of the County comments, Comments 1, 5, and 8 are not summarized below.)*

Comment No. 2 - "Please prepare a grading plan review in conformance with the guidelines of "Technical guidelines for review of Geotechnical and Geologic Reports, County of Riverside (2000 edition). The grading plan review report and the response to this review may be combined as one document".

Response - As requested, a grading plan review for the proposed 45-acre residential and commercial development located along the south side of Limonite Avenue between Wineville Avenue and Lorena Avenue in the Mira Loma area of Riverside County, California is included herein.

Comment No. 3 - "No bottom material criteria are provided. Please provide acceptable bottom material criteria (engineering properties) and test frequency to be utilized during future grading stage".

Response - Bottom material criteria and test frequency during future grading has been addressed and is provided in the following sections of the enclosed grading plan review report: Ground Preparation 4.2.5 and Appendix F: General Earthwork and Grading Specifications - Frequency of Compaction Testing 4. 6. Basically all settlement prone soils will be removed and replaced with compacted fill. In situ soils less than 85% compaction will be removed.to competent soils.

Comment No. 4 - "Provide approximate maximum fill depth considering over-excavation. If maximum fill depth over 30', provide location and settlement calculation based on consolidation result".

Response - A maximum fill depth on the order of 20 feet is estimated for the proposed project. Recommendations for settlement monitoring is provided herein. (*Petra: settlement information provided below.)*

Comment No. 6 - "Provide settlement analysis for the proposed commercial building. Provide all laboratory test data sheets or other references to decide soil parameters used in settlement analysis".

Response - Settlement analyses were performed on Borings 1 and 2, located within the proposed commercial development. Our enclosed calculations indicate that the volumetric strain within the sands is negligible according to Tokimatsu & Seed, 1987. As a result, settlement should be less than 0. 75 inches and differential settlement is expected to be about 0.5 inches over a horizontal distance of approximately 20 feet. All settlement prone soils will be removed and replaced with compacted fill.

Comment No. 7 - "Additional tests such as corrosion tests, R-values test, and expansion test shall be done in grading stage. Please provide test frequency. Also, provide the test data sheet for all laboratory test to be performed".

Response - Additional corrosion, R-value and expansion testing shall be performed upon completion of rough grading. Frequency of testing is provided in the following sections of the enclosed grading plan review report: Expansive Soil Considerations: Section 6.6 and 6.8, Corrosivity to Concrete and Metal: Section 6.9, Preliminary Asphaltic Concrete Pavement Design: Section 9. 0. Test data sheets will be provided with the results in the compaction report.

(Petra: In addition to reiterating geotechnical information, findings, and conclusions and recommendations provided in their 2005 report (summarized above), additional relative conclusions and recommendations provided by LGC in their 2006 report are summarized below.)

Ground Preparation – Fill Areas

All existing low density and potentially collapsible soil materials, such as topsoil, loose manmade fill, and the upper loose alluvium, old fan deposits, and/or older alluvium should be removed to underlying competent alluvium, old alluvial fan deposits, or older alluvium, from each area to receive compacted fill. Dense native soils are subject to verification by the project engineer, geologist, or their representative. Prior to placing structural fills, the exposed bottom surfaces in each removal area should first be scarified to a depth of 6 inches or more, watered or air dried as necessary to achieve near-optimum moisture conditions and then re-compacted in place to a minimum relative compaction of 90 percent.

Based on LGC's exploration, anticipated depths of removal are shown on the enclosed Geotechnical Map (Plate 1). In general, the anticipated removal depths should vary from 3 to 15 feet. However, actual depths and horizontal limits of any removals will have to be determined during grading on the basis of in-grading observations and testing performed by the geotechnical consultant and/or engineering geologist.

Cut/Fill Transition Lots

To mitigate distress to structures related to the potential adverse effects of excessive differential settlement, cut/fill transitions should be eliminated from all building areas where the depth of fill placed within the "fill" portion exceeds proposed footing depths. The entire structure should be founded on a uniform bearing material. This should be accomplished by over-excavating the "cut" portion and replacing the excavated materials as properly compacted fill.

Over-excavation of the "cut" portion should extend beyond the perimeter building lines a horizontal distance equal to the depth of over-excavation or to a minimum distance of 5 feet, whichever is greater.

Processing of Cut Lots

Where low-density surficial earth materials (undocumented artificial fills, topsoil, and the upper loose old alluvial fan deposits, alluvium, or older alluvium) are not removed in their entirety in cut areas, these materials should be removed to competent old alluvial fan deposits, alluvium, or older alluvium and replaced as properly compacted fill. Competent earth materials should be exposed at final grade, or the entire lot should be over-excavated and replaced with compacted fill. In addition, final determination of lots that require over-excavation due to rock or transition conditions should be determined in the field.

Deep Fill Settlement Monitoring

Fills in excess of 30 feet will require the placement of settlement monuments. Monuments will be required at the base and surface of the deep fills in order to monitor post construction settlement of alluvial soils and consolidation of fill materials.

Surface monuments may consist of 5± foot lengths of 1-inch diameter pipe driven into the ground and furnished with a suitable, well defined measuring point. Locations of settlement monuments will be determined when detailed grading plans are available.

Elevation readings of survey monuments should be made weekly for the first four (4) weeks, bi-weekly for eight (8) weeks, and then monthly until observed settlement has reached tolerable limits. Construction timing in areas of deep fill will be evaluated on a continuing basis, as survey data are available.

Settlement

Based on the general settlement characteristics of the soil types that underlie the building sites and the anticipated loading, it has been estimated that the maximum total settlement of conventional footings will be less than approximately ¾ inch. Differential settlement is expected to be about ½ inch over a horizontal distance of approximately 20 feet, for an angular distortion ratio of 1:480. It is anticipated that the majority of the settlement will occur during construction or shortly thereafter as loads are applied.

The above settlement estimates are based on the assumption that the grading and construction is performed in accordance with the recommendations presented in this report and that the project geotechnical consultant will observe or test the soil conditions in the footing excavations.

FIELD EVALUATION

Petra's subsurface exploration was performed on June 7, 2022 to supplement LGC's (2005, 2006) boring data, and assess liquefaction and settlement potential using current regulatory guidelines (Petra, 2022). Field exploration also consisted of five Cone Penetration Test (CPT) soundings, identified herein as CPT-1 through CPT-5, advanced to a maximum depth of 45.5 feet below the existing ground surface (bgs) where practical refusal was achieved. Additionally, 12 exploratory test pits were excavated with a rubber-tired backhoe to a maximum depth of approximately 6 feet bgs. The test pits are identified herein as TP-1 through TP-12. The locations of our test pits and CPT soundings plus boring locations from LGC are shown on Figure 2. Descriptive exploration logs and results from the CPT soundings are provided in Appendix A and B, respectively. Boring logs from LGC's 2005 geotechnical report are also included in Appendix A.

Earth materials encountered within the exploratory borings were classified and logged in accordance with the visual-manual procedures of the Unified Soil Classification System (USCS). The approximate locations of the exploratory borings are shown on the Boring and CPT Location Map, Figure 2 and descriptive logs of the borings are presented in Appendix A.

Associated with the field exploration was the collection of bulk samples of soil materials for classification, laboratory testing and geotechnical engineering analyses. Bulk samples consisted of selected soil materials obtained from the exploratory test pits.

Seismic Shear Wave Measurement

In accordance with the 2022 CBC, average shear-wave velocity measurements are required to determine the Soil Profile Type Classification of earth materials underlying the subject site to a depth of 30 meters (98.43 feet). Soil Profile Type is used to determine seismic design parameters provided later in this report.

In CPT-3, placed within young alluvium soils near Dry Creek Channel, shear wave measurements were made from the probe with a tip depth of approximately 10 feet to 40 feet bgs at 10-foot intervals. CPT-3 was not advanced past 40.7 feet due to practical refusal. Geophone depths were placed at a depth of one foot higher than the tip. Energy waves were generated by the CPT truck conducting a series of surface impacts. Travel time, as measured from the ground surface to the geophone, measures the S-wave velocity. The final measured velocity is 813 feet per second (f/s), or approximately 248 meters per second (m/s), at approximately 40.03 feet. Based upon this data, a Soil Profile Type of D was used for the subject site classification.

LABORATORY TESTING

Petra reviewed laboratory test results from the LGC geotechnical report (LGC, 2005) in order to evaluate the engineering properties of the onsite soils. Additional laboratory tests were performed on selected samples considered representative of the materials encountered during our evaluation. Laboratory tests included the determination of maximum dry density and optimum moisture content, expansion potential, remolded shear strength, soluble sulfate and chloride content, and soil pH and minimum resistivity. A description of laboratory test methods is provided in the Laboratory Test Procedures section of this report including data from the LGC report (Appendix D).

FINDINGS

Regional Geology

Geologically, the site lies within the Peninsular Ranges Geomorphic Province. The Peninsular Range region is underlain primarily of plutonic rock of the Southern California Batholith. The Peninsular Range Geomorphic Province is generally characterized by alluviated basins, elevated erosion surfaces and northwest trending faults. The subject site lies west of the San Jacinto Fault zone and southwest of the San Andreas Fault zone within a broad alluvial area that makes up the upper Santa Ana River Basin. The eastern San Gabriel Mountains situated north of the subject property fall within the Transverse Ranges Province.

The site does not lie within an Alquist Priolo – Fault Hazard Special Studies Zone (CGS, 1995; Bryant and Hart, 2007; CGS, 2010); however, there are multiple active faults within the site area including (but not limited to) the San Jacinto Fault zone (located to the east), San Andreas Fault zone (located to the north-northeast), the Whitter-Elsinore Fault zone (located to the west-southwest) and the Cucamonga Fault zone (located to the north).

Local Geology and Subsurface Soil Conditions

The subject site lies within the northern portion of the Perris Block. The Perris Block is an internally un-faulted, eroded mass of Cretaceous age and older granitic rocks of the Southern California Batholith and metasedimentary basement rocks bounded by the San Jacinto Fault Zone to the northeast, the Elsinore Fault Zone to the southwest, the Cucamonga Fault Zone to the northwest, and the Temecula Basin to the southeast. The interior of the Perris Block has various bedrock low mountains, hills and bedrock plains with intervening sediment-filled valleys, that make up six erosional surfaces sculpted by the effects of the vertical oscillation of the block during the Plio-Pleistocene era.

According to the Geologic Map of the Corona North 7.5' Quadrangle, Riverside and San Bernardino County, California, Version 1.0, the site is underlain by one unit of Holocene and two units of late to middle Pleistocene age deposits (Figure A). The Holocene unit, Young Alluvial Channel deposits, is described as unconsolidated alluvium consisting of medium- to fine-grain sand and lesser silt (Morton and Gray, 2002). This unit is mapped in the central portion of the subject property. The unit on the east portion of the subject property, Old Alluvial Fan deposits, is described as indurated sandy deposits. The oldest unit, Old Alluvial Channel deposits, mapped on the west portion of the subject property, is described as unconsolidated to indurated deposits consisting mainly of sand, with minor gravel and silt. Alluvial deposits encountered in our borings are described below.

Young Alluvial Channel Deposits (Qya_a) – Where encountered in our test pits, these soils consisted predominantly of yellow brown, orange brown, and brown, loose to medium dense, silty sands and fine-grain sands with occasional gravels. Interbeds of silt, clayey silt and sandy silt were also encountered. Soil moisture ranged from damp to slightly moist.

Old Alluvial Fan Deposits (Qof) – Where encountered in LCG's borings, these soils consisted predominantly of dark yellowish brown, dry to slightly moist, medium dense to dense, friable, silty fine- to medium-grain sand with an occasional clay component, and clayey fine-grain sand. Minor pinhole porosity and slight cementation was locally observed.

Old Alluvial Channel Deposits (Qoa) – Where encountered in LGC's borings, these soils consisted predominantly of yellowish brown, slightly moist, medium dense to dense, friable, silty fine- to medium-grain sand. Minor pinhole porosity and slight cementation was locally observed.

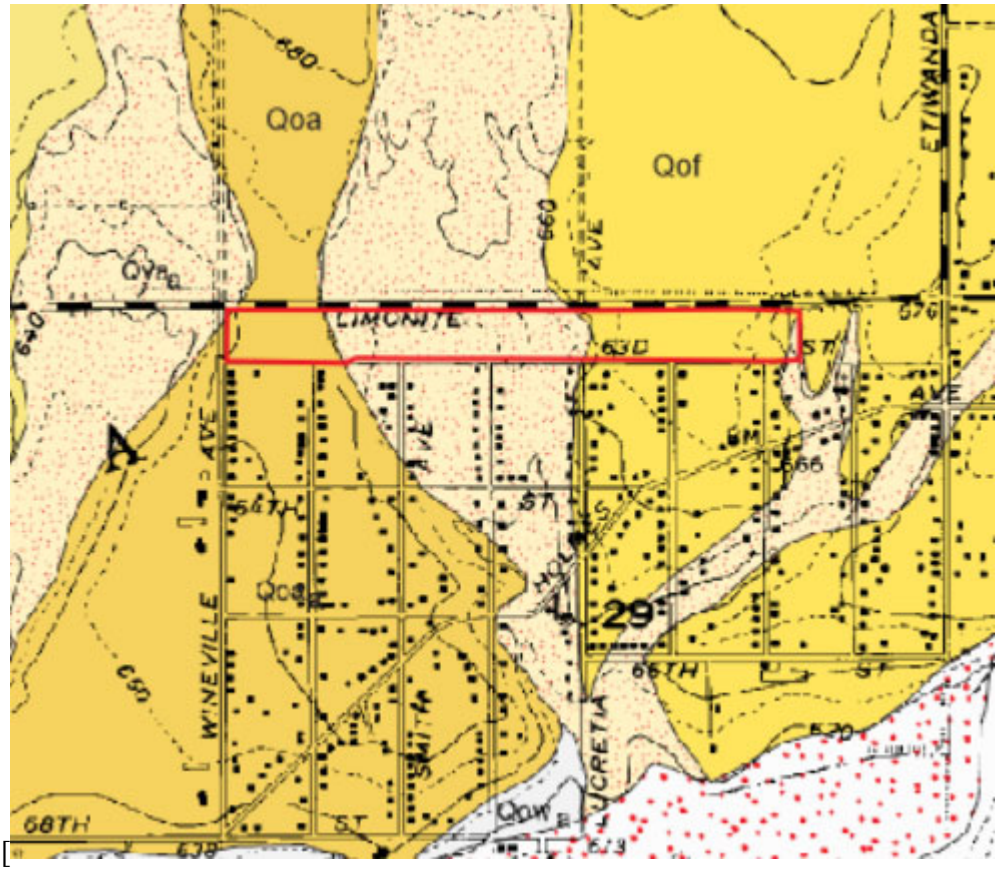

Figure A – Geologic Map (Morton and Gray, 2002)

Groundwater

The site is located within the Upper Santa Ana River - Chino (8-002.01) Groundwater Basin, (California Department of Water Resources, [CDWR], 2022). No groundwater wells were listed within the subject site on the CDWR Water Data Library (CDWR, 2022). The closest mapped public well to the subject property, approximately 4,130 feet northwest, was mapped near the northwest corner of I-15 and Limonite Avenue.

Groundwater depths reported from October 2010 to March 2021 ranged from approximately 104 to 110 feet bgs.

The previous geotechnical reported noted groundwater was not encountered in borings drilled on the subject property to a maximum depth of 51 feet (LGC, 2005). Groundwater was not encountered in our recent test pits or CPT soundings to a maximum depth of 45.15 feet (where practical refusal was achieved).

A 2013 Case Closure Summary related to a LUST case further east of the subject property, at 6190 Etiwanda Avenue, Mira Loma, listed historical depth to groundwater as 71.21 feet to 83.19 feet below the ground surface (bgs). The summary reported a flow direction to the northwest.

Faulting and Nearby Seismic Sources

Based on our review of the referenced geologic maps and literature, no active faults are known to project through the property. The subject property does not lie within a Riverside County Fault zone (2019). Furthermore, the site does not lie within the boundaries of an "Earthquake Fault Zone" as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act (CGS, 2018). The Alquist-Priolo Earthquake Fault Zoning Act (AP Act) defines an *active fault* as one that "has had surface displacement within Holocene time (about the last 11,000 years)." The main objective of the AP Act is to prevent the construction of dwellings on top of active faults that could displace the ground surface resulting in loss of life and property.

However, it should be noted that according to the USGS Unified Hazard Tool website and/or 2010 CGS Fault Activity Map of California, the San Bernardino segment of the San Jacinto Fault zone, located approximately 23.8 kilometers (14.9 miles) northeast of the site, would probably generate the most severe site ground motions and, therefore, is the majority contributor to the deterministic minimum component of the ground motion models. The subject site is located at a distance of less than 6.25 miles (10 km) from the surface projection of this fault system, which is capable of producing a magnitude 7 or larger events with a slip rate along the fault greater than 0.04 inch per year. As such, the site should be considered as a **Near-Fault Site** in accordance with ASCE 7-16, Section 11.4.1.

It should also be noted that the Fontana Trend is mapped 5 kilometers (3.1 miles) northwest of the subject property. Readily available data indicates this little-known fault is capable of producing a magnitude 6.61 event (USGS Unified Hazard Tool). In early June 2019, activity along this left-lateral "fault" produced a magnitude 3.0 event. Within the last 20 years, the largest event along this trend was a magnitude 3.8 (Stein, 2019). Although closer to the subject property than the San Bernardino segment of the San Jacinto Fault,

the maximum design magnitude of 8.08 for the San Bernardino segment represents a greater risk to the subject property.

Fault Rupture

The subject property is not located within a currently designated State of California Alquist-Priolo Earthquake Fault Zone (CDMG, 1995) or Riverside County Fault Zone (Riverside County, 2019). In addition, no known active faults have been identified on the site. While fault rupture would most likely occur along previously established fault traces, fault rupture could occur at other locations. The potential for active fault rupture at the site is considered to be low.

Preliminary Seismic Design Parameters

Earthquake loads on earthen structures and buildings are a function of ground acceleration which may be determined from the site-specific ground motion analysis. Alternatively, a design response spectrum can be developed for certain sites based on the code guidelines. To provide the design team with the parameters necessary to construct the design acceleration response spectrum for this project, we used two computer applications. Specifically, the first computer application, which was jointly developed by the Structural Engineering Association of California (SEAOC) and California's Office of Statewide Health Planning and Development (OSHPD), the SEAOC/OSHPD Seismic Design Maps Tool website, https://seismicmaps.org, is used to calculate the ground motion parameters. The second computer application, the United Stated Geological Survey (USGS) Unified Hazard Tool website, https://earthquake.usgs.gov/hazards/interactive/, is used to estimate the earthquake magnitude and the distance to surface projection of the fault.

To run the above computer applications, site latitude and longitude, seismic risk category and knowledge of site class are required. The site class definition depends on the direct measurement and the ASCE 7-16 recommended procedure for calculating average small-strain shear wave velocity, V_{s30}, within the upper 30 meters (approximately 100 feet) of site soils.

A seismic risk category of II was assigned to the proposed building(s) in accordance with 2022 CBC, Table 1604.5. An average shear wave velocity of 813 feet per second (f/s), or approximately 248 meters per second (m/s), was used for the site based on direct measurement of small-strain shear wave velocity and the ASCE 7-16, Article 20.4 procedure. As such, in accordance with ASCE 7-16, Table 20.3-1, Site Class D (D- Stiff Soil as per SEA/OSHPD software) has been assigned to the subject site.

The following table, Table 1, provides parameters required to construct the Seismic Response Coefficient – Natural Period, C_s – T, curve based on ASCE 7-16, Article 12.8 guidelines. A printout of the computer output is attached in Appendix C. The results of direct measurement of] small-strain shear wave velocity is also provided in Appendix C.

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TABLE 1
SEISMIC DESIGN PARAMETERS

Ground Motion Parameters		Specific Reference	Parameter Value	Unit
Site Latitude (North)		-	33.9746	°
Site Longitude (West)		-	-117. 5331	°
Site Class Definition		Section 1613.2.2 [1], Chapter 20 [2]	D-Stiff [4]	-
Assumed Seismic Risk Category		Table 1604.5 [1]	II	-
M_w - Earthquake Magnitude		USGS Unified Hazard Tool [3]	8.08 [3]	-
R – Distance to Surface Projection of Fault		USGS Unified Hazard Tool [3]	23.8 [3]	km
S_s - Mapped Spectral Response Acceleration Short Period (0.2 second)		Figure 1613.2.1(1) [1]	1.601 [4]	g
S_1 - Mapped Spectral Response Acceleration Long Period (1.0 second)		Figure 1613.2.1(3) [1]	0.578 [4]	g
F_a – Short Period (0.2 second) Site Coefficient		Table 1613.2.3(1) [1]	1.0 [4]	-
F_v – Long Period (1.0 second) Site Coefficient		Table 1613.2.3(2) [1]	null [4]	-
S_{MS} – MCE_R Spectral Response Acceleration Parameter Adjusted for Site Class Effect (0.2 second)		Equation 16-20 [1]	1.601 [4]	g
S_{M1} - MCE_R Spectral Response Acceleration Parameter Adjusted for Site Class Effect (1.0 second)		Equation 16-21 [1]	null [4]	g
S_{DS} - Design Spectral Response Acceleration at 0.2-s		Equation 16-22 [1]	1.067 [4]	g
S_{D1} - Design Spectral Response Acceleration at 1-s		Equation 16-23 [1]	null [4]	g
Domain of Constant Acceleration	$T_s = S_{D1}/ S_{DS}$	Section 11.4.6 [2]	null	s
	$T_o = 0.2\ S_{D1}/ S_{DS}$	Section 11.4.6 [2]	null	s
T_L - Long Period Transition Period		Figure 22-14 [2]	8 [4]	s
PGA - Peak Ground Acceleration Maximum Considered Earthquake Geometric Mean, MCE_G [*]		Figure 22-9 [2]	0.66	g
F_{PGA} - Site Coefficient Adjusted for Site Class Effect [2]		Table 11.8-1 [2]	1.1 [4]	-
PGA_M –Peak Ground Acceleration [2] Adjusted for Site Class Effect		Equation 11.8-1 [2]	0.726 [4]	g
Design PGA ≈ (⅔ PGA_M) - Slope Stability [†]		Similar to Eqs. 16-22 & 16-23 [2]	0.484	g
Design PGA ≈ (0.4 S_{DS}) – Short Retaining Walls [‡]		Equation 11.4-5 [2]	0.427	g
C_{RS} - Short Period Risk Coefficient		Figure 22-18A [2]	0.943 [4]	-
C_{R1} - Long Period Risk Coefficient		Figure 22-19A [2]	0.919 [4]	-
SDC - Seismic Design Category [§]		Section 1613.2.5 [1]	null [4]	-

References:
[1] California Building Code (CBC), 2022, California Code of Regulations, Title 24, Part 2, Volume I and II.
[2] American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI), 2016, Minimum Design Loads and Associated Criteria for Buildings and Other Structures, Standards 7-16.
[3] USGS Unified Hazard Tool - https://earthquake.usgs.gov/hazards/interactive/ [Dynamic: Conterminous U.S. 2014 (update) (v4.2.0)]
[4] SEAOC/OSHPD Seismic Design Map Application – https://seismicmaps.org [Reference: ASCE 7-16]

Related References:
Federal Emergency Management Agency (FEMA), 2015, NEHRP (National Earthquake Hazards Reduction Program) Recommended Seismic Provision for New Building and Other Structures (FEMA P-1050).

Notes:
* PGA Calculated at the MCE return period of 2475 years (2 percent chance of exceedance in 50 years).
† PGA Calculated at the Design Level of ⅔ of MCE; approximately equivalent to a return period of 475 years (10 percent chance of exceedance in 50 years).
‡ PGA Calculated for short, stubby retaining walls with an infinitesimal (zero) fundamental period.
§ The designation provided herein may be superseded by the structural engineer in accordance with Section 1613.2.5.1, if applicable.

Discussion

General

Owing to the characteristics of the subsurface soils, as defined by Site Class, D-Stiff Soil, designation, and proximity of the site to the sources of major ground shaking, the site is expected to experience strong ground shaking during its anticipated life span. Under these circumstances, where the code-specified design response spectrum may not adequately characterize site response, the 2022 CBC typically requires a site-specific seismic response analysis to be performed. This requirement is signified/identified by the "null" values that are output using SEAOC/OSHPD software in determination of short period, but mostly, in determination of long period seismic parameters, see Table 1.

For conditions where a "null" value is reported for the site, a variety of analytical design approaches are permitted by 2022 CBC and ASCE 7-16 (see Table 12.6-1) in lieu of a site-specific seismic hazard analysis. For any specific site, these alternative design approaches, which include Equivalent Lateral Force (ELF) procedure, Modal Response Spectrum Analysis (MRSA) procedure, Linear Response History Analysis (LRHA) procedure and Simplified Design procedure, among other methods, are expected to provide results that may or may not be more economical than those that are obtained if a site-specific seismic hazards analysis is performed. These design approaches and their limitations should be evaluated by the project structural engineer.

Seismic Design Category

Please note that the Seismic Design Category, SDC, is also designated as "null" in Table 1. For condition where the mapped spectral response acceleration parameter at 1 – second period, S_1, is less than 0.75, the 2022 CBC, Section 1613.2.5.1 allows that seismic design category to be determined from Table 1613.2.5(1) alone provided that all 4 requirements concerning fundamental period of structure, story drift, seismic response coefficient, and relative rigidity of the diaphragms are met. For this condition, Site Coefficient F_v, should be taken from Table 1613.2.3(2) for Site Class D, only for calculation of T_s.

Our interpretation of ASCE 7-16 is that for conditions where one or more of these 4 conditions are not met, seismic design category should be assigned based on: 1) 2022 CBC, Table 1613.2.5(1), 2) structure's risk category and 3) the value of S_{DS}, at the discretion of the project structural engineer.

Equivalent Lateral Force Method

As stated herein, the subject site is considered to be within a Site Class D-Stiff Soil. Per ASCE 7-16 Supplement 3, a site-specific ground motion hazard analysis is not required for structures on Site Class D-Stiff Soil with $S_1 \geq 0.2$ provided that the value of the parameter S_{M1} determined by Eq. (11.4-2) is increased

by 50 percent for all applications of $S_{M1}$and structural design is performed in accordance with Equivalent Lateral Force (ELF) procedure.

Liquefaction and Seismically Induced Dry Sand Settlement

Assessment of liquefaction potential for a particular site requires knowledge of a number of regional as well as site-specific parameters, including the estimated design earthquake magnitude, the distance to the assumed causative fault and the associated probable peak horizontal ground acceleration at the site, subsurface stratigraphy and soil characteristics and groundwater elevation. Parameters such as distance to causative faults and estimated probable peak horizontal ground acceleration can readily be determined using published references, or by utilizing a commercially available computer program specifically designed to perform a probabilistic analysis. Stratigraphy and soil characteristics can only be accurately determined by means of a site-specific subsurface evaluation combined with appropriate laboratory analysis of representative samples of onsite soils.

Riverside County identifies the subject property within a zone of high liquefaction potential (County of Riverside Mapping Portal, 2019); however, in view of the absence of shallow groundwater, the potential for liquefaction is considered to be very low.

Unconsolidated to consolidated young granular alluvial wash/fan materials reported within the subject property during previous field exploration (LGC, 2005). When subjected to strong ground motion, these materials may be experiencing in-situ densification, which could result in significant localized areal subsidence.

Site-Specific Liquefaction/Dynamic Settlement Analysis

Based on previous site exploration the site appeared to be susceptible to seismic (i.e., dynamic) settlement but reported as not susceptible to liquefaction (LGC, 2005). This appeared due primarily to the documented presence of unconsolidated granular (sandy) soils in the Young alluvial channel deposits area (Qya), and to the proximity of seismic sources. For this reason, a site-specific liquefaction analysis was performed as part of this evaluation.

Assessment of liquefaction potential for a particular site requires knowledge of a number of regional as well as site-specific parameters, including the estimated design earthquake magnitude, and the associated probable peak horizontal ground acceleration at the site, subsurface stratigraphy, and soil characteristics. Parameters such as estimated probable peak horizontal ground acceleration can readily be determined using published references, or by utilizing a commercially available computer program specifically designed to

perform a probabilistic analysis. On the other hand, stratigraphy and soil characteristics can only be accurately determined by means of a site-specific subsurface investigation combined with appropriate laboratory analysis of representative samples of onsite soils.

Propagating earthquake waves induce shearing stresses and strains in soil materials during strong ground shaking. This process rearranges the structure of granular soils such that there is an increase in density, with a corresponding decrease in volume, which results in vertical settlement. Dynamic settlement has been well documented in wet, sandy deposits undergoing liquefaction (see Tokimatsu and Seed, 1987) and in relatively dry sediments as well (Stewart et al, 1996). Specific methods to analyze potential wet and dry dynamic settlement are reported in Tokimatsu and Seed (1987), and specifically dry settlement in Pradel (1998) and Stewart et al. (2001; 2002) respectively. Most of the referenced papers focus on the seismic effects on dry, clean sands of a uniform grain size, though several reports extend the literature to fine-grained soils (Stewart et al., 2001 & 2002). State guidelines for evaluating dynamic settlement are provided in the California Geological Survey Special Publication 117A (CGS, 2008).

Groundwater was not encountered during our recent field exploration to a maximum depth of approximately 45 feet bgs, nor during field exploration by LGC in 2005 to a maximum depth of 51.5 feet bgs (LGC, 2005). A Tank Removal/Excavation Geologic Report for a lot approximately 1,200 feet east of the subject property (10960 Limonite Avenue, Mira Loma), referenced a USGS groundwater map depicting groundwater at a depth of approximately 48 feet bgs on the lot with a flow direction south-southeast (PIC, 1989). A copy of a portion of the USGS map was provided in the report, which indicated groundwater within the subject property at a depth of approximately 50 to 70 feet bgs and a gradient to the northwest. We have used a conservative value of 47 feet for our liquefaction analysis.

Analyses Using CPT Sounding Results

Petra performed five CPT soundings at the subject site for use in the liquefaction analysis. Our analysis using the CPT data provides *continuous* penetration resistance data rather than borehole data using SPT sampling that must be averaged over discrete sampling increments (e.g., 5 or 10 feet). A variety of computer programs are available that were developed specifically for liquefaction and seismic settlement analyses. For purposes of this study, we selected the commercially available software program CLiq Version 1.7.6.34 (GeoLogismiki, 2014) that implements updated versions of the NCEER procedure as recommended by Dr. Peter Robertson (2010), or that of Professors Idriss and Boulanger (2008, 2014). The procedures were based on the methods originally recommended by Seed and Idriss (1982). Calculations using CPT data are provided in Appendix B.

Analysis Results and Assessment of Dynamic Settlement Effects

Analyses with historic high groundwater estimated at 47 feet below the ground surface indicated that no major potentially liquefiable zones exist; however, seismically induced dry sand settlement was found in all 5 CPT locations.

To determine the estimated seismically induced settlement from the CPT soundings we used the Robertson (2009) modifications to the NCEER procedure to estimate the free field settlement. Tabulated results of the estimated settlement for this analysis method are provided in Appendix B of this report and are shown in Table 2 below. The results of the other methods are shown on the summary comparison plot printouts. Please note, total seismic settlement is based on the depth of our evaluation at each location.

TABLE 2

Seismic Settlement Results

CPT Sounding No.	Total Dry Sand Settlement (in.)	Total Liquefaction Settlement (in.)	Total Seismic Settlement (in.)
CPT-1	1.04	0	1.04
CPT-2	0.82	0	0.82
CPT-3	4.95	0	4.95
CPT-4	0.93	0	0.93
CPT-5	3.69	0	3.69

Based on our calculations, total seismically induced settlement at locations CPT-1, CPT-2, and CPT-4 are not considered excessive in accordance with guidelines provided in the California Geotechnical Survey Special Publication 117A (CGA, 2008). Near surface settlement shown in CPT-3 and CPT-5 are deemed to be excessive, however the majority of the settlement can be remediated by deeper removal and re-compaction as described in the *Compressible Soils and Remedial Grading* section of this report.

Subsurface infiltration chambers planned for the residential portion of the subject property, where young alluvial fan deposits are encountered, will introduce water into the subsurface near the southwest and southeast sides of Dry Creek Channel as it trends through the subject property. Based upon discussions with the design engineer, the bottom of the infiltration chambers are approximately 13 feet below finish grade. Furthermore, proposed storm drain pipes are proposed to connect each of the two chambers near Dry Creek Channel to the inside of the channel at depth. Provided remedial grading recommendations noted above are adhered to, which includes deeper removals and re-compaction to grade with fill soils compacted to 95

percent, we do not anticipate short term mounding of groundwater locally within the subject site to adversely affect liquefaction on building pads within the subject property.

Soil Strength Loss

The results of our analysis show that subsurface soils are not subject to significant strength loss during a strong seismic event. The fine-grained soils at the site are prone to cyclical softening and strength loss in addition to the classical strength loss of the sandy soils. As a result, the post-seismic event bearing capacity for shallow foundation elements will not be significantly reduced from the static condition. Mitigation measures are outlined in the *Compressible Soils and Remedial Grading* section of this report.

Secondary Seismic Effects

The site and immediate area exhibit mostly gentle-sloping land that is not typically prone to landsliding. Secondary effects of seismic activity normally considered as possible hazards to a site include several types of ground failure. Various general types of ground failures, which might occur as a consequence of severe ground shaking at the site include ground subsidence, ground lurching, and lateral spreading. The probability of occurrence of each type of ground failure depends on the severity of the earthquake, distance from faults, topography, subsoil, and groundwater conditions, in addition to other factors. Based on site conditions and gentle to locally moderate topography across the site, landsliding, and significant ground lurching are considered unlikely at the site. Lateral spreading was assessed in our liquefaction analysis described herein and found to not occur. Furthermore, the Day Creek Channel is lined with reinforced concrete walls that are not likely susceptible to lateral spreading.

Seismically induced flooding that might be considered a potential hazard to a site normally includes flooding due to tsunami or seiche (i.e., a wave-like oscillation of the surface of water in an enclosed basin) that may be initiated by a strong earthquake or failure of a major reservoir or retention structure upstream of the site. No major reservoirs are located up-gradient within the near vicinity of the site. The potential for seiche is considered very low.

Areal Subsidence

The subject property is not mapped within an area of either historic and/or current land subsidence due to groundwater withdrawal, as mapped by the United States Geological Survey (USGS) electronic Subsidence Map of California. As a result, the potential for areal subsidence to affect the site is considered low and would generally be no greater than that for existing residential development in the immediate site vicinity.

Compressible Soils

One geotechnical condition affecting the subject site is the presence of near-surface compressible native surficial soils. Such materials consist of surficial topsoil and young alluvial deposits, which are not considered suitable for support of fill or structural loads in their current state. Accordingly, these materials will require removal to competent alluvial deposit soils and replacement as properly compacted fill.

Flooding

The subject property is covered by two Flood Insurance Maps (FIRMs). The west parcel and a portion of the east parcel are within FIRM 06065C0681G (Effective date August 28, 2008). Much of the east parcel is within FIRM 06065C0682G. Except for Day Creek Channel, which is not a part of the subject property, the subject site is mapped within Zone X. In this case, Zone X is defined as areas of 0.2 percent annual chance flood; areas of 1 percent chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile.

North of Limonite Avenue, Day Creek Channel is mapped as Special Flood Hazard Area Zone A without base flood elevation. Between the two subject property parcels, the channel is not mapped within Zone A; however, a note indicates the channel has a "1 percent annual chance flood discharge contained in structure".

The California Department of Water Resources - Division of Dam Safety, Dam Breech Inundation Map Web Publisher (DDS, 2022) was reviewed for up-gradient dams that may represent a potential for flooding in the event of a breech. No dams were mapped and/or reported to affect the subject property.

CONCLUSIONS

General Feasibility

From a soils engineering and engineering geologic point of view, the subject property is considered suitable for the proposed development. Based on our geotechnical exploration of the site, it is our opinion the building site is free of hazard from landslide and slippage and will remain so provided the recommendations of this report are incorporated into the design criteria and project specifications. Furthermore, it is our opinion that the proposed grading and construction will not adversely affect the geologic stability of adjoining properties in an adverse manner provided grading and construction are performed in accordance with current standards of practice, all applicable grading ordinances and the recommendations presented in this report.

Strong Ground Motions

The site is located in a seismically active area of southern California and will likely be subjected to very strong seismically related ground shaking during the anticipated life span of the project. Structures within the site should, therefore, be designed and constructed to resist the effects of strong ground motion in accordance with the 2022 California Building Code (CBC) and the seismic parameters included in the recommendations section herein.

Liquefaction and Seismically Induced Dry Sand Settlement

Based on a review of the Riverside County Mapping Portal, the site lies within zone that is moderately susceptible to liquefaction (Riverside County, 2019). Our liquefaction analysis indicates, however, that the subject property is not susceptible to liquefaction. Supporting calculations are provided in Appendix B of this report. Dry sand settlement, calculated to range from 0.82 to 4.95 inches within young alluvial deposits may be mitigated by locally deeper remedial earthwork within certain areas of the project site.

Compressible Soils and Remedial Grading

In their present condition, topsoil and weathered near-surface alluvial deposits are surficially loose, inconsistent, and variable across the site. Young alluvial channel deposits, consisting of interbedded loose to medium dense silty sand and sand (map symbol Qya), are encountered at depths of approximately 8 to 10 feet bgs within the central portion and eastern edge of the subject property. Aside from being subject to excessive static settlement when subjected to fill surcharge and/or foundation loads, Young alluvial channel deposits are susceptible to seismically induced dry sand settlement. Remedial grading of these materials will be required to reduce both the static and dynamic settlement potential to an acceptable level.

Old alluvial channel deposits consisting of medium dense clayey sand, silty sand, and stiff sandy clay (map symbol Qoa) are encountered at depths of approximately 3 feet bgs in the western portion of the subject site, mostly within the retail development area. Old alluvial fan deposits, consisting of medium dense to dense silty sand, clayey sand, and hard sandy clay (map symbol Qof), are encountered at depths of 3 feet within the eastern portion of the property. Because these materials are inherently medium dense to dense, remedial grading will be comparatively shallow compared to the Young alluvial channel deposits.

The conceptual grading plans by Madole and Associates, Inc., dated February 24, 2023, depict a sequential lot number system for C, P, and R (attached) home products. The information provided below details the estimated remedial earthwork depths on a C, P, and P product and lot number.

Residential Area – Single-Family West R Lots 4-27, Attached West P Lots 2-18, 21-34 and Recreation Center; Single-Family East P Lots 1-4, 33-40, 54-57, and Single-Family East C Lots 69-79

Areas underlain by Young alluvial channel deposits and compressible soils will need to be removed and replaced as properly compacted fill to depths of approximately 8 to 10 feet below the existing ground surface. The lateral limits of the removals should extend at least 8 to 10 feet beyond the outside edges of the structures. Ultimate removal depths must be determined based on observation and testing by the geotechnical consultant during grading operations. The location of lot numbers is depicted on the Comprehensive Site Plan, Figures 2 through 4.

Retail Area, Attached West R Lots 1, 19, 20 and Single Family West P Lots 1-3; Single-Family East C Lots 5-32, 41-68 and Single-Family P Lots 28-53

Areas underlain by topsoil, highly weathered Old alluvial channel and Old alluvial fan deposits, will need to be removed and replaced as properly compacted fill to depths of approximately 3 feet below the existing ground surface. The lateral limits of the removals should extend at least 3 feet beyond the outside edges of the structures. Ultimate removal depths must be determined based on observation and testing by the geotechnical consultant during grading operations. The location of lot numbers is depicted on the Comprehensive Site Plan, Figures 2 through 4.

Effect of Proposed Grading on Adjacent Properties

Generally, provided that proposed grades are as shown on the conceptual grading plans by Madole and Associates, Inc. (dated February 24, 2023), it is our opinion that the proposed grading and construction will not significantly affect the stability of adjoining property improvements provided that the grading and construction are performed in accordance with the recommendations provided herein. However, deeper young alluvium removals along the east site boundary with the self-storage facility may affect the adjoining wall. Deeper removals of young alluvial soils along the eastern portion of the site may require slot cut techniques to complete. This technique is discussed in the Earthwork Recommendations section of this report.

If the final grades adjacent to the property lines are lowered or raised, it should be brought to the attention of the project geotechnical consultant in order to evaluate the potential effects of the grade changes on existing property line structures and nearby offsite structures.

Plan Review

This report has been prepared utilizing a conceptual site development plan by Madole and Associates, Inc., dated February 24, 2023 (see Figures 2 through 4), As such, the recommendations provided in this report

should be considered tentative until a finalized grading plan is available and reviewed by our firm. Additional recommendations and/or modification of the recommendations provided herein may be necessary depending on the results of our grading plan review.

EARTHWORK RECOMMENDATIONS

General Earthwork Recommendations

Earthwork should be performed in accordance with the Grading Code of the City of Jurupa Valley or Riverside County, in addition to the applicable provisions of the 2022 CBC. Grading should also be performed in accordance with the following site-specific recommendations prepared by Petra based on the proposed construction.

Geotechnical Observations and Testing

Prior to the start of earthwork, a meeting should be held at the site with the owner, contractor, and geotechnical consultant to discuss the work schedule and geotechnical aspects of the grading. Earthwork, which in this instance will generally entail removal and re-compaction of existing surficial native soils and compressible young alluvial soils, should be accomplished under full-time observation and testing of the geotechnical consultant. A representative of the project geotechnical consultant should be present onsite during all earthwork operations to document proper placement and compaction of fills, as well as to document compliance with the other recommendations presented herein.

Clearing and Grubbing

Prior to rough grading vegetation should be stripped and removed from the site. Clearing operations should also include the removal of any stockpiled soils/rock, concrete, asphalt, dumped debris, vegetation, and similar deleterious materials. Any deleterious materials encountered within the site may also need to be removed by hand (i.e., root pickers) during the grading operations.

The project geotechnical consultant should provide periodic observation and testing services during clearing and grubbing operations to document compliance with the above recommendations. In addition, should unusual or adverse soil conditions or buried structures be encountered during grading that are not described herein, these conditions should be brought to the immediate attention of the project geotechnical consultant for corrective recommendations.

Oversize Material

Based upon our recent field observations and subsurface conditions encountered in our borings, oversize rock fragments will not likely be encountered during grading of the project site. If encountered, oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches in diameter, shall be taken offsite or placed in accordance with the recommendations of the Geotechnical Consultant in areas designated as suitable for rock disposal (typical details for Rock Disposal are given on Plate SG-4, Appendix E). Oversize rock should not be placed shallower than 10 feet below finish pad grades.

Excavation Characteristics

The existing site soils are expected to be readily excavated with conventional earthmoving equipment. As noted previously, variable soil conditions will be encountered during earthwork operations. Overall, dry to slightly moist, medium dense to dense clayey sand and stiff to hard sandy clay are anticipated to be encountered within the gently sloping higher elevations of the western and easterly portions of the subject property. Dry to slightly moist, loose to medium dense, silty sand and sand are anticipated within the central portion and eastern edge of the subject site.

Unsuitable Soil Removals

Surficial soils consisting of topsoil and upper low-density young alluvial soils across the site were found generally to be loose to medium dense and exhibit varying degrees of porosity and are considered unsuitable for support of proposed fills, structures, pavements, or other improvements in their current state. Based on previous borings (LGS, 2005) and our recent test pits and CPT data, existing low-density soils should be removed to expose competent old alluvial deposits, estimated to lie at depths of approximately 3 feet below the natural ground surface on the western and eastern mesas, where older alluvial soils are encountered. Within the central portion of the property and the eastern portion of the site, where loose and unconsolidated young alluvial soils exist, old alluvium or competent young alluvium is estimated to lie at depths of approximately 8 to 10 feet below the natural ground surface. Deeper removals may be required, as will be determined during grading. Street pavement areas and non-structural areas may be cut to subgrade levels prior to processing. Oversize rock is not anticipated to be encountered during future trenching operations for underground utility lines.

Exposed competent bottom surfaces should have an in-situ density of at least 85 percent relative compaction and should be watered as necessary to achieve moisture conditions at least two percent above optimum and then compacted in-place to a relative compaction of 90 percent or more based on ASTM D 1557.

Cut Lots

Lots located entirely in cut, if any, should be over-excavated a minimum of 3 feet below proposed finished pad grade elevations, or as determined in the field, and replaced as properly compacted fill. Prior to placing engineered fill, all exposed over-excavation bottom surfaces in the building pad areas should be watered, as necessary, to achieve moisture conditions at least two percent above optimum and then compacted in-place to a relative compaction of 90 percent or more based on ASTM D 1557.

Cut/Fill Transition Lots

Cut/fill transitions, if any, should be eliminated from building-pad areas to reduce the detrimental effects of differential settlement. This should be accomplished by over-excavating the "cut" or shallow-fill portions and replacing the excavated materials as properly compacted fill. Recommended depths of over-excavation are given in the table below.

Depth of Fill	Depth of Over-Excavation
Up to 5 feet	3 feet
Greater than 5 feet	One-half of greatest fill depth placed on the "fill" portion; to 15 feet maximum

Horizontal limits of over-excavation should extend across the entire level portion of the lot or pad. Prior to placing engineered fill, all exposed over-excavation bottom surfaces in the over-excavation areas should be watered, as necessary, to achieve moisture conditions at least percent above optimum and then compacted in-place to a relative compaction of 90 percent or more based on ASTM D 1557.

Suitability of Site Soils as Fill

Site soils are suitable for placement as compacted (engineered) fills, provided they are clean from organics and/or debris.

Fill Placement

Fill materials should be placed in approximately 6- to 8-inch-thick loose lifts, watered or air-dried as necessary to achieve a minimum moisture content at least 2 percent above the optimum moisture condition, and then compacted in-place to at least 90 or 95 percent, as appropriate. ***In areas underlain by the young alluvium (Qya), fills placed deeper than 4 feet below finished pad grade shall be compacted to no less than 95 percent relative compaction. The increased compaction requirement from the standard 90 percent to 95 percent is imposed as a mitigation measure for both the irregular formational soils across***

the subject property and dynamic settlement potential. The laboratory maximum dry density and optimum moisture content for each change in soil type should be determined in accordance with ASTM D1557. The location of lot numbers affected by deeper removals is depicted on the Conceptual Grading Plan, Figures 2 through 4.

Import Soils for Grading

The grading plan by Madole and Associates, Inc., dated February 24, 2023, suggest import soils are needed to complete rough grading of the residential portion of the subject property. Import the soils should be free of deleterious materials, rock in excess of 3 inches and any hazardous residues/materials. Additionally, the soils should also be non-expansive (i.e., have "very low" expansion potential), verified to be essentially non-corrosive, and approved by the project geotechnical consultant *prior to being brought onsite*. Environmental testing of import soils should be in compliance with guidelines provided in the Department of Toxic Substances Control (DTSC) Information Advisory, Clean Imported Fill Material (dated October 2001). The geotechnical consultant should observe the potential borrow site and conduct testing of the soil at least three days before the commencement of import operations.

Soil Shrinkage

Volumetric changes in earth quantities will occur when excavated onsite soils are replaced as engineered fill. We have estimated the soil shrinkage factor to be on the order of 5 to 10 percent with a subsidence of 0.1 foot for the denser Old alluvium channel and fan deposits predominant in the western and eastern ends of the site. The soil shrinkage factor is estimated to be 10 to 15 percent with a subsidence of 0.2 foot in the Young alluvium channel deposits predominant in the central portion of the site.

The estimate of shrinkage is intended as an aid for project engineers in determining earthwork quantities; however, this estimate should not be considered as absolute values and should be used with some caution. Contingencies should be made for balancing earthwork quantities based on actual shrinkage that occurs during the grading operations.

Temporary Excavations

Temporary excavations to a depth of up to 10 feet below existing grades may be required to accommodate the recommended over-excavation. Based on the physical properties of onsite soils, temporary excavation slopes which are constructed exceeding 4 feet in height, should be cut back to an inclination of 1:1 (h:v) or flatter for the duration of the over-excavation of unsuitable soil material and replacement as compacted fill, as well as placement of underground utilities. However, the temporary excavations should be observed by

a representative of the project geotechnical consultant for evidence of potential instability. Depending on the results of these observations, revised slope configurations may be necessary. Other factors which should be considered with respect to the stability of the temporary slopes include construction traffic and/or storage of materials on or near the tops of slopes, construction scheduling, presence of nearby walls or structures on adjacent properties and weather conditions at the time of construction. Applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health act of 1970 and the Construction Safety Act should also be followed.

Slot Cutting

Remedial earthwork along the east property boundary, estimated to be 8 to 10 feet in depth, will be in proximity to a wall associated with the offsite business. Excavations in this area should consist of slot cuts to eliminate potential damage to the offsite wall. To mitigate potential off-site ground instability due to over-excavation operations along the project boundaries, a slot cutting technique, commonly referred to as the "ABC" method, may be utilized. This method consists of first excavating a temporary excavation at a 1:1 (h:v) maximum inclination along the length of the existing fencing/block wall or toe-of-slope, with the top of the temporary backcut slope located a minimum of approximately 3 feet horizontally from the outside edge of the existing boundary improvements. The 1:1 (h:v) backcut slope is then divided into approximately equal sections not exceeding a width of approximately 10 feet, depending largely upon the nature of the exposed alluvial soils. Every third section is then excavated at a vertical inclination and the section then brought to design grade with compacted fill prior to excavating the next series of 10-foot wide slot cuts.

Continuous observations should be provided by the project geotechnical consultant during excavation of the initial 1:1 (h:v) backcut slope. If any evidence of potential instability is observed, revised recommendations such as flatter (h:v) backcut slopes and/or narrower slot cuts may be necessary. Continuous observations should also be provided by the project geotechnical consultant during excavation of the individual vertical slot cuts. If any evidence of potential instability is observed, immediate revised recommendations for performing the slot cuts may become necessary.

No temporary excavations along the property lines should be left open without proper protections to reduce safety hazards. The grading contractor is solely responsible for ensuring the safety of construction personnel and the general public, and for appointing a designated “Competent Person” to observe and classify temporary excavation sidewalls pursuant to 29 CFR Part 1926 (OSHA Safety and Health Regulations for Construction).

Slope Construction

Fill Slopes

For fill slopes exceeding 5 feet in height and constructed on natural ground, a fill key excavated a depth of 2 feet or more into competent old alluvial channel deposits or old alluvial fan deposits is recommended at the base of the fill slope. Where a fill slope is to be constructed on the young alluvium channel deposits, the area to receive fill shall first be oxer-excavated in accordance with the recommendations presented in the Unsuitable Soil Removals section. As such, a fill key is not required where the fill slope is constructed on properly compacted fill.

The exposed native soils should have an in-situ density of at least 85 percent relative compaction and should be watered as necessary to achieve moisture conditions at least two percent above optimum and then compacted in-place to a relative compaction of 90 percent or more based on ASTM D 1557. The width of the fill key should equal to one-half the slope height or 15 feet, whichever is greater. To obtain proper compaction to the face of fill slopes, low-height fill slopes should be overfilled during construction and then trimmed-back to the compacted inner core.

Cut Slopes

Observations during grading of individual cut slopes by the project engineering geologist to document favorable geologic structure or soil conditions of the exposed conditions is recommended. Where cohesionless sandy soil materials are observed, the cut slopes in question may require stabilization by means of a compacted stabilization fill.

Slope Stability

Slope stability calculations were performed to evaluate the global stability of the proposed cut slope depicted in Cross Section B-B' on Sheet CG-02 of the Conceptual Grading Plan. The north-facing slope incorporates two retaining walls, each noted as 4 feet maximum in height, with a gentle slope not exceeding 3:1 (h:v) between the walls. Calculations were performed utilizing the software program GSTABL7 v2.005.3 by Gregory Geotechnical Software, 2003. Shear strength parameters of the different materials analyses are based on data obtained from the site and other nearby sites underlain with similar materials. The stability analyses resulted in factors of safety greater than 1.5 and 1.1 for static and seismic loading conditions, respectively. The slope stability calculations are presented in Appendix F.

Geotechnical Observations

Observation of clearing operations, over-excavation of unsuitable surficial materials, cut and fill slope construction and general grading procedures should be performed by the project geotechnical consultant. Fills should not be placed without prior observation and approval from the geotechnical consultant.

The project geotechnical consultant or his representative should be present onsite during grading operations to observe and document proper placement and compaction of fill, as well as to observe and document compliance with the other recommendations presented herein.

Building Setback from Underground Infiltration Chambers

Underground infiltration chambers are proposed in the Hitching Area (West 2) and the Dog Park and Community Garden, as well as in the parking lot east of Retail Pad 4. Buried chambers adjacent to proposed residential buildings (Lots 33, 34, 72, and 73) should be entirely constructed outside a 1:1 projection downward from the bottom outside edge of the building footings. Fill placed within Lots 33, 34, 72, and 73 should be compacted to no less than 95 percent relative compaction, based on ASTM D 1557.

The retail area of the subject property is underlain by medium dense to dense Old Alluvium consisting of silt, sandy silt and sand with silt. These materials are not considered susceptible to hydro-consolidation due to their relatively high density. Where tested, this material is also non-expansive (i.e., Expansion Index ≤ 20). The buried chamber adjacent to the commercial buildings should be entirely constructed outside a 1:1 projection downward from the bottom outside edge of the building footing.

TENTATIVE FOUNDATION DESIGN GUIDELINES

Allowable Bearing Capacity, Estimated Settlement and Lateral Resistance

Allowable Soil Bearing Capacities

Pad Footings

An allowable soil bearing capacity of 1,500 pounds per square foot may be utilized for design of isolated 24-inch-square footings founded at a minimum depth of 12 inches below the lowest adjacent final grade for pad footings that are not a part of the slab system and are used for support of such features as roof overhang, second-story decks, patio covers, etc. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 2,500 pounds per square foot. The recommended allowable bearing value includes both dead and live loads and may be increased by one-third for short duration wind and seismic forces.

Continuous Footings

An allowable soil bearing capacity of 1,500 pounds per square foot may be utilized for design of continuous footings founded at a minimum depth of 12 inches below the lowest adjacent final grade. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 2,500 pounds per square foot. The recommended allowable bearing value includes both dead and live loads and may be increased by one-third for short duration wind and seismic forces.

Estimated Footing Settlement

Based on the allowable bearing values provided above, total static settlement of the footings under the anticipated loads is expected to be on the order of 3/4 inch. Differential settlement is expected to be less than 1/2 inch over a horizontal span of 30 feet. The majority of settlement is likely to take place as footing loads are applied or shortly thereafter.

By implementing the remedial grading recommended for the zone of young alluvium channel deposits in the central portion of the site, the anticipated dynamic settlement is on the order of 1 inch or less with a corresponding differential settlement of 0.65 inch. The dynamic settlement values should be utilized in evaluating structural integrity in the event of a major seismic event.

Lateral Resistance

A passive earth pressure of 250 pounds per square foot per foot of depth, to a maximum value of 2,500 pounds per square foot, may be used to determine lateral bearing resistance for footings. In addition, a coefficient of friction of 0.35 times the dead load forces may be used between concrete and the supporting soils to determine lateral sliding resistance. The above values may be increased by one-third when designing for transient wind or seismic forces. It should be noted that the above values are based on the condition where footings are cast in direct contact with compacted fill or competent native soils. In cases where the footing sides are formed, all backfill placed against the footings upon removal of forms should be compacted to at least 90 percent of the applicable maximum dry density.

Guidelines for Footings and Slabs on-Grade Design and Construction

The results of our laboratory tests performed on representative samples of near-surface soils within the site during our investigation indicate that these materials predominantly exhibit expansion indices that range from 21 to 50. As such, the site soil is classified as "expansive" as defined in Section 1803.5.3 of the 2022 California Building Code (2022 CBC). The design of foundations and slabs on-ground should therefore be performed in accordance with the procedures outlined in Sections 1808.6.1 and 1808.6.2 of the 2022 CBC.

General

Briefly, Section 1808.6.1 of the 2022 CBC requires that foundations placed on or within the active zone of expansive soils shall be designed to resist differential volume changes and to prevent structural damage to the supported structure. Section 1808.6.2 of the 2022 CBC requires that non-prestressed slabs on-grade or mat foundations constructed on expansive soils be designed in accordance with the latest Code-adopted edition of *WRI/CRSI Design of Slab-on-Ground Foundations.* The 2022 CBC also requires that post-tensioned slabs on-grade or mat foundations placed on expansive soils be designed in accordance with the latest Code-adopted edition of *PTI DC 10.5,* with the provision that the analyses used to determination of moments, shears and deflections are performed accordingly. It should be noted that, under certain conditions, the 2022 CBC allows for alternative, rational methods of analysis and design of such slabs provided that these methods account for soil-structure interaction, the deformed shape of the soil support, plate or stiffened plate action of the slab, as well as both center lift and edge lift conditions.

The design and construction guidelines that follow are based on the above soil conditions and may be considered for reducing the effects of variability in fabric, composition and, therefore, the detrimental behavior of the site soils such as excessive short- and long-term total and differential heave and settlement. These guidelines have been developed on the basis of the previous experience of this firm on projects with similar soil conditions. Although construction performed in accordance with these guidelines has been found to reduce post-construction movement and/or distress, they generally do not positively eliminate all potential effects of variability in soils characteristics and future settlement.

It should also be noted that the suggestions for dimension and reinforcement provided herein are performance-based and intended only as preliminary guidelines to achieve adequate performance under the anticipated soil conditions. However, they should not be construed as replacement for structural engineering analyses, experience and judgment. The project structural engineer, architect and/or civil engineer should make appropriate adjustments to slab and footing dimensions, and reinforcement type, size and spacing to account for internal concrete forces (e.g., thermal, shrinkage and expansion), as well as external forces (e.g., applied loads) as deemed necessary. Consideration should also be given to minimum design criteria as dictated by local building code requirements.

Conventional Slab on-Grade System

As stated above, onsite soils should be considered expansive per Section 1803.5.3 of the 2022 CBC. For soils that are considered expansive, Section 1808.6.2 of the 2022 CBC specifies that non-prestressed slab-

on-grade foundations constructed on expansive materials should be designed in accordance with the latest Code-adopted edition of the Wire Reinforcement Institute (WRI) publication "Design of Slab-on-Ground Foundations". The design procedures outlined in the WRI publication are based on the weighted plasticity index of the various soil layers existing within the upper 15 feet of the building site.

Based on the recent laboratory testing by our firm, a weighted plasticity index of 12 can be assumed for the subject site. The WRI publication states that the weighted plasticity index of each building site should be modified (multiplied) by correction factors that compensate for the effects of sloping ground and the unconfined compressive strength of the supporting soil or bedrock materials. Since the buildings will be constructed on level building pads, and in consideration of the estimated unconfined compressive strength of the onsite soils, it is recommended that the weighted plasticity index, as provided herein, be multiplied by a factor of 1.2 in order to determine the value of the effective plasticity index (per Figure 9 of the WRI publication). In summary, it is recommended that an effective plasticity index of 15 be utilized by the project structural engineer to design slabs on-ground with an interior grade beam system in accordance with the WRI publication.

Footings

1. Exterior continuous footings supporting one- and two-story structures should be founded at a minimum depth of 15 inches below the lowest adjacent final grade. Interior continuous footings may be founded at a minimum depth of 12 inches below the top of the adjacent finish floor slabs. Interior continuous footings width and spacing should be designed by the project structural engineer.

2. In accordance with Table 1809.7 of 2022 CBC for light-frame construction, all continuous footings should have minimum widths of 12 inches for one- and two-story construction. We recommend all continuous footings should be reinforced with a minimum of two No. 4 bars, one top and one bottom.

3. A minimum 12-inch-wide grade beam founded at the same depth as adjacent footings should be provided across the garage entrances or similar openings (such as large doors or bay windows). The grade beam should be reinforced in a similar manner as provided above.

4. Interior isolated pad footings, if required, should be a minimum of 24 inches square and founded at a minimum depth of 12 inches below the bottoms of the adjacent floor slabs. Pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings.

5. Exterior isolated pad footings intended for support of colonnades, roof overhangs, upper-story decks, patio covers, and similar construction should be a minimum of 24 inches square and founded at a minimum depth of 18 inches below the lowest adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings.

6. Exterior isolated pad footings may need to be connected to adjacent pad and/or continuous footings via tie beams at the discretion of the project structural engineer. Further, where excessive soils settlement issues have been identified for this site elsewhere in the report, it is strongly recommended to tie all footings both interior and exterior with a network of grade beams to reduce the potential differential settlement or isolated bearing distress issues below any independent footings.

7. The spacing and layout of the interior concrete grade beam system required below floor slabs should be determined by the project architect or structural engineer in accordance with the WRI publication using the effective plasticity index value provided previously.

8. The minimum footing dimensions and reinforcement recommended herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2022 CBC) by the structural engineer responsible for foundation design based on his/her calculations, engineering experience, and judgment.

Building Floor Slabs

1. Concrete floor slabs should be a minimum 4 inches thick and reinforced with a minimum No. 3 bars spaced a maximum of 18 inches on centers, both ways. Alternatively, the structural engineer may recommend the use of prefabricated welded wire mesh for slab reinforcement. For this condition, the welded wire mesh should be of sheet type (not rolled) and should consist of 6x6/W2.9xW2.9 (per the Wire Reinforcement Institute, WRI, designation) or stronger. All slab reinforcement should be supported on concrete chairs or brick to ensure the desired placement near mid-depth. Care should be exercised to prevent warping of the welded wire mesh between the chairs in order to ensure its placement at the desired mid-slab position.
   Slab dimension, reinforcement type, size and spacing need to account for internal concrete forces (e.g., thermal, shrinkage and expansion) as well as external forces (e.g., applied loads), as deemed necessary.

   It should be noted that some of the non-climatic site parameters, which may impact slabs on-grade performance, are not known at this time, as it is the case for many projects at the design stage. Some of these site parameters include unsaturated soils diffusion conditions pre- and post-construction (e.g., casting the slabs at the end of long, dry or wet periods, maintenance during long, dry and wet periods, etc.), landscaping, alterations in site surface gradient, irrigation, trees, etc. While the effects of any or a combination of these parameters on slab performance cannot be accurately predicted, maintaining moisture content equilibrium within the soils mass and planting trees at a distance greater than half of their mature height away from the edge of foundation may reduce the potential for the adverse impact of these site parameters on slabs on-grade performance.

2. Living area concrete floor slabs and areas to receive moisture sensitive floor covering should be underlain with a moisture vapor retarder consisting of a minimum 10-mil-thick polyethylene or polyolefin membrane that meets the minimum requirements of ASTM E96 and ASTM E1745 for vapor retarders (such as Husky Yellow Guard®, Stego® Wrap, or equivalent). All laps within the membrane should be sealed, and at least 2 inches of clean sand should be placed over the membrane to promote uniform curing of the concrete.

   In general, to reduce the potential for punctures, the membrane should be placed on a pad surface that has been graded smooth without any sharp protrusions. If a smooth surface cannot be achieved by grading, consideration should be given to lowering the pad finished grade an additional inch and then placing a 1-inch-thick leveling course of sand across the pad surface prior to the placement of the

membrane. Foot traffic on the membrane should be reduced to a minimum. Additional steps would also need to be taken to prevent puncturing of the vapor retarder during concrete placement.

At the present time, some slab designers, geotechnical professionals and concrete experts view the sand layer below the slab (blotting sand) as a place for entrapment of excess moisture that could adversely impact moisture-sensitive floor coverings. As a preventive measure, the potential for moisture intrusion into the concrete slab could be reduced if the concrete is placed directly on the vapor retarder. However, if this sand layer is omitted, appropriate curing methods must be implemented to ensure that the concrete slab cures uniformly. A qualified contractor with experience in slab construction and curing should provide recommendations for alternative methods of curing and supervise the construction process to ensure uniform slab curing.

3. Garage floor slabs should be a minimum 4 inches thick and reinforced in a similar manner as living area floor slabs. Garage slabs should also be poured separately from adjacent wall footings with a positive separation maintained using ¾-inch-minimum felt expansion joint material. To control the propagation of shrinkage cracks, garage floor slabs should be quartered with weakened plane joints. Consideration should be given to placement of a moisture vapor retarder below the garage slab, similar to that provided in Item 2 above, should the garage slab be overlain with moisture sensitive floor covering.

4. Prior to placing concrete, the subgrade soils below living area floor slabs should be pre-watered to achieve a moisture content that is at least 1.2 times the optimum moisture content. This moisture should penetrate to a depth of approximately 12 inches into the subgrade.
5. The minimum dimensions and reinforcement recommended herein for building floor slabs may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2022 CBC) by the structural engineer responsible for foundation design based on his/her calculations and engineering experience and judgment.

Post-Tensioned Slabs on-Grade System

As stated above, onsite soils should be considered to be expansive per Section 1803.5.3 of the 2022 CBC. Section 1808.6.2 of the 2022 CBC specifies that post-tensioned slab-on-ground foundations (floor slabs) resting on expansive materials should be designed in accordance with the latest Code-adopted edition of the Post-Tensioning Institute publication, PTI DC 10.5.

To comply with Section 1808.6.2 of the 2022 CBC and the PTI publication, in addition to performing appropriate tests on representative samples of site soils, certain assumptions regarding the site environmental (climatic) condition and the composition of the subsurface soils were made. The following table, Table 3, presents our recommendations for soil and climatic parameters for design of post-tensioned slabs on-grade based on our laboratory testing, engineering analysis, as well as our engineering judgment and experience on similar sites.

TABLE 3

Presumptive Post-Tensioned Slab on-Grade Design Parameters for PTI Procedure

Tentative Design Parameters	
Approximate Depth of Constant Suction, feet	9
Approximate Soil Suction, pF	3.9
Inferred Thornthwaite Index:	-20
Average Edge Moisture Variation Distance, e_m in feet: Center Lift Edge Lift	 9.0 4.7
Anticipated Swell, y_m in inches: Center Lift Edge Lift	 0.35 0.65

It should be noted that some of the non-climatic site parameters, which may impact slabs on-grade performance, are not known at this time, as it is the case for many projects at the design stage. Some of these site parameters include unsaturated soils diffusion conditions pre- and post-construction (e.g., casting the slabs at the end of long, dry or wet periods, maintenance during long, dry and wet periods, etc.), landscaping, alterations in site surface gradient, irrigation, trees, etc. While the effects of any or a combination of these parameters on slab performance cannot be accurately predicted, maintaining moisture content equilibrium within the soils mass and planting trees at a distance greater than half of their mature height away from the edge of foundation may reduce the potential for the adverse impact of these site parameters on slabs on-grade performance.

Modulus of Subgrade Reaction

The modulus of subgrade reaction for design of load bearing elements depends on the size of the element and soil-structure interaction. However, as a first level of approximation, this value may be assumed to be 125 pounds per cubic inch.

Minimum Design Recommendations

The soil values provided above may be utilized by the project structural engineer to design post-tensioned slabs on-ground in accordance with Section 1808.6.2 of the 2022 CBC and the PTI publication. Thicker floor slabs and larger footing sizes may be required for structural reasons and should govern the design if more restrictive than the minimum recommendations provided below:

1. Exterior continuous footings for one- and two-story structures should be founded at a minimum depth of 12 inches below the lowest adjacent finished ground surface. Interior footings may be founded at a minimum depth of 12 inches below the tops of the finish floor slabs. Interior continuous footings width and spacing should be designed by the project structural engineer.

2. In accordance with Table 1809.7 of 2022 CBC for light-frame construction, all continuous footings should have minimum width of 12 inches for one- and two-story construction. We recommend all continuous footings should be reinforced with a minimum of two No. 4 bars, one top and one bottom. Alternatively, post-tensioned tendons may be utilized in the perimeter continuous footings in lieu of the reinforcement bars.

3. A minimum 12-inch-wide grade beam founded at the same depth as adjacent footings should be provided across the garage entrances or similar openings (such as large doors or bay windows). The grade beam should be reinforced in a similar manner as provided above.

4. Interior isolated pad footings, if required, should be a minimum of 24 inches square and founded at a minimum depth of 12 inches below the bottoms of the adjacent floor slabs. Pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings.

5. Exterior isolated pad footings intended for support of colonnades, roof overhangs, upper-story decks, patio covers, and similar construction should be a minimum of 24 inches square, and founded at a minimum depth of 18 inches below the lowest adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad and/or continuous footings via tie beams at the discretion of the project structural engineer.

6. The thickness of the floor slabs should be determined by the project structural engineer with consideration given to the expansion potential of the on-site soils; however; we recommend that a minimum slab thickness of 4 inches be considered.
7. As an alternative to designing 4-inch-thick post-tensioned slabs with perimeter footings as described in Items 1 and 2 above, the structural engineer may design the foundation system using a thickened slab design. The minimum thickness of this uniformly thick slab should be 8 inches. The engineer in charge of post-tensioned slab design may also opt to use any combination of slab thickness and footing embedment depth as deemed appropriate based on their engineering experience and judgment.

8. Living area concrete floor slabs and areas to receive moisture sensitive floor covering should be underlain with a moisture vapor retarder consisting of a minimum 10-mil-thick polyethylene or polyolefin membrane that meets the minimum requirements of ASTM E96 and ASTM E1745 for vapor retarders (such as Husky Yellow Guard®, Stego® Wrap, or equivalent). All laps within the membrane should be sealed, and at least 2 inches of clean sand should be placed over the membrane to promote uniform curing of the concrete.

   In general, to reduce the potential for punctures, the membrane should be placed on a pad surface that has been graded smooth without any sharp protrusions. If a smooth surface cannot be achieved by grading, consideration should be given to lowering the pad finished grade an additional inch and then placing a 1-inch-thick leveling course of sand across the pad surface prior to the placement of the membrane. Foot traffic on the membrane should be reduced to a minimum. Additional steps would also need to be taken to prevent puncturing of the vapor retarder during concrete placement.

   At the present time, some slab designers, geotechnical professionals and concrete experts view the sand layer below the slab (blotting sand) as a place for entrapment of excess moisture that could adversely impact moisture-sensitive floor coverings. As a preventive

measure, the potential for moisture intrusion into the concrete slab could be reduced if the concrete is placed directly on the vapor retarder. However, if this sand layer is omitted, appropriate curing methods must be implemented to ensure that the concrete slab cures uniformly. A qualified contractor with experience in slab construction and curing should provide recommendations for alternative methods of curing and supervise the construction process to ensure uniform slab curing.

9. Garage floor slabs should be a minimum 4 inches thick and reinforced in a similar manner as living area floor slabs. Consideration should be given to placement of a moisture vapor retarder below the garage slab, similar to that provided in Item 6 above, should the garage slab be overlain with moisture sensitive floor covering.

10. Presaturation of the subgrade below floor slabs will not be required; however, prior to placing concrete, the subgrade below all dwelling and garage floor slab areas should be thoroughly moistened to achieve a moisture content that is at least equal to or slightly greater than optimum moisture content to a minimum depth of 12 inches below the bottoms of the slabs.

11. The minimum footing dimensions and foundation design parameters recommended herein are based on our experience, judgement and professional interpretation of the prevailing site soils' characteristics and the inferred site environmental/climatic conditions. At this time, we do not have information regarding potential improvements to be located and/or absent within the zone of influence of the foundation system that could adversely impact the foundation's performance. Such improvements may include, but are not limited to, adjacent lawn/planter areas, irrigation regime, trees located within a horizontal distance of less than half of their mature height from the foundation, and vertical and/or horizontal moisture barriers. A knowledge of these features may allow the designers to perform a refined analysis. However, in the absence of such process, the minimum dimensions provided herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2022 CBC and PTI DC 10.5) by the structural engineer responsible for foundation design based on his/her calculations, engineering experience, and judgment.

Foundation Excavation Observations

Foundation excavations should be observed by a representative of this firm to document that they have been excavated into competent engineered fill soils prior to the placement of forms, reinforcement, or concrete. Following grading, the presence of sloughing in the compacted fill may require the use of forms when pouring concrete. The excavations should be trimmed neat, level and square. All loose, sloughed or moisture-softened soils and/or any construction debris should be removed prior to placing of concrete. Excavated soils derived from footing and/or utility trenches should not be placed in building slab-on-grade areas or exterior concrete flatwork areas unless the soils are compacted to at least 90 percent of maximum dry density.

General Corrosivity Screening

As a screening level study, limited chemical and electrical tests were performed on samples considered representative of the onsite soils to identify potential corrosive characteristics of these soils. The common

indicators associated with soil corrosivity include water-soluble sulfate and chloride levels, pH (a measure of acidity), and minimum electrical resistivity. Test methodology and results are presented in Appendix D.

> *It should be noted that Petra does not practice corrosion engineering; therefore, the test results, opinion and engineering judgment provided herein should be considered as general guidelines only. Additional analyses would be warranted, especially, for cases where buried metallic building materials (such as copper and cast or ductile iron pipes) in contact with site soils are planned for the project. In many cases, the project geotechnical engineer may not be informed of these choices. Therefore, for conditions where such elements are considered, we recommend that other, relevant project design professionals (e.g., the architect, landscape architect, civil and/or structural engineer) also consider recommending a qualified corrosion engineer to conduct additional sampling and testing of near-surface soils during the final stages of site grading to provide a complete assessment of soil corrosivity. Recommendations to mitigate the detrimental effects of corrosive soils on buried metallic and other building materials that may be exposed to corrosive soils should be provided by the corrosion engineer as deemed appropriate.*

In general, a soil's water-soluble sulfate levels and pH relate to the potential for concrete degradation; water-soluble chlorides in soils impact ferrous metals embedded or encased in concrete, e.g., reinforcing steel; and electrical resistivity is a measure of a soil's corrosion potential to a variety of buried metals used in the building industry, such as copper tubing and cast or ductile iron pipes. Table 4, below, presents the range of each category of individual test results with an interpretation of current code indicators and guidelines that are commonly used in this industry. The table includes the code-related classifications of the soils as they relate to the various tests, as well as a general recommendation for possible mitigation measures in view of the potential adverse impact on various components of the proposed structures in direct contact with site soils. The guidelines provided herein should be evaluated and confirmed, or modified, in their entirety by the project structural engineer, corrosion engineer and/or the contractor responsible for concrete placement for structural concrete used in exterior and interior footings, interior slabs on-ground, garage slabs, wall foundations and concrete exposed to weather such as driveways, patios, porches, walkways, ramps, steps, curbs, etc.

TABLE 4

Soil Corrosivity Screening Results

Sample ID	Test (Test Method Designation)	Test Results	Classification	General Recommendations
TP-4 @ 0-5' B-4 @ 0-5' B-11 @ 0-5'	Soluble Sulfate (Cal 417)	SO_4^{2-} < 0.10 % by weight	**S0[1] - Not Applicable**	Type II cement; minimum f_c'[2] = 2,500 psi; no water/cement ratio restrictions.
TP-10 @ 0-5'		0.10 ≤ SO_4^{2-} < 0.20 % by weight	**S1[1] - Moderate**	Type II cement; maximum water/cement ratio of the fresh concrete should not exceed 0.50, f_c'[2] should not be less than 4,000 psi.
TP-10 @ 0-5'	pH (Cal 643)	7.9 – 8.4	**Moderately Alkaline**[3]	No special recommendations
TP-4 @ 0-5'		8.5 – 9.0	**Strongly Alkaline**[3]	No special recommendations
TP-4 @ 0-5' TP-10 @ 0-5'	Soluble Chloride (Cal 422)	< 500 ppm	**C1[1] - Moderate**	Residence: No special recommendations; f_c'[2] should not be less than 2,500 psi.
		< 500 ppm	**C2[4] - Severe**	Pools/Decking: Increase concrete cover thickness; maximum water/cement ratio of the fresh concrete should not exceed 0.40; f_c'[2] should not be less than 5,000 psi.
TP-4 @ 0-5'	Resistivity (Cal 643)	1,000 – 3,000	**Highly Corrosive**[5]	Consult a corrosion engineer
TP-10 @ 0-5'		< 1,000	**Extremely Corrosive**[5]	Consult a corrosion engineer

Notes:
1. ACI 318-14, Section 19.3
2. ACI 318-14, Section 19.3
3. Pierre R. Roberge, "Handbook of Corrosion Engineering"
4. Exposure classification C2 applies specifically to swimming pools and appurtenant concrete elements

INFILTRATION TEST RESULTS

Four infiltration test holes (P-1 through P-4) were completed on the project. These tests used the Falling Head Test Method (RCFCD, 2011). Infiltration rates were then calculated using the Porchet Method (RCFCD, 2011), commonly called the "inversed auger-hole method." The infiltration tests were conducted in the lower five feet of each boring corresponding to five feet below the bottom elevation of the proposed basin. Each test hole consisted of an eight-inch diameter boring drilled with a truck-mounted hollow-stem auger drill rig. The holes were pre-soaked immediately after drilling.

Soils encountered in test locations P-1 and P-2 consisted of fine- to medium-grain silty sand. Soils encountered in test locations P-3 and P-4 consisted of silt and fine-grained sandy silt with clay. Test locations are shown on Figure 2. Boring logs are provided in Appendix A. The un-factored infiltration rate results are summarized below in Table 5, and are provided in Appendix E.

TABLE 5

Summary of Infiltration Rates

Percolation Test Location	Depth of Test (feet below surface)	Percolation Rate (gal./day/ft^2)	Infiltration Rate (inches/hour)
P-1 (Hitching Area West 2)	20	82	11.3
P-2 (Dog Park / Garden Area)	20	31	4.3
P-3 (commercial/retail area)	18	8.9	1.2
P-4 (commercial/retail area)	19	6.6	0.9

Gradation tests were completed on soil samples collected from recent percolation test holes P-3 at 10 feet, P-3 at 15 feet, P-4 at 10 feet bgs, and P-4 at 18 feet bgs. Results of soil passing the No. 200 sieve (i.e., silt and clay particles) were reported as 39.3 percent, 55.3 percent, 18.4 percent, and 51.4 percent, respectively.

The infiltration test rates measured at the 4 locations are quite variable. On the commercial/retail portion of the subject property (P-3, P-4), this is attributable to the medium dense to dense nature of the older alluvium underlying the site and the relatively high percentage of fines (silts and clays) in the soils. Because of the inconsistency of the infiltration test rates, the lower test rates should be selected for design purposes within the commercial/retail area (P-3, P-4) and the recreation/corral areas (P-1, P-2) with an appropriate reduction factor. The corresponding design infiltration rates may prove adequate to support storm water infiltration in the residential areas. The corresponding design infiltration rates may prove inadequate to support storm water infiltration in the commercial area.

POST-GRADING CONSIDERATIONS

Precise Grading and Drainage

Surface and subsurface drainage systems consisting of sloping concrete flatwork, drainage swales and possibly subsurface area drains will be constructed on the subject lots to collect and direct all surface water to the adjacent streets. In addition, the ground surface around the proposed buildings should be sloped to provide a positive drainage gradient away from the structures. The purpose of the drainage systems is to prevent ponding of surface water within the level areas of the site and against building foundations and associated site improvements. The drainage systems should be properly maintained throughout the life of the proposed development.

Section 1804.3 of the 2019 CBC requires that "The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet (3048 mm) measured perpendicular to the face of the wall." Further, "Swales used for this purpose shall be sloped a minimum of 2 percent where located within 10 feet (3048 mm) of the building foundation."

These provisions fall under the purview of the Design Civil Engineer. However, exceptions to allow modifications to these criteria are provided within the same section of the Code as "Where climatic or soil conditions warrant, the slope of the ground away from the building foundations is permitted to be reduced to not less than one unit in 48 units horizontal (2-percent slope)." This exemption provision appears to fall under the purview of the Geotechnical Engineer-of-Record.

It is our understanding that the state-of-the-practice for projects in various cities and unincorporated areas of Riverside County, as well as throughout Southern California, has been to construct earthen slopes at a 2 percent minimum gradient away from the foundations and at 1 percent minimum for earthen swale gradients. Structures constructed and properly maintained under those criteria have performed satisfactorily. Therefore, considering the semi-arid climate, site soil conditions and an appropriate irrigation regime, Petra considers that the implementation of 2 percent slopes away from the structures and 1 percent swales to be acceptable for the subject lots.

It should be emphasized that homeowners are cautioned that the slopes away from the structures and swales shall be properly maintained, not to be obstructed, and that future improvements are not to alter established gradients unless replaced with suitable alternative drainage systems. Further, where the flow line of the swale exists within five feet of the structure, adjacent footings shall be deepened appropriately to maintain minimum embedment requirements, measured from the flow line of the swale.

Utility Trench Backfill

All utility trench backfill should be compacted to a minimum relative compaction of 90 percent, however trench backfill materials should be first be screened of any rock greater than 6-inches in diameter, then placed in maximum lifts approximately 8- to 12-inch thick, moisture-conditioned as necessary to achieve slightly above optimum moisture conditions, and mechanically compacted in place with a hydra-hammer, pneumatic tamper or similar equipment to achieve a minimum relative compaction of 90 percent. A representative of this firm should probe and test the backfills to document the adequate compaction has been achieved.

For shallow trenches where pipe or utilities might be damaged by mechanical compaction equipment, imported sand having a Sand Equivalent (SE) value of 30 or greater may be used for backfilling. Sand backfill materials should be watered to achieve above optimum moisture conditions, and then tamped with hand-operated pneumatic tampers to ensure proper consolidation of the backfill. No specific relative compaction will be required; however, observation, probing and, if deemed necessary, testing should be performed by a representative of this firm to verify that the backfill is adequately compacted and will not be subject to excessive settlement.

Where an exterior or interior utility trench is proposed in a direction that is parallel to a building footing, the bottom of the trench should not extend below a 1:1 plane projected downward from the bottom edge of the adjacent footing. Where this condition occurs, the adjacent footing should be deepened, or the trench backfilled and compacted prior to construction of the footing.

Masonry Screen Walls

Construction on or Near the Tops of Descending Slopes

Continuous footings for masonry walls proposed on or within 5 feet from the top of a descending cut or fill slope should be deepened such that a horizontal clearance of 5 feet is maintained between the outside bottom edge of the footing and the slope face. The footings should be reinforced with two No. 4 bars, one top and one bottom. Plans for top-of-slope masonry walls proposing pier and grade beam footings should be reviewed by the project geotechnical consultant prior to construction.

Construction on Level Ground

Where masonry walls are proposed on level ground and 5 feet or more from the tops of descending slopes, the footings for these walls may be founded 18 inches or more below the lowest adjacent final grade. These footings should also be reinforced with two No. 4 bars, one top and one bottom.

Construction Joints

To reduce the potential for unsightly cracking related to the effects of differential settlement, positive separations (construction joints) should be provided in the walls at horizontal intervals of approximately 20 to 25 feet and at each corner. The separations should be provided in the blocks only and not extend through the footings. The footings should be placed monolithically with continuous rebars to serve as effective "grade beams" along the full lengths of the walls.

Retaining Walls

Footing Embedment

The base of retaining wall footings constructed on level ground may be founded at a depth of 12 inches or more below the lowest adjacent final grade. Footing trenches should be observed by the project geotechnical representative to document that the footing trenches have been excavated into competent bearing soils and to the embedments recommended above. These observations should be performed prior to placing forms or reinforcing steel.

Allowable Soil Bearing Capacity

A basic allowable soil bearing capacity of 1,500 pounds per square foot, including dead and live loads, may be utilized for design of 12-inch-wide continuous footings founded in compacted fill at a minimum depth of 12 inches below the lowest adjacent final grade. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width to a maximum value of 2,500 pounds per square foot. Recommended allowable bearing values include both dead and live loads and may be increased by one-third for short duration wind and seismic forces.

Lateral Resistance

A passive earth pressure of 250 pounds per square foot per foot of depth, to a maximum value of 2,500 pounds per square foot, may be used to determine lateral bearing resistance for footings. In addition, a coefficient of friction of 0.35 times the dead load forces may be used between concrete and the supporting soils to determine lateral sliding resistance. When calculating passive resistance, the resistance of the upper 6 inches of the soil cover in front of the wall should be ignored in areas where the front of the wall will not be covered with concrete flatwork. The above values may be increased by one-third when designing for transient wind or seismic forces. It should be noted that the above values are based on the condition where footings are cast in direct contact with compacted fill or competent native soils. In cases where the footing sides are formed, all backfill placed against the footings upon removal of forms should be compacted to at least 90 percent of the applicable maximum dry density.

Active Earth Pressures

Existing soils within the site exhibit expansion potentials that are predominately low in expansion potential and are expected to be used as retaining wall backfill material. It should be noted that the retaining wall plans that are prepared for construction should specify the type of backfill as used by the project structural engineer in their design. For onsite soils used for retaining wall backfill, an active lateral earth pressure

equivalent to a fluid having a density of 40 pounds per cubic foot (pcf) should be used for design of cantilevered walls retaining a drained level backfill. Where the wall backfill slopes upward at 2:1 (h:v), the above value should be increased to 61 pcf. Where imported clean granular backfill material is used as backfill, the active soil pressures values may be reduced to 30 pcf and 41 pcf for level and 2:1 (h:v) sloping backfill, respectively.

All wall backfill soils should be screened of rock particles greater than 6-inches in diameter. The values provided herein are for retaining walls that have been constructed with a proper backdrain system. Retaining walls should be designed to resist surcharge loads imposed by other nearby walls or structures in addition to the above active earth pressures.

Backdrains

To reduce the likelihood of the entrapment of water in the backfill soils, weepholes or open vertical masonry joints may be considered for retaining walls not exceeding a height of 3 feet. Weepholes, if used, should be 3-inches minimum diameter and provided at intervals of 6 feet or less along the wall. Open vertical masonry joints, if used, should be provided at 32-inch intervals. A continuous gravel fill, 3 inches by 12 inches, should be placed behind the weepholes or open masonry joints. The gravel should be wrapped in filter fabric to prevent infiltration of fines and subsequent clogging of the gravel. Filter fabric may consist of Mirafi 140N or equivalent.

A perforated pipe-and-gravel subdrain should be constructed behind retaining walls exceeding a height of 3 feet. Perforated pipe should consist of 4-inch-minimum diameter PVC Schedule 40, or ABS SDR-35, with the perforations laid down. The pipe should be encased in a 1-foot-wide column of ¾-inch to 1½-inch open-graded gravel. If on-site soils are used as backfill, the open-graded gravel should extend above the wall footings to a minimum height equal to one-third the wall height or to a minimum height of 1.5 feet above the footing, whichever is greater. The open-graded gravel should be completely wrapped in filter fabric consisting of Mirafi 140N or equivalent. Solid outlet pipes should be connected to the backdrains at intervals no greater than 100 feet and then routed to a suitable area for discharge of accumulated water.

Waterproofing

The backfilled sides of retaining walls should be coated with an approved waterproofing compound or covered with a similar material to inhibit migration of moisture through the walls.

Wall Backfill

Recommended active pressures for design of retaining walls are based on the physical and mechanical properties of the onsite soil materials. The backfill behind the proposed retaining walls, they should be screened of rock fragments greater than 6-inches in diameter, placed in approximately 6- to 8-inch-thick maximum lifts, watered as necessary to achieve slightly above optimum moisture conditions and then mechanically compacted in place to a minimum relative compaction of 90 percent. Flooding or jetting of the backfill materials should be avoided. A representative of the project geotechnical consultant should observe the backfill procedures and test the wall backfill to verify adequate compaction.

Geotechnical Observation and Testing

All earthwork associated with retaining wall construction, including backcut excavations, observation of the footing trenches, installation of the backdrain systems, and placement of backfill should be provided by a representative of the project geotechnical consultant.

EXTERIOR CONCRETE FLATWORK

Very Low and Low Expansion Potential (Expansion Index 0 – 50)

General

Near-surface soils within the site are variable in expansion behavior and are expected to exhibit very low to low expansion potential. Due to typical project scheduling constraints, it may not be feasible to collect additional samples of subgrade soils for testing to verify their expansion potential immediately prior to pouring concrete. For this reason, we recommend that all exterior concrete flatwork such as sidewalks, patio slabs, large decorative slabs, concrete subslabs that will be covered with decorative pavers, private and/or public vehicular driveways and/or access roads within and adjacent to the site be designed by the project architect and/or structural engineer with consideration given to mitigating the potential cracking and uplift that can develop in soils exhibiting expansion index values that fall in the low category.

The guidelines that follow should be considered as minimums and are subject to review and revision by the project architect, structural engineer and/or landscape consultant as deemed appropriate. If sufficient time will be allowed in the project schedule for verification sampling and testing prior to the concrete pour, the test results generated may dictate that a somewhat less conservative design could be used.

Thickness and Joint Spacing

To reduce the potential of unsightly cracking, concrete walkways, patio-type slabs, large decorative slabs and concrete subslabs to be covered with decorative pavers should be at least 4 inches thick and provided with construction joints or expansion joints every 6 feet or less. Private driveways that will be designed for the use of passenger cars for access to private garages should also be at least 4 inches thick and provided with construction joints or expansion joints every 10 feet or less. Concrete pavement that will be designed based on an unlimited number of applications of an 18-kip single-axle load in public access areas, segments of road that will be paved with concrete (such as bus stops and cross-walks) or access roads and driveways, which serve multiple residential units or garages, that will be subject to heavy truck loadings should have a minimum thickness of 5 inches and be provided with control joints spaced at maximum 10-foot intervals. A modulus of subgrade reaction of 125 pounds per cubic foot may be used for design of the public and access roads.

Reinforcement

All concrete flatwork having their largest plan-view panel dimension exceeding 10 feet should be reinforced with a minimum of No. 3 bars spaced 24 inches on centers, both ways. Alternatively, the slab reinforcement may consist of welded wire mesh of the sheet type (not rolled) with 6x6/W1.4xW1.4 designation in accordance with the Wire Reinforcement Institute (WRI). The reinforcement should be properly positioned near the middle of the slabs.

> *The reinforcement recommendations provided herein are intended as guidelines to achieve adequate performance for anticipated soil conditions. The project architect, civil and/or structural engineer should make appropriate adjustments in reinforcement type, size and spacing to account for concrete internal (e.g., shrinkage and thermal) and external (e.g., applied loads) forces as deemed necessary.*

Edge Beams (Optional)

Where the outer edges of concrete flatwork are to be bordered by landscaping, it is recommended that consideration be given to the use of edge beams (thickened edges) to prevent excessive infiltration and accumulation of water under the slabs. Edge beams, if used, should be 6 to 8 inches wide, extend 8 inches below the tops of the finish slab surfaces. Edge beams are not mandatory; however, their inclusion in flatwork construction adjacent to landscaped areas is intended to reduce the potential for vertical and horizontal movement and subsequent cracking of the flatwork related to uplift forces that can develop in expansive soils.

Subgrade Preparation

Compaction

To reduce the potential for distress to concrete flatwork, the subgrade soils below concrete flatwork areas to a minimum depth of 12 inches (or deeper, as either prescribed elsewhere in this report or determined in the field) should be moisture conditioned to at least equal to, or slightly greater than, the optimum moisture content and then compacted to a minimum relative compaction of 90 percent. Where concrete public roads, concrete segments of roads and/or concrete access driveways are proposed, the upper 6 inches of subgrade soil should be compacted to a minimum 95 percent relative compaction.

Pre-Moistening

As a further measure to reduce the potential for concrete flatwork cracking, subgrade soils should be thoroughly moistened prior to placing concrete. The moisture content of the soils should be at least 1.2 times the optimum moisture content and penetrate to a minimum depth of 12 inches into the subgrade. Flooding or ponding of the subgrade is not considered feasible to achieve the above moisture conditions since this method would likely require construction of numerous earth berms to contain the water. Therefore, moisture conditioning should be achieved with sprinklers, or a light spray applied to the subgrade over a period of few to several days just prior to pouring concrete. Pre-watering of the soils is intended to promote uniform curing of the concrete, reduce the development of shrinkage cracks and reduce the potential for differential expansion pressure on freshly poured flatwork. A representative of the project geotechnical consultant should observe and verify the density and moisture content of the soils, and the depth of moisture penetration prior to pouring concrete.

Drainage

Drainage from patios and other flatwork areas should be directed to local area drains and/or graded earth swales designed to carry runoff water to the adjacent streets or other approved drainage structures. The concrete flatwork should be sloped at a minimum gradient of one percent, or as prescribed by project civil engineer or local codes, away from building foundations, retaining walls, masonry garden walls and slope areas.

Tree Wells

Tree wells are not recommended in concrete flatwork areas since they introduce excessive water into the subgrade soils and allow root invasion, both of which can cause heaving and cracking of the flatwork.

PLAN REVIEWS

This report has been prepared for the exclusive use of Diversified Pacific Communities to assist the project engineers and architect in the design of the proposed development. It is recommended that Petra be engaged to review the final-design plans, drawings, and specifications prior to construction. This is to document that the recommendations contained in this report have been properly interpreted and are incorporated into the project specifications. If Petra is not accorded the opportunity to review these documents, we can take no responsibility for misinterpretation of our recommendations.

We recommend that Petra be retained to provide soil-engineering services during construction of the excavation and foundation phases of the work. This is to observe compliance with the design, specifications, or recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to start of construction.

If the project plans change significantly (e.g., building loads or type of structures), we should be retained to review our original design recommendations and their applicability to the revised construction. If conditions are encountered during construction that appears to be different than those indicated in this report, this office should be notified immediately. Design and construction revisions may be required.

REPORT LIMITATIONS

This report is based on the proposed project and geotechnical data as described herein. The materials encountered on the project site, described in other literature, and utilized in our laboratory evaluation are believed representative of the project area, and the conclusions and recommendations contained in this report are presented on that basis. However, soil materials can vary in characteristics between points of exploration, both laterally and vertically, and those variations could affect the conclusions and recommendations contained herein. As such, observation and testing by a geotechnical consultant during the grading and construction phases of the project are essential to confirming the basis of this report.

This geotechnical evaluation report does not address other improvements in the vicinity or in proximity to the subject property. This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and time period. The contents of this report are professional opinions and as such, are not to be considered a guarantee or warranty. This report should be reviewed and updated after a period of one year or if the project concept changes from that described herein.

The information contained herein has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

This report is subject to review by the controlling authorities for this project. Should you have any questions, please do not hesitate to call.

Respectfully submitted,

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FIGURES

LEGEND

- - - - - - - - Approximate Site Limits

- Reproduced from: USGS, 2022, The National Map Viewer

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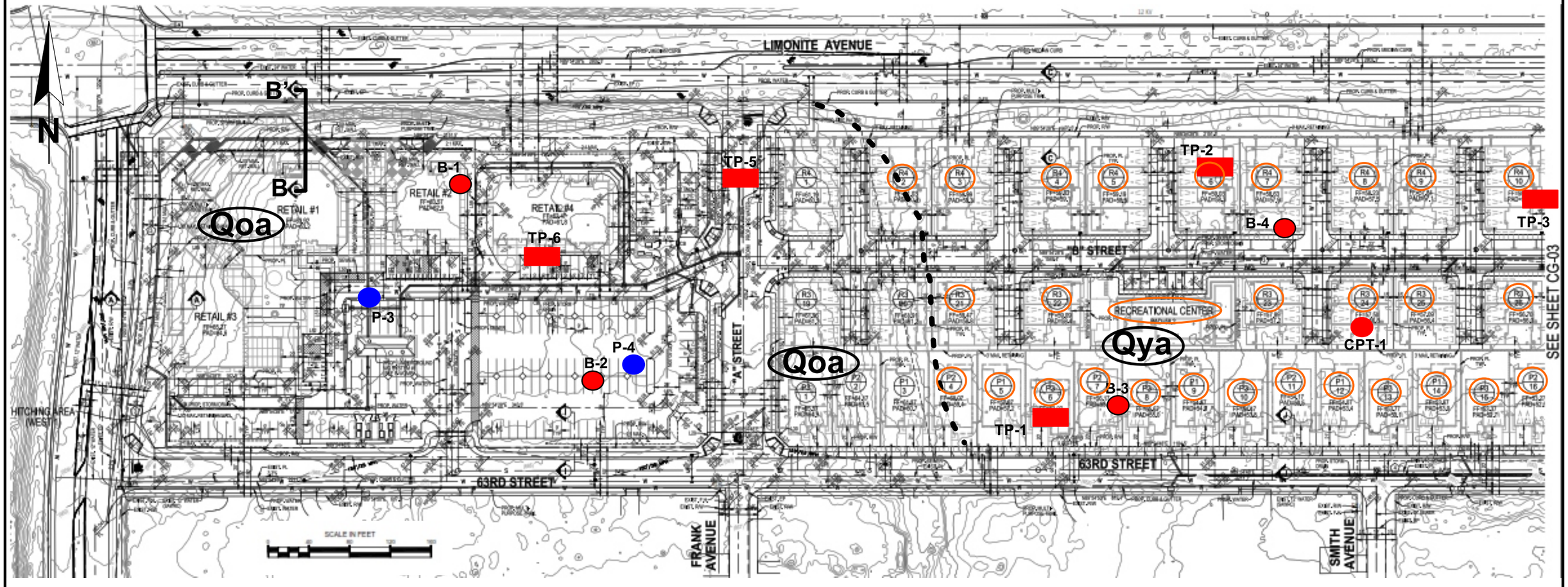
PHONE: (951) 600-9271
COSTA MESA MURRIETA PALM DESERT SANTA CLARITA

Site Location Map

Vineyard Market and Villages, Tract 38541
Jurupa Valley, Riverside County, California

DATE: July 2024 (rev)	J.N.: 21-392	**Figure 1**
DWG BY: epl	SCALE: see map	



LEGEND

- B-14 - Approximate Location of Exploratory Boring (LGC, 2005)
- TP-12 - Approximate Location of Exploratory Test Pit (Petra, 2022)
- CPT-5 - Approximate Location of Cone Penetration Test Sounding (Petra, 2022)
- P-4 - Approximate Location of Percolation Test (Petra, 2022)
- Approximate Location of Geologic/Geotechnical Contact
- P2 / 5 - Lots Estimated to Require Deeper Removals (8 - 10 feet)
- B – B' - Approximate Location of Slope Stability Cross Section

- af - Artificial Fill
- Qya - Holocene and Late Pleistocene Young alluvial channel deposits
- Qoa - Late to Middle Pleistocene Old alluvial channel deposits
- Qof - Late to Middle Pleistocene Old alluvial fan deposits

Base Map Reference: Madole & Associates, Inc., 2023, Conceptual Grading Plans, Tentative Tract Map No. 38541, City of Jurupa Valley, dated February 24.

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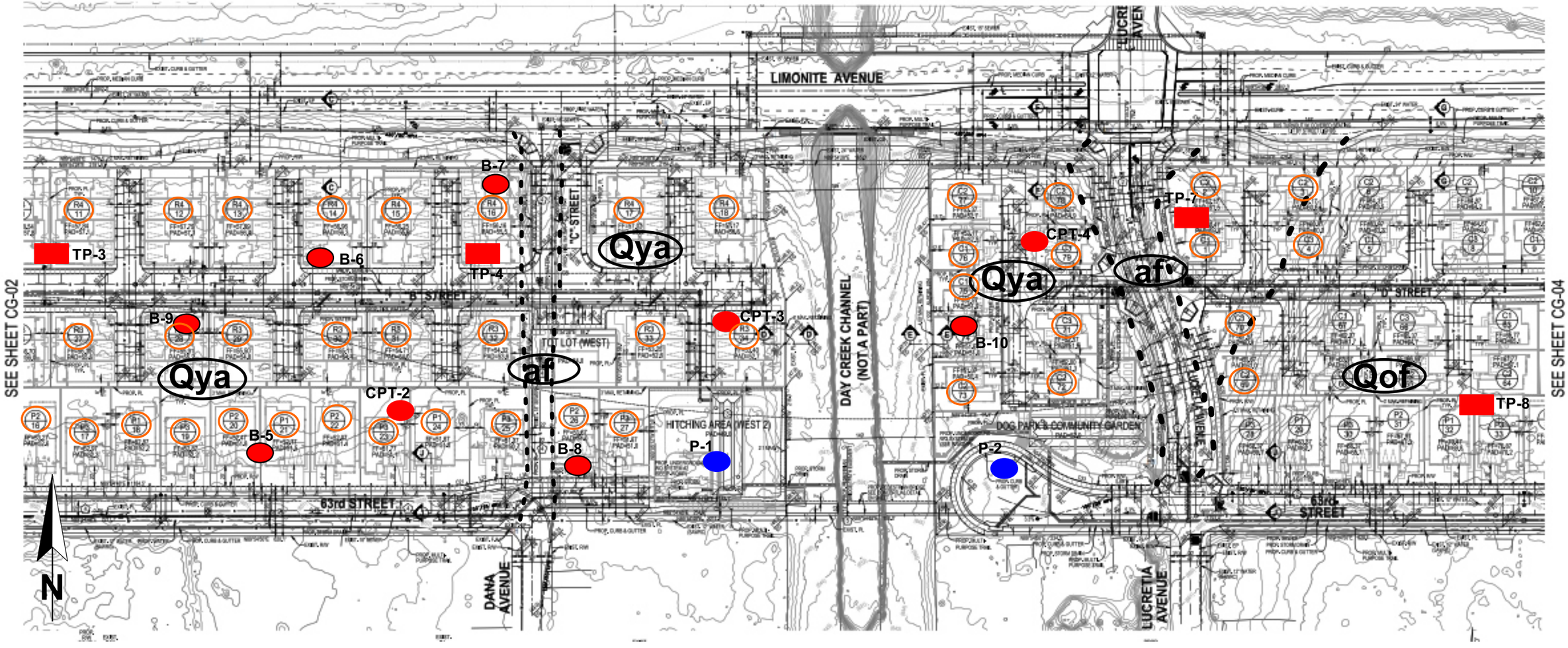
Geotechnical Map

Tentative Tract Map No. 38541
Jurupa Valley, Riverside County, California

PETRA GEOSCIENCES INC.

DATE: July 2024 rev.
J.N.: 21-392

Figure 2



LEGEND - See Figure 2

Base Map Reference: See Figure 2.

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Geotechnical Map

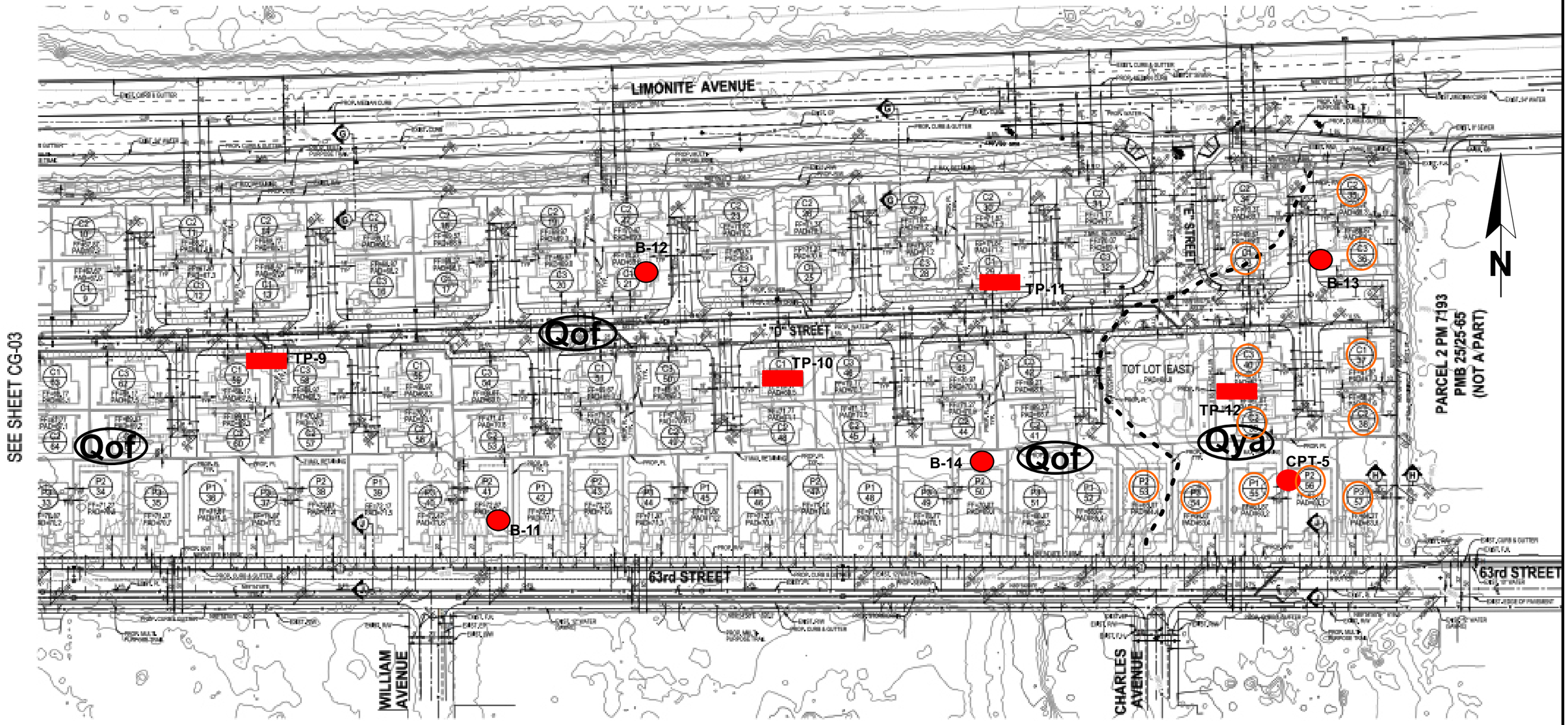
Tentative Tract Map No. 38541
Jurupa Valley, County of Riverside, California

PETRA GEOSCIENCES INC

DATE: July 2024 (rev)

J.N.: 21-392

Figure 3



Legend: See Figure 2

Base Map Reference: See Figure 2

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Geotechnical Map

Tentative Tract Map No. 38541
Jurupa Valley, County of Riverside, California

PETRA GEOSCIENCES INC.

DATE: July 2024 (rev)

J.N.: 21-392

Figure 4

APPENDIX A

BORING AND TEST PIT LOGS

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-1**
Location:	**Southeasterly of Limonite and**		Elevation: **±655'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ARTIFICIAL FILL/TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained, trace grass , debris.							
		YOUNG ALLUVIUM Sand with Silt (SP): Dark yellowish-brown, orangish brown, slightly moist, loose. 3" thick orangish brown. Sand (SP): Dark yellowish-brown, slightly moist, loose, fine grained sand.							
5		Total depth = 6' Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
10									
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PLATE A-1

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-2**
Location:	**Southeasterly of Limonite and**		Elevation: **±651'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained, with roots.							
		YOUNG ALLUVIUM Sand with Silt (SP): Yellowish gray, dry, loose, fine grained. Sand (SP): Dark yellowish-brown, dry, loose, 3" thick orangish brown.							
5		Total depth = 6' Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-2

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-3**
Location:	**Southeasterly of Limonite and**		Elevation: **±652'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained, roots.							
		YOUNG ALLUVIUM Sand (SP): Dark yellowish gray, slightly moist, loose, fine grained. Becomes dark yellowish brown to brown, moist, medium dense.							
5		Total depth = 5'3" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-3

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-4**
Location:	**Southeasterly of Limonite and**		Elevation: **±650'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Grayish-brown, dry, loose, fine grained, roots.							
		YOUNG ALLUVIUM Sand (SP): Dark yellowish gray, slightly moist, loose, fine grained with trace medium grained.							MAX,EI,PH, SO4,RES,CL
5		Silt (ML): Yellowish-brown, dry, firm, Becomes dark yellowish brown to brown, moist, medium dense.							
		Total depth = 5'6" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-4

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-5**
Location:	**Southeasterly of Limonite and**		Elevation: **±663'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained to trace medium grained, fine roots.							
		OLD ALLUVIUM Sand with Silt (SP): Dark yellowish gray, moist, medium dense, fine- to medium-grained sand, trace grained sand.							
5		Total depth = 5'7" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-5

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-6**
Location:	**Southeasterly of Limonite and**		Elevation: **±664'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Grayish-brown, dry, loose, fine grained to trace medium grained, abundant roots.							
		Old ALLUVIUM Sand with Silt (SP): Dark yellowish brown, moist, very dense, fine- to medium-grained sand, trace pinhole porosity, slightly cemented, trace roots.							
5		Total depth = 3'1" Test pit backfilled with cutting after drilling.							
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PLATE A-6

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-7**
Location:	**Southeasterly of Limonite and**		Elevation: **±656'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, medium dense, fine grained sand, irrigation pipe at 3". **OLD FAN DEPOSIT** Sandy Silt (SM): Dark yellowish brown, brown, moist, dense, fine grained sand, trace pinhole porosity.							
5		Sand (SP): Dark yellowish brown, moist, medium dense, fine grained. Total depth = 5'4" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-7

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-8**
Location:	**Southeasterly of Limonite and**		Elevation: **±671'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained sand, some roots.							
		OLD FAN DEPOSIT Sand with Silt (SP): Dark yellowish brown, moist, dense, fine to medium grained sand.							
		Total depth = 3'3" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-8

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-9**
Location:	**Southeasterly of Limonite and**		Elevation: **±672'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained sand, some roots.							
		OLD FAN DEPOSIT Sand with Silt (SP-SM): Dark yellowish brown, slightly moist, dense, trace clay.							
		Total depth = 3'5" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-9

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-10**
Location:	**Southeasterly of Limonite and**		Elevation: **+670'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Grayish-brown, dry, loose, fine grained sand, trace gravel up to 3/4" in diameter.							
		OLD FAN DEPOSIT Sand with Silt (SP-SM): Dark yellowish brown, slightly moist, dense, fine with trace medium grained, fine gravel.							MAX,EI,RES ,CL,SO4,PH
5		Clayey Sand (SC): Dark yellowish brown, moist, firm, fine grained. Total depth = 5'1" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
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PLATE A-10

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-11**
Location:	**Southeasterly of Limonite and**		Elevation: **±667'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Brown, dry, loose, fine grained sand.							
		YOUNG FAN DEPOSIT Sand with Silt (SP-SM): Dark yellowish brown, brown, slightly moist, dense, fine with trace medium grained.							
		Sand (SP): Dark yellowish brown, slightly moist, medium dense, fine grained.							
5		Total depth = 4'10" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
10									
15									
20									
25									
30									

PLATE A-11

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **TP-12**
Location:	**Southeasterly of Limonite and**		Elevation: **±660'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/07/2022**
Drill Method:	**Test pit**	Driving Weight:	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**ARTIFICIAL FILL** Silty Sand (SM): Grayish-brown, dry, loose, fine grained sand, trace trash and debris.							
		YOUNG FAN DEPOSIT Sand with Silt (SP-SM): Dark yellowish brown, dry, loose to medium dense, fine to trace medium grained sand.							
5		Total depth = 4'7" Test pit backfilled with cutting after drilling No groundwater encountered during drilling.							
10									
15									
20									
25									
30									

PLATE A-12

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **P-1**
Location:	**Southeasterly of Limonite and**		Elevation: **±647'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/06/2022**
Drill Method:	**Hollow Stem Auger**	Driving Weight: **130lb/30"**	Logged By:

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**YOUNG ALLUVIUM** Sand with Silt (SP-SM): Grayish-brown, dry, loose, fine grained.							
		Becomes brown and moist.		1 1 2	■				
5		Same as above.		2 2 3	■				
10		Becomes dark yellowish brown, with gravel up to 3/4" in diameter.		5 8 14	■				
15		Sand (SP): Dark yellowish-brown, moist, medium dense, medium coarse graned sand, fine gravel.		17 14 14	■				
		Becomes gray, fine to medium grained.		11 16 19	■				
20		Total Depth = 20' Boring backfilled with cutting after drilling No groundwater encountered during drilling.							
25									
30									

PLATE A-13

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **P-2**
Location:	**Southeasterly of Limonite and**		Elevation: **±650'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/06/2022**
Drill Method:	**Hollow Stem Auger**	Driving Weight: **140lb/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**YOUNG ALLUVIUM** Sand with Silt (SP-SM): Gray, dry, loose, fine grained.							
		Becomes dark yellowish brown, moist.		3 2 3	■				
5		Same as above.		2 2 3	■				
10		Sand (SP): Gray, to brown, moist, dense, fine grained sand.		3 8 10	■				
15		Same as above, with gravel to 3/4" in diameter about 5%.		9 12 13	■				
		Becomes fine to medium grained with trace coarse grained.		4 10 11	■				
20		Total Depth = 20' Boring backfilled with cutting after drilling No groundwater encountered during drilling.							
25									
30									

PLATE A-14

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **P-3**
Location:	**Southeasterly of Limonite and**		Elevation: **±663'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/06/2022**
Drill Method:	**Hollow Stem Auger**	Driving Weight: **140lb/30"**	Logged By:

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Gray, to brown, dry, fine grained.							
		OLD ALLUVIUM Sand with Silt (SP-SM): Dark yellowish-brown, slightly moist, dense, fine grained.							
5		Same as above.		8 20 25					
10		Same as above.		10 15 17					#200
15		Silt (ML): Reddish-brown, moist, stiff.		12 20 27					#200
		Total Depth = 18' Boring backfilled with cutting after drilling No groundwater encountered during drilling.							
20									
25									
30									

PLATE A-15

Petra Geosciences, Inc.

EXPLORATION LOG

Project:	**Wineville Market and Villages**		Boring No.: **P-4**
Location:	**Southeasterly of Limonite and**		Elevation: **±664'**
Job No.:	**21-392**	Client: **Diversified Pacific Communities**	Date: **06/08/2022**
Drill Method:	**Hollow Stem Auger**	Driving Weight: **140lbs/30"**	Logged By: **KTM**

Depth (Feet)	Lith-ology	Material Description	WATER	Samples: Blows per 6 in.	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
0		**TOP SOIL** Silty Sand (SM): Grayish-brown, dry, loose, fine grained sand.							
		OLD OLUVIUM Sandy Silt (ML): Dark yellowish-brown, slightly moist, dense, fine grained sand.							
5		Becomes orangish brown.				■			
10		Same as above.		6 12 14	◪				#200
15									
				26 26 28	◪				#200
20		Total Depth = 19' Boring backfilled with cutting after drilling No groundwater encountered during drilling.							
25									
30									

PLATE A-16

Petra Geosciences, Inc.

Geotechnical Boring Log B-1

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma — Page 1 of 1
Project Number: I051012-10	Logged By: JAM
Drilling Company: 2R	Type of Rig: CME-55
Drive Weight (lbs): 140	Drop (in): 30 — Hole Dia (in): 8
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qoa	***QUATERNARY OLD ALLUVIAL CHANNEL DEPOSITS***	R-Value
		Bag 1			SC	Clayey SAND; orangish to reddish brown, slightly moist, medium dense, fine to coarse sand, fine gravel	
		0-5'					
	5 10 24	R-1	123.1	6.8			
5	32 50/5"	R-2	123.2	9.5		Very dense, some calcium carbonate present	
	50	R-3	109.2	14.3		Moist, yellowish orange	
10	33 50/3"	R-4	113.4	16.6	SM	Silty SAND; light orangish brown, moist, very dense, firm to medium sand	
15	31 50/5"	R-5	111.3	17.2	CL	Sandy CLAY; orangish brown, moist, very stiff, calcium carbonate present	
20	11 12 25	SPT-1	-	-			
25	21 50/5.5"	R-6	-	-		Light yellowish orange, moist, fine to coarse, sand, gravel has decomposed to clay	
						Total Depth: 26 feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-2

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME-55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qoa	***QUATERNARY OLD ALLUVIAL CHANNEL DEPOSITS***	
		Bag 1			SC	Clayey SAND; light orangish brown, moist, dense	
		0-5'					
	8 21 50/5"	R-1	119.0	13.7			
5	30 50/3"	R-2	122.6	12.9		Calcium carbonate present	
	31 45 50/5.5"	R-3	120.3	6.5	SM	Silty SAND; reddish brown, slightly moist, very dense, fine to coarse sand	
10	31 33 41	R-4	108.7	4.7		Fine gravel	
15	23 36 50	R-5			CL	Sandy CLAY; yellowish to orangish brown, slightly moist, very dense, fine to medium sand, some calcium carbonate present	
20	18 17 20	SPT-1			ML	Sandy SILT; medium olive brown, moist, hard, oxidation present	
25	27 39 50/4"	R-6			SC	Clayey SAND; orangish red, moist, very dense	
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-3

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME-55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; medium yellowish brown,slightly moist, medium dense, fine sand	
	8 11 11	R-1	107.9	5.0			
5							
	4 6 7	R-2	104.4	6.6		Loose	
					ML	Sandy SILT; medium yellowish brown, moist, very stiff, fine sand	
	4 5 8	R-3	97.5	14.4			
10							
	4 6 10	R-4	97.6	13.9	SM	Silty SAND; medium yellowish brown, moist, loose	
						Light olive brown,slightly moist, dense	
15							
	13 22 27	R-5	105.9	3.5			
20						Moist, interfingered SAND and Sandy SILT, scattered gravel	
	10 6 5	SPT-1		18.4			
						Medium yellowish brown, moist, dense, fine sand	
25							
	18 24 32	R-6	105.0	8.7			
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-4

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME-55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	MAX
		Bag 1			SM	Silty SAND; medium yellowish brown, slightly moist, loose, fine to medium sand	EI
		0-5					Sulfate
	5 6 7	R-1	99.2	2.6			
5							
	3 4 5	R-2	101.3	5.4			
	2 4 8	R-3	101.0	7.3			
10							Consolidation
	6 8 9	R-4	104.7	6.6		Medium dense, fine to coarse sand	
15							
	11 12 15	R-5	100.0	10.0		Moist, occassional fine gravel	
20							
	4 5 6	SPT-1	-	9.4		Medium olive brown, moist, medium dense, increase in fines	
25					SP	SAND; medium brown, moist, very dense, fine to coarse sand, fine to coarse gravel	
	19 32 50/5.5"	R-6	-	-			
						Total Depth: 26½ feet	
30						No Groundwater	

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Geotechnical Boring Log B-5

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma — Page 1 of 1
Project Number: I051012-10	Logged By: JAM
Drilling Company: 2R	Type of Rig: CME-55
Drive Weight (lbs): 140	Drop (in): 30 — Hole Dia (in): 8
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; medium yellowish brown, moist, loose	
	4 5 8	R-1	108.4	7.7			
5					ML	Sandy SILT; medium to olive brown, moist, very stiff	
	7 12 17	R-2	117.4	12.3			
	6 11 13	R-3	107.7	19.4			
10							
	10 13 21	R-4	104.1	14.4			
						Increase in fines	
					SM	Silty SAND; medium yellowish brown, moist, dense	
15							
	17 24 35	R-5	111.7	7.2			
20						Light yellowish brown, medium dense	
	5 6 10	SPT-1	-	2.9			
25					ML	Sandy SILT, light olive brown, moist, very stiff	
	15 26 26	R-6	100.4	1.8			
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-6

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME-55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; light orangish brown, moist, loose fine sand	
	4 4 6	R-1	105.0	5.0			
5	8 12 12	R-2	114.1	6.6		Medium to yellowish brown, medium dense, some calcium carbonate stringers	
	9 11 14	R-3	115.2	13.0			
10	10 11 16	R-4	108.1	6.3		Decrease in fines	
15	15 17 22	R-5	-	-		Dense	
20	7 12 12	SPT-1	-	-		Interfingered Sandy SILT lenses, scattered coarse gravel to cobble	
					ML	Sandy SILT; medium olive brown, moist, very stiff	
25	18 23 25	R-6	-	-			
						Total Deposit: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-7

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma — Page 1 of 1
Project Number: I051012-10	Logged By: JAM
Drilling Company: 2R	Type of Rig: CME-55
Drive Weight (lbs): 140	Drop (in): 30 — Hole Dia (in): 8
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; medium brown, moist, very loose, fine to medium sand	
	3 3 3	R-1	91.8	13.9			
5	3 4 5	R-2	104.0	9.7		Loose	
	9 15 22	R-3	108.9	3.8		Light to medium brown, medium dense, fine to coarse sand	
10	11 19 14	R-4	108.6	2.2		numerous gravel, scattered cobble Decrease in gravel	
15	16 26 30	R-5	-	-	Qof SP-SM	***Quaternary Old Alluvial Channel Deposits*** SAND; light brown, slightly moist, dense, fine to coarse sand, fine gravel	
20	8 12 20	SPT-1	-	-			
25	18 32 48	R-6	-	-		Fine gravel	
						Total Depth: 26½ feet ***No Groundwater***	
30							

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Geotechnical Boring Log B-8

Date: 8-16-05	Project Name: Ben Chai Group - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME-55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; light yellowish brown, slightly moist, medium dense	
	7 8 11	R-1	113.7	5.0			
		Bag-1					
5	6 8 11	5-10'					
		R-2	109.0	7.0			
	7 12 14	R-3	114.5	12.3	ML	Sandy SILT; olive brown, moist, very stiff	
10	12 16 24	R-4	109.8	13.8			
					SM	Silty SAND with gravel; light brown, slightly moist, dense, fine to coarse sand, coarse gravel	
15	19 50	R-5	110.7	0.9			
20	7 11 15	SPT-1	–	5.4		Fine to medium sand, no gravel	
25	14 25 42	R-6	–	–			
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-9

Date: 8-16-05		Project Name: Ben Chai Group - Mira Loma	Page 1 of 2
Project Number: I051012-10		Logged By: JAM	
Drilling Company: 2R		Type of Rig: CME-55	
Drive Weight (lbs): 140		Drop (in): 30	Hole Dia (in): 8
Top of Hole Elevation (ft):		Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; medium yellowish brown, moist, loose, fine to medium sand	
	5 6 7	R-1	106.0	4.8			
5	6 9 12	R-2	114.6	8.3		Medium dense	
	6 9 13	R-3	102.2	23.8	CL	Sandy CLAY; medium yellowish brown, very moist, stiff	
10	9 14 20	R-4	106.4	10.2		Moist	
					SM	Silty SAND; light brown, moist, medium dense	
15	6 8 10	SPT-1	-	5.2			
					ML	Sandy SILT; medium yellowish brown, moist, very stiff	
20	15 12 15	R-5	103.6	7.1			
					SM	Silty SAND; light yellow brown, slightly moist, very stiff, fine to medium grained, fine to coarse gravel	
25	10 16 20	SPT-2	-	2.8			
30							

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Geotechnical Boring Log B-9

Top of Hole Elevation (ft):		Project Name: Ben Chai Group - Mira Loma	Page 2 of 2
Project Number: I051012-10		Logged By: JAM	
Drilling Company: 2R		Type of Rig: CME-55	
Drive Weight (lbs): 140		Drop (in): 30	Hole Dia (in): 8
Top of Hole Elevation (ft):		Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
30	40 17 17	R-6	108.4	14.3	ML	Sandy SILT; medium yellowish brown, moist, very stiff	
35	22 22 30	SPT-3	-	2.9	SP-SM	SAND with gravel; light brown, slightly moist, dense, fine to coarse sand, fine to coarse gravel	
40	9 10 16	R-7	93.7	27.2	ML	Sandy SILT; medium olive brown,very moist to wet, very stiff, fine to coarse gravel; cobbles	
45	26 33 45	SPT-4	-	2.0	SP	SAND with gravel; medium brown, slightly moist, very dense	
50	35 50/5"	R-8	109.5	2.8		Medium brown, moist, very dense, fine to coarse sand, fine to coarse gravel; cobbles	
55						Total Depth: 51 feet No Groundwater	
60							

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Geotechnical Boring Log B-10

Date: 8-17-05	Project Name: Ben Chai - Mira Loma — Page 1 of 1
Project Number: I051012-10	Logged By: JAM
Drilling Company: 2R	Type of Rig: CME - 55
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; medium orangish brown, slightly moist, loose, fine to medium sand	
	4 5 6	R-1	98.3	3.5			
5	4 5 8	R-2	101.7	3.8			
		Bag-1 5-10'					
	5 8 11	R-3	105.0	10.2		Moist, fine to coarse sand, decrease in fines, lenses of clayey SAND	
10	8 14 26	R-4	-	-			
15	30 50/5.5"	R-5	-	-		No Recovery (rock in sampler)	
20	8 7 6	SPT-1	-	-			
					CL	Sandy CLAY; medium yellowish brown, moist, stiff, fine sand	
					SM	Silty SAND; light yellowish brown, moist, dense, fine to coarse sand	
25	16 25 38	R-6	-	-			
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-11

Date: 8-17-05	Project Name: Ben Chai - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME - 55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0		Bag-1			Qof	***QUATERNARY OLD ALLUVIAL FAN DEPOSIT***	MAX
		0-5			SC	Clayey SAND; reddish brown, moist, hard, fine to coarse sand, fine gravel	EI
	25 50/4"	R-1	120.3	11.1			Sulfate
5							
	50/5"	R-2	93.0	8.6		Orangish brown, decrease in gravel	
	25 50/5"	R-3	117.5	13.7	ML	Sandy SILT; medium yellowish brown, moist, hard, fine sand	
10	27 50	R-4	97.8	21.5		Very moist	
15	33 50	R-5	119.4	13.4	CL	Sandy CLAY; reddish brown, slightly moist, hard	
20	13 16 17	SPT-1	-	-	ML	Sandy SILT; medium olive to yellowish brown, moist, very stiff	
25	10 23 36	R-6	-	-		Hard	
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-12

Date: 8-17-05	Project Name: Ben Chai - Mira Loma	Page 1 of 1
Project Number: I051012-10	Logged By: JAM	
Drilling Company: 2R	Type of Rig: CME - 55	
Drive Weight (lbs): 140	Drop (in): 30 Hole Dia (in): 8	
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qof	***QUATERNARY OLD ALLUVIAL FAN DEPOSITS***	
					SC	Clayey SAND; dark reddish brown, moist, medium dense to dense	
	28 50/5"	R-1	120.9	12.0			
5	50/5.5"	R-2	197.5	11.7			
		Bag-1 5-10'					
	32 50/2"	R-3	121.5	11.0			
10	13 29 50	R-4	110.5	4.0	SP	SAND; orangish brown, slightly moist, dense, fine to medium	
15	40 50/4"	R-5	119.4	14.2	SC	Sandy CLAY; orangish brown, slightly moist, hard, fine to coarse sand, scattered fine gravel	
20	25 37 50/5.5"	SPT-1	-	-	ML	Sandy SILT; olive brown, slightly moist, hard, fine sand, pinhole porosity	
25	9 31 50/5.5"	R-6	-	-		Yellowish brown, non - porous	
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-13

Date: 8-17-05	Project Name: Ben Chai - Mira Loma — Page 1 of 1
Project Number: I051012-10	Logged By: JAM
Drilling Company: 2R	Type of Rig: CME - 55
Drive Weight (lbs): 140	Drop (in): 30 — Hole Dia (in): 8
Top of Hole Elevation (ft):	Hole Location: See Geotechnical Map

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qya	***QUATERNARY YOUNG ALLUVIAL CHANNEL DEPOSITS***	
					SM	Silty SAND; medium yellowish brown, slightly moist, loose, fine to medium sand	
	3 6 7	R-1	111.8	6.5			
5							
	3 7 7	R-2	115.8	10.6		Moist	
	13 18 50	R-3	124.2	8.9	Qof	***QUATERNARY OLD ALLUVIAL FAN DEPOSITS***	
					SC	Clayey SAND; orangish brown, slightly moist to moist, hard	
10	36 50	R-4	125.6	9.2			
					CL	Sandy CLAY; light yellowish brown, moist, hard, fine sand	
15	45 45 50	R-5	107.2	19.1			
					SP	SAND; light yellowish brown, slightly moist, medium dense, fine to coarse	
20	12 15 18	SPT-1	-	5.1			
25	17 23 34	R-6	-	-		Dense, fine to coarse gravel	
						Total Depth: 26½ feet	
						No Groundwater	
30							

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Geotechnical Boring Log B-14

Date: 8-17-05		Project Name: Ben Chai - Mira Loma	Page 1 of 1
Project Number: I051012-10		Logged By: JAM	
Drilling Company: 2R		Type of Rig: CME - 55	
Drive Weight (lbs): 140		Drop (in): 30	Hole Dia (in): 8
Top of Hole Elevation (ft):		Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qof	***QUATERNARY OLD ALLUVIAL FAN DEPOSITS***	
					SM	Silty SAND; light orangish brown, slightly moist, medium dense	
	7 9 9	R-1	109.9	9.7			
5	4 18 50/5.5"	R-2	108.5	13.9		Dense, some calcium carbonate stringers, lenses of sandy SILT	
	43 50	R-3	117.1	14.8		Very dense, fine to coarse sand	
10	20 45 50	R-4	120.0	13.8	ML	Sandy SILT; medium yellowish brown, slightly moist, hard, fine to medium sand	
15	19 35 47	R-5	-	-			
20	10 13 24	SPT-1	-	-		Oxidation present	
25	14 19 50	R-6	-	-			
						Total Depth: 26½ feet	
						No Groundwater	
30							

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APPENDIX B

CPT RESULTS AND LIQUEFACTION ANALYSIS

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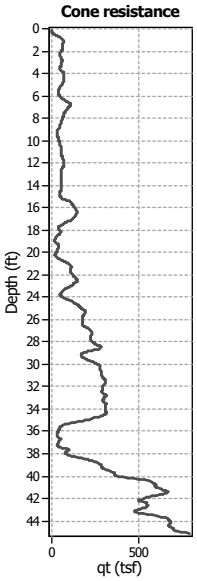
LIQUEFACTION ANALYSIS REPORT

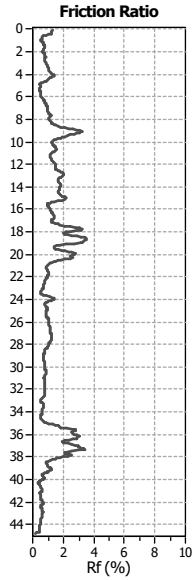
Project title : **Location :**

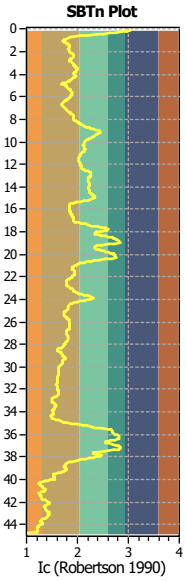
CPT file : CPT-1

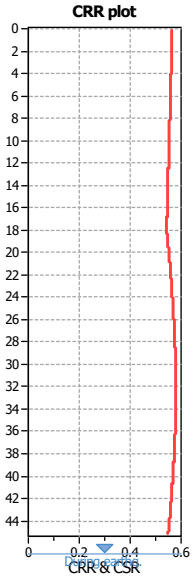
Input parameters and analysis data

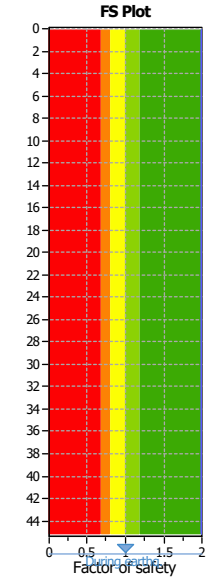
Analysis method:	NCEER (1998)	G.W.T. (in-situ):	47.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	47.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	8.07	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.72	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

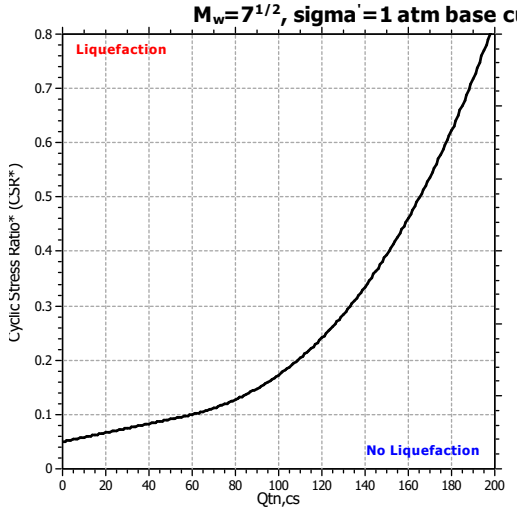


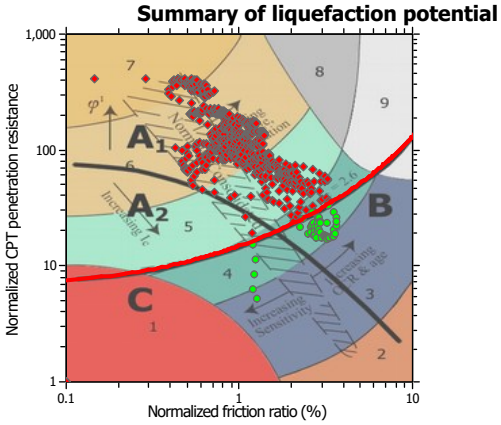






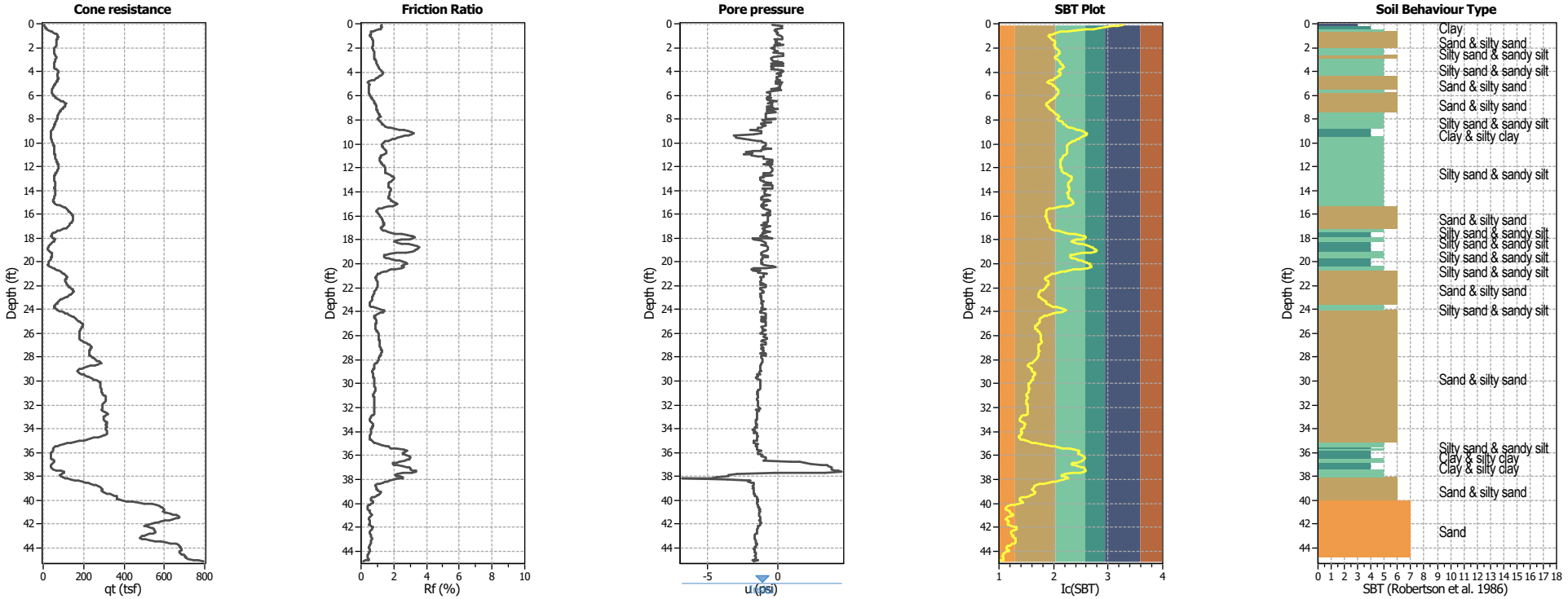






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



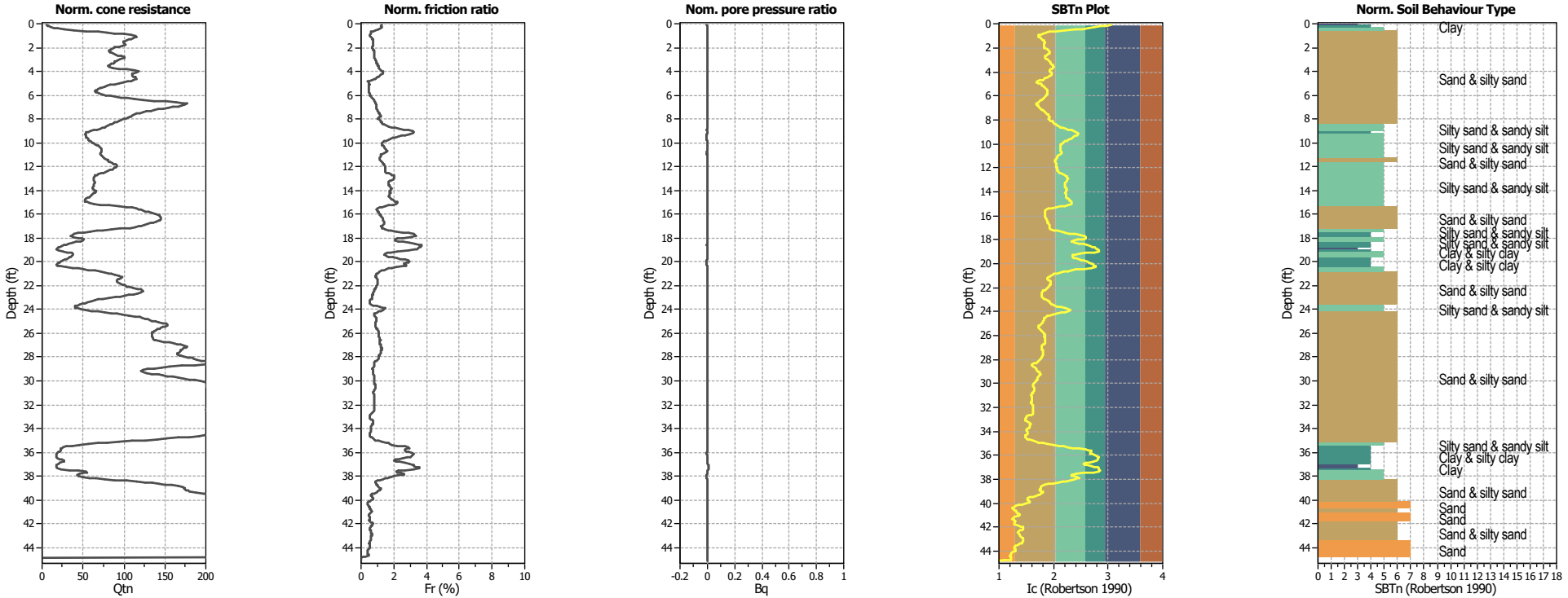
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



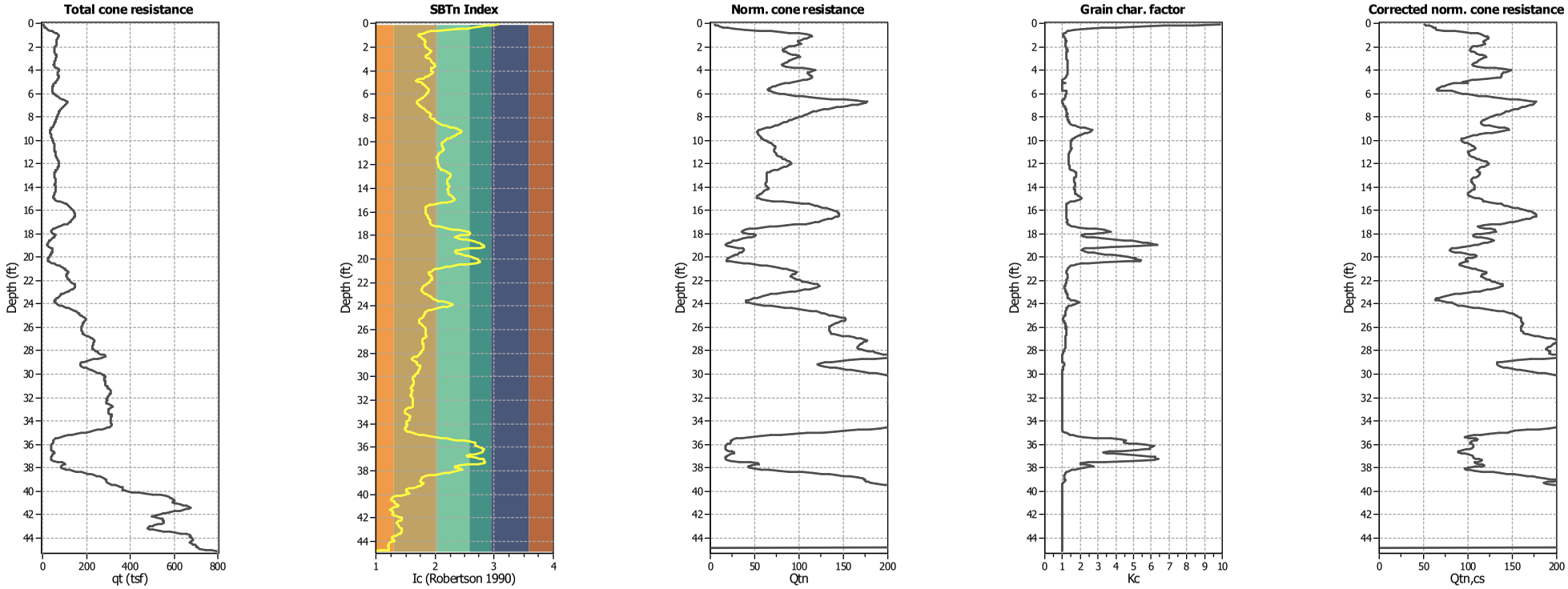
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

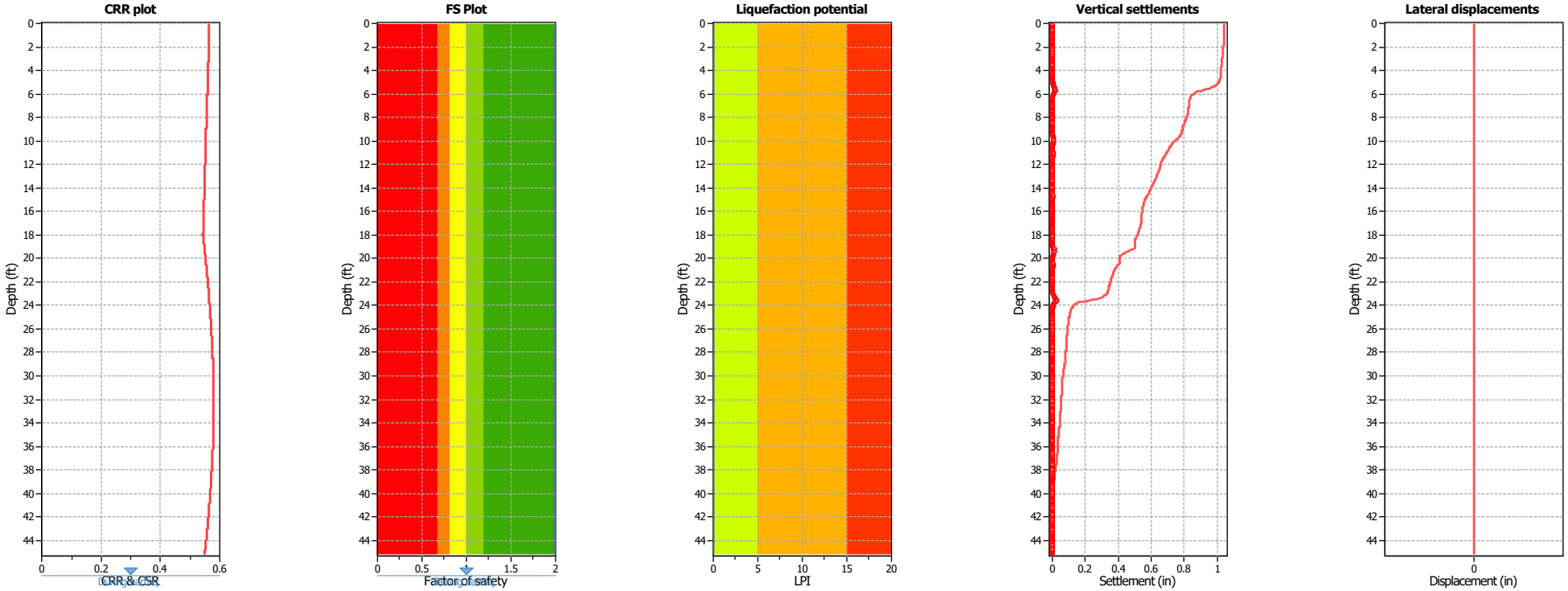
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

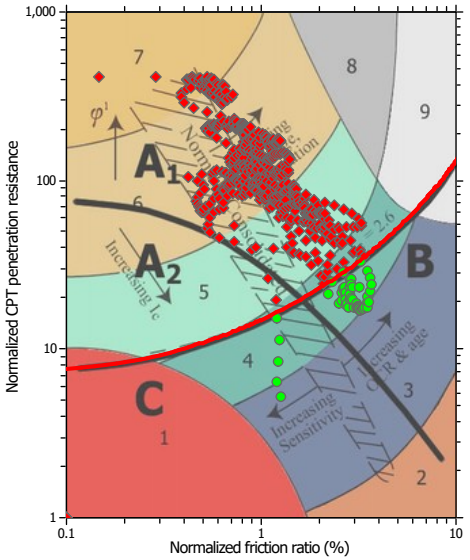
F.S. color scheme

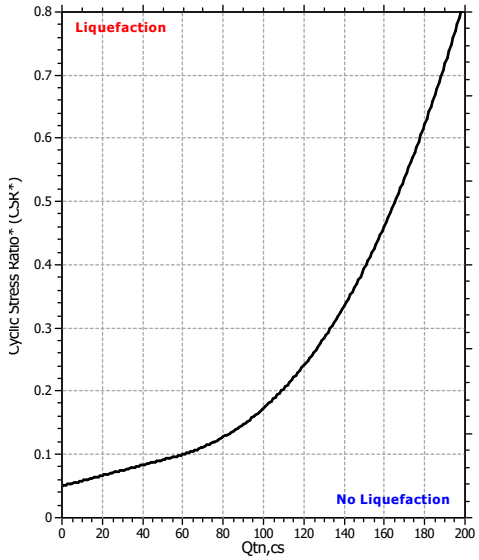
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

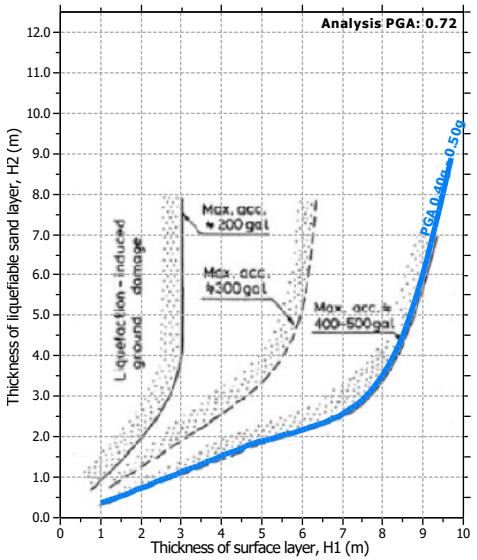
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



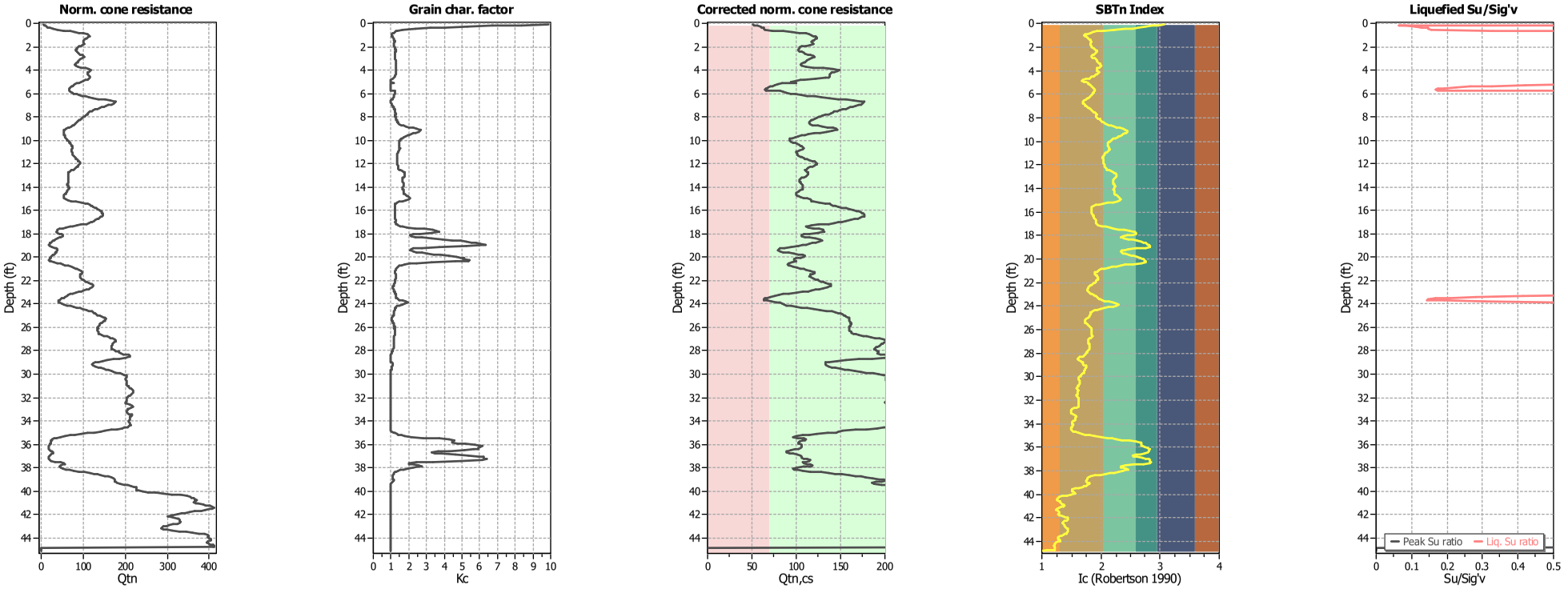




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.07	2.80	0.04	-0.40	62.73	89.71
2	0.13	4.01	0.04	0.20	56.70	91.31
3	0.20	4.94	0.06	0.30	49.94	94.16
4	0.27	6.62	0.09	0.20	43.42	97.16
5	0.34	9.42	0.11	0.30	37.01	99.85
6	0.40	12.31	0.14	0.30	32.42	102.17
7	0.46	14.55	0.18	-0.17	26.48	104.53
8	0.53	22.66	0.22	-0.23	19.59	106.77
9	0.60	34.97	0.25	-0.10	14.14	108.53
10	0.66	43.83	0.27	-0.15	11.08	109.84
11	0.73	49.05	0.30	0.00	9.60	110.91
12	0.79	54.37	0.33	-0.04	8.44	111.91
13	0.86	63.13	0.36	-0.13	7.45	112.76
14	0.93	68.36	0.38	0.00	6.69	113.47
15	0.99	71.81	0.40	0.20	6.48	114.01
16	1.06	71.99	0.43	0.30	6.58	114.42
17	1.13	70.97	0.44	0.30	6.92	114.69
18	1.18	69.29	0.46	0.30	7.35	114.87
19	1.25	67.42	0.47	0.30	7.78	114.98
20	1.32	66.02	0.48	-0.21	8.18	115.03
21	1.38	64.35	0.48	-0.12	8.52	114.99
22	1.45	62.67	0.47	-0.12	8.79	114.84
23	1.51	61.27	0.46	-0.16	8.94	114.70
24	1.58	61.18	0.46	-0.16	8.97	114.68
25	1.64	62.11	0.47	0.10	8.80	114.77
26	1.71	64.16	0.47	-0.29	8.63	114.86
27	1.77	64.16	0.47	0.40	8.65	114.80
28	1.84	61.27	0.46	-0.21	8.82	114.33
29	1.91	57.63	0.40	-0.21	8.83	113.39
30	1.97	55.67	0.33	-0.21	8.88	112.54
31	2.04	53.71	0.35	-0.50	9.15	112.30
32	2.10	52.78	0.37	-0.29	9.89	112.72
33	2.18	51.48	0.40	-0.29	10.47	113.06
34	2.24	50.82	0.41	-0.24	10.91	113.29
35	2.30	50.54	0.42	0.00	11.02	113.49
36	2.37	52.04	0.43	-0.24	11.00	113.72
37	2.43	52.88	0.44	-0.30	10.82	113.99
38	2.50	54.27	0.45	0.40	10.61	114.17
39	2.56	55.49	0.45	0.40	10.24	114.29
40	2.63	57.54	0.45	0.40	9.76	114.43
41	2.69	60.52	0.47	0.40	9.29	114.70
42	2.76	63.13	0.48	-0.30	9.01	115.03
43	2.83	63.97	0.50	-0.50	9.08	115.31
44	2.89	62.39	0.52	-0.50	9.49	115.45
45	2.96	59.68	0.52	-0.50	10.09	115.45
46	3.02	57.26	0.52	-0.40	10.65	115.36
47	3.10	55.77	0.52	-0.30	10.98	115.27
48	3.15	55.49	0.51	-0.10	11.15	115.19

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.22	55.02	0.51	0.30	11.30	115.18
50	3.29	54.27	0.52	-0.50	11.55	115.17
51	3.35	53.06	0.52	0.35	11.95	115.17
52	3.42	51.57	0.52	-0.40	12.39	115.13
53	3.48	50.08	0.52	0.40	12.76	115.05
54	3.55	49.52	0.52	-0.50	12.97	115.09
55	3.62	50.17	0.53	-0.50	12.91	115.37
56	3.68	52.78	0.57	-0.30	12.57	116.05
57	3.75	58.00	0.64	-0.30	11.98	117.07
58	3.81	64.72	0.74	-0.50	11.37	118.28
59	3.87	71.25	0.85	0.30	10.99	119.40
60	3.94	74.98	0.94	0.25	11.00	120.23
61	4.01	74.70	1.00	0.40	11.35	120.61
62	4.08	71.71	1.00	0.20	11.83	120.57
63	4.15	68.73	0.95	-0.07	12.03	120.26
64	4.20	68.73	0.90	0.20	11.80	119.79
65	4.27	68.73	0.84	0.08	11.37	119.37
66	4.33	68.73	0.80	0.20	10.88	118.99
67	4.40	69.94	0.77	-0.04	10.36	118.64
68	4.47	70.97	0.71	-0.10	9.71	118.20
69	4.53	71.90	0.66	-0.10	9.14	117.75
70	4.60	72.18	0.63	-0.10	8.78	117.38
71	4.67	71.62	0.61	-0.10	8.27	116.64
72	4.72	70.50	0.48	0.10	7.18	114.79
73	4.80	67.89	0.25	0.00	5.00	112.62
74	4.86	65.56	0.28	-0.20	5.00	111.02
75	4.93	62.20	0.29	0.30	5.00	111.29
76	4.99	58.75	0.30	-0.20	5.00	111.23
77	5.05	55.77	0.29	0.20	7.73	110.74
78	5.13	51.76	0.25	0.15	5.00	109.97
79	5.18	49.98	0.23	0.15	5.00	109.13
80	5.25	47.65	0.21	0.10	5.00	108.61
81	5.33	45.23	0.22	-0.06	5.00	108.34
82	5.38	44.30	0.21	0.15	5.00	108.14
83	5.45	42.99	0.20	-0.50	5.00	107.91
84	5.51	41.69	0.20	0.20	5.00	107.70
85	5.58	40.66	0.20	0.10	5.00	107.61
86	5.65	40.66	0.20	-0.50	5.00	107.58
87	5.72	40.66	0.20	-0.80	5.00	107.65
88	5.79	41.78	0.21	-0.70	10.03	107.95
89	5.85	43.55	0.22	-0.60	9.82	108.55
90	5.92	45.79	0.25	-0.60	9.62	109.36
91	5.98	48.40	0.27	-0.60	9.37	110.30
92	6.05	51.85	0.31	-0.60	9.06	111.32
93	6.12	55.95	0.35	-0.70	8.75	112.47
94	6.19	60.62	0.40	-0.80	8.46	113.56
95	6.24	64.44	0.45	-0.50	8.17	114.68
96	6.30	70.22	0.51	-0.80	7.85	115.81

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.37	76.56	0.59	-0.70	7.46	117.10
98	6.45	85.42	0.69	-0.10	7.02	118.36
99	6.51	94.19	0.78	-0.60	6.50	119.53
100	6.58	103.89	0.87	-0.40	6.07	120.46
101	6.64	109.95	0.93	-0.70	5.86	121.14
102	6.70	111.44	0.98	-0.40	5.94	121.54
103	6.77	109.85	1.01	-0.50	6.17	121.72
104	6.83	107.80	1.01	-0.40	6.43	121.63
105	6.91	103.70	0.97	-0.80	6.64	121.42
106	6.96	101.46	0.95	-0.80	6.86	121.08
107	7.03	97.26	0.91	-0.30	7.09	120.74
108	7.10	93.35	0.87	-0.80	7.39	120.36
109	7.17	89.62	0.84	0.00	7.72	120.10
110	7.22	87.29	0.85	-0.70	8.12	119.93
111	7.29	83.65	0.85	-0.80	8.56	119.80
112	7.36	80.48	0.83	-0.30	9.02	119.65
113	7.43	77.96	0.83	-0.20	9.46	119.51
114	7.50	75.44	0.83	-0.90	9.86	119.44
115	7.55	74.04	0.83	-0.90	10.35	119.36
116	7.61	70.41	0.83	-0.90	10.74	119.32
117	7.69	70.22	0.84	-0.90	11.12	119.33
118	7.75	69.66	0.85	-0.90	11.09	119.11
119	7.83	68.73	0.76	-0.90	10.84	118.57
120	7.88	67.80	0.67	-0.90	10.60	117.96
121	7.96	66.30	0.67	-0.90	10.68	117.66
122	8.01	65.00	0.69	-0.20	11.17	117.74
123	8.09	63.04	0.71	-1.09	11.68	117.82
124	8.14	61.74	0.71	-0.93	12.38	117.81
125	8.21	57.72	0.72	-0.93	12.85	117.78
126	8.27	58.38	0.72	-0.50	13.31	117.73
127	8.35	57.17	0.72	-1.20	13.61	117.76
128	8.42	55.58	0.73	-1.20	14.18	117.84
129	8.47	54.37	0.76	-0.99	14.91	117.99
130	8.54	52.60	0.79	-0.90	15.77	118.22
131	8.61	51.01	0.83	-1.09	16.94	118.61
132	8.69	49.24	0.91	-1.20	18.26	119.08
133	8.74	47.84	0.98	-1.39	19.84	119.61
134	8.81	45.42	1.07	-1.39	21.46	120.00
135	8.86	43.27	1.12	-1.59	23.37	120.29
136	8.93	40.19	1.18	-1.99	25.24	120.37
137	9.00	37.40	1.18	-1.20	26.96	120.25
138	9.07	35.53	1.15	-1.20	28.09	119.99
139	9.12	34.41	1.11	-1.20	28.56	119.64
140	9.20	33.76	1.06	-1.20	28.36	119.26
141	9.27	34.22	0.99	-1.69	27.67	118.83
142	9.32	34.69	0.93	-3.09	26.60	118.37
143	9.39	35.16	0.86	-3.09	25.48	117.87
144	9.47	35.90	0.79	-2.99	24.34	117.40

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.54	36.74	0.76	-2.99	23.39	117.07
146	9.59	37.40	0.74	-2.99	22.52	116.82
147	9.66	38.42	0.70	-2.39	21.57	116.51
148	9.73	39.45	0.65	-1.99	20.45	116.09
149	9.80	40.57	0.60	-1.39	19.40	115.69
150	9.85	41.50	0.58	-1.20	18.51	115.45
151	9.92	42.99	0.57	-1.09	17.81	115.39
152	9.99	44.58	0.57	-0.90	17.21	115.41
153	10.04	45.60	0.56	-0.90	16.76	115.56
154	10.12	47.19	0.59	-0.90	16.50	115.89
155	10.19	49.05	0.63	-0.90	16.40	116.34
156	10.24	50.08	0.66	-0.90	16.35	116.83
157	10.31	51.57	0.70	-0.99	16.41	117.29
158	10.38	52.69	0.74	-1.09	16.51	117.76
159	10.46	53.62	0.78	-0.50	16.63	118.11
160	10.50	54.09	0.80	-0.70	16.73	118.39
161	10.58	54.55	0.82	-1.20	16.87	118.60
162	10.65	54.74	0.85	-1.20	17.08	118.78
163	10.70	54.55	0.86	-1.69	17.25	118.92
164	10.77	54.74	0.87	-2.29	17.03	118.66
165	10.84	54.46	0.76	-1.79	16.39	118.09
166	10.91	54.74	0.67	-2.39	15.64	117.44
167	10.96	55.30	0.67	-1.89	15.16	117.16
168	11.04	56.23	0.67	-1.89	14.89	117.24
169	11.11	58.19	0.68	-1.39	14.57	117.35
170	11.16	59.40	0.69	-1.06	14.66	117.36
171	11.22	55.77	0.68	-1.06	14.37	117.40
172	11.29	61.46	0.68	-1.06	14.13	117.50
173	11.37	62.95	0.70	-0.40	13.66	117.85
174	11.44	63.97	0.75	-0.40	13.76	118.23
175	11.48	64.63	0.78	-0.40	13.91	118.63
176	11.56	65.84	0.81	-0.80	13.98	118.98
177	11.63	67.33	0.85	-0.40	13.99	119.39
178	11.70	69.29	0.90	-0.70	14.00	119.81
179	11.76	70.87	0.94	-0.40	14.02	120.30
180	11.83	73.11	1.01	-0.99	14.09	120.76
181	11.90	74.32	1.06	-0.45	14.22	121.15
182	11.95	74.51	1.09	-0.60	14.41	121.39
183	12.02	74.32	1.11	-0.50	14.61	121.47
184	12.09	73.39	1.10	-0.50	14.76	121.40
185	12.16	72.46	1.07	-0.40	14.85	121.22
186	12.21	71.43	1.05	-0.40	14.97	120.96
187	12.28	69.38	1.01	-0.40	15.19	120.68
188	12.36	67.14	0.97	-0.40	15.49	120.40
189	12.41	65.74	0.96	-0.50	15.96	120.21
190	12.48	63.04	0.96	-0.60	16.79	120.16
191	12.55	59.50	0.99	-0.99	17.85	120.20
192	12.60	57.63	1.02	-0.99	19.04	120.33

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.67	55.30	1.06	-0.80	19.94	120.41
194	12.75	54.09	1.06	-0.40	20.74	120.46
195	12.82	52.97	1.07	-1.09	21.01	120.49
196	12.87	54.13	1.08	-0.99	21.20	120.52
197	12.94	53.34	1.08	-1.29	21.05	120.52
198	13.01	54.18	1.06	-1.24	20.96	120.43
199	13.06	54.18	1.04	-1.24	20.56	120.23
200	13.13	54.37	0.99	-1.20	20.14	119.95
201	13.21	54.83	0.94	-0.99	19.66	119.68
202	13.26	55.30	0.92	-0.99	19.32	119.52
203	13.33	55.58	0.92	-0.50	19.19	119.49
204	13.40	55.67	0.92	-0.90	19.18	119.49
205	13.47	55.77	0.92	-0.80	19.20	119.51
206	13.52	55.86	0.93	-0.99	19.27	119.56
207	13.59	55.86	0.94	-0.40	19.50	119.65
208	13.67	55.21	0.96	-0.40	19.82	119.76
209	13.72	54.93	0.98	-0.40	20.18	119.90
210	13.79	54.83	1.00	-0.40	20.38	120.03
211	13.86	55.30	1.01	-1.09	20.36	120.15
212	13.93	56.42	1.02	-0.90	20.12	120.21
213	13.98	57.45	1.02	-0.90	19.71	120.29
214	14.06	59.12	1.02	-0.93	19.45	120.38
215	14.13	59.50	1.04	-0.93	19.34	120.44
216	14.18	59.12	1.03	-0.96	19.65	120.36
217	14.24	56.23	1.00	-0.96	19.87	120.14
218	14.31	56.14	0.97	-0.96	20.04	119.83
219	14.38	55.30	0.93	-0.60	19.98	119.54
220	14.46	54.27	0.90	-1.09	20.13	119.30
221	14.53	53.25	0.89	-1.09	20.52	119.17
222	14.58	51.94	0.90	-1.20	21.08	119.11
223	14.65	50.36	0.90	-1.20	21.78	119.04
224	14.72	48.68	0.90	-1.20	22.34	119.00
225	14.77	48.68	0.90	-0.70	22.81	119.11
226	14.84	48.68	0.95	-0.60	23.34	119.45
227	14.92	48.68	1.03	-0.99	23.74	119.94
228	14.96	50.73	1.09	-0.99	23.86	120.61
229	15.03	53.71	1.21	-0.99	23.25	121.30
230	15.11	58.47	1.28	-1.09	21.62	121.98
231	15.18	68.17	1.31	-1.20	19.44	122.47
232	15.23	76.10	1.32	-0.80	16.56	122.89
233	15.30	91.30	1.31	-1.20	14.05	123.14
234	15.37	102.21	1.26	-1.09	12.03	123.19
235	15.43	107.24	1.20	-0.99	10.59	122.94
236	15.50	112.84	1.10	-0.99	9.67	122.66
237	15.56	115.73	1.08	-0.80	9.08	122.56
238	15.62	118.06	1.12	-0.70	8.93	122.78
239	15.68	120.86	1.18	-0.60	8.92	123.25
240	15.76	125.43	1.28	-0.60	8.99	123.81

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.82	128.60	1.37	-0.60	9.01	124.39
242	15.89	133.08	1.45	-0.80	9.01	124.91
243	15.96	137.27	1.53	-0.60	8.96	125.38
244	16.03	141.37	1.60	-1.09	8.92	125.77
245	16.08	144.08	1.66	-0.60	9.04	126.12
246	16.15	142.87	1.74	-0.70	9.18	126.41
247	16.21	145.38	1.79	-0.70	9.40	126.69
248	16.27	145.38	1.85	-0.70	9.53	126.93
249	16.34	146.22	1.91	-0.70	9.69	127.13
250	16.41	146.78	1.94	-0.70	9.84	127.28
251	16.48	145.66	1.97	-0.70	10.00	127.35
252	16.54	144.27	1.97	-0.70	10.22	127.33
253	16.61	141.37	1.95	-0.70	10.40	127.22
254	16.68	138.86	1.92	-0.99	10.61	127.04
255	16.75	135.31	1.87	-0.99	10.83	126.83
256	16.81	131.49	1.83	-0.80	10.97	126.46
257	16.88	127.67	1.69	-1.20	10.90	125.92
258	16.95	125.06	1.53	-0.90	10.79	125.35
259	17.00	121.88	1.49	-0.60	10.83	124.90
260	17.06	117.69	1.45	-0.90	11.19	124.60
261	17.13	112.09	1.40	-1.09	11.79	124.22
262	17.20	103.51	1.35	-0.91	13.37	123.64
263	17.27	81.78	1.29	-0.91	15.10	123.09
264	17.33	79.92	1.25	-0.91	17.36	122.59
265	17.40	71.25	1.25	-0.99	19.29	122.39
266	17.47	61.27	1.30	-0.60	22.41	122.24
267	17.52	54.09	1.34	-1.09	26.27	122.03
268	17.59	45.42	1.33	-0.90	29.95	121.65
269	17.67	40.29	1.28	-1.09	33.10	121.21
270	17.73	38.51	1.26	-1.20	34.14	120.96
271	17.78	40.24	1.26	-1.29	35.14	120.77
272	17.86	35.90	1.23	-0.80	34.54	120.70
273	17.93	40.19	1.20	-0.80	32.64	120.69
274	17.98	46.91	1.18	-0.40	28.30	120.83
275	18.05	54.93	1.13	-1.79	25.28	120.88
276	18.13	56.05	1.11	-1.69	23.91	120.86
277	18.18	54.83	1.12	-1.20	24.45	120.83
278	18.25	51.66	1.14	-0.99	26.34	120.80
279	18.33	45.70	1.17	-0.99	29.04	120.72
280	18.38	41.41	1.18	-0.90	32.66	120.48
281	18.45	35.62	1.17	-0.90	36.05	120.09
282	18.52	32.17	1.12	-0.90	39.19	119.56
283	18.57	29.84	1.06	-1.20	41.53	118.86
284	18.65	26.67	0.96	-0.80	43.14	118.06
285	18.72	25.27	0.87	-0.70	44.57	117.20
286	18.77	23.69	0.81	-0.70	45.59	116.34
287	18.84	21.73	0.73	-0.70	46.97	115.49
288	18.91	20.24	0.66	-0.70	48.09	114.69

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.98	19.58	0.62	-0.70	47.77	114.26
290	19.04	20.98	0.62	-0.80	43.02	114.46
291	19.11	28.26	0.63	-0.99	35.28	115.06
292	19.18	37.86	0.63	-1.20	29.14	115.72
293	19.24	42.34	0.66	-1.20	25.71	115.99
294	19.29	43.18	0.62	-1.20	24.36	115.92
295	19.36	43.64	0.58	-1.20	24.05	115.78
296	19.44	43.08	0.62	-1.09	24.37	115.77
297	19.50	41.78	0.62	-0.70	25.38	116.04
298	19.55	40.94	0.66	-0.70	26.88	116.41
299	19.62	39.07	0.74	-1.08	29.22	116.90
300	19.69	35.81	0.80	-1.08	31.28	117.38
301	19.75	36.56	0.84	-1.08	33.42	117.68
302	19.82	33.94	0.87	-1.19	35.47	117.77
303	19.89	30.40	0.88	-1.20	38.26	117.39
304	19.96	27.51	0.79	-1.20	40.47	116.60
305	20.04	25.46	0.69	-1.20	41.58	115.61
306	20.09	24.25	0.63	-1.09	42.45	114.62
307	20.16	22.29	0.57	-1.20	42.24	114.06
308	20.23	23.97	0.56	-0.99	43.96	113.75
309	20.30	20.42	0.59	-0.60	43.84	114.09
310	20.35	23.69	0.64	-0.40	40.02	115.17
311	20.42	34.97	0.74	-0.20	32.53	116.71
312	20.49	46.53	0.83	-0.90	27.10	118.08
313	20.54	52.41	0.88	-1.69	23.66	119.02
314	20.61	59.59	0.93	-1.89	21.12	119.61
315	20.69	67.98	0.93	-1.29	18.82	120.03
316	20.74	74.32	0.93	-1.79	16.58	120.31
317	20.81	83.56	0.93	-1.34	14.77	120.54
318	20.88	90.92	0.93	-1.39	13.29	120.74
319	20.95	96.15	0.93	-0.80	12.35	120.86
320	21.00	99.22	0.93	-0.99	11.65	120.99
321	21.07	103.98	0.94	-0.99	11.07	121.22
322	21.14	109.95	0.98	-0.99	10.52	121.58
323	21.22	115.36	1.02	-0.99	10.23	121.95
324	21.27	116.66	1.05	-1.29	10.25	122.25
325	21.34	114.98	1.09	-1.20	10.57	122.38
326	21.41	111.81	1.09	-1.20	10.99	122.41
327	21.46	109.48	1.09	-1.20	11.38	122.36
328	21.53	107.24	1.09	-1.20	11.50	122.34
329	21.60	109.57	1.09	-1.29	11.62	122.36
330	21.67	107.99	1.10	-1.29	11.60	122.46
331	21.72	109.67	1.12	-1.29	11.55	122.62
332	21.80	113.49	1.15	-0.99	11.25	122.83
333	21.87	117.69	1.17	-1.29	10.85	123.04
334	21.94	121.32	1.18	-0.90	10.54	123.16
335	21.99	122.54	1.18	-0.90	10.27	123.23
336	22.06	124.96	1.18	-0.90	10.03	123.28

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.11	127.85	1.18	-0.90	9.60	123.35
338	22.18	133.82	1.18	-1.29	9.02	123.45
339	22.26	141.37	1.18	-1.29	8.43	123.58
340	22.33	146.13	1.19	-1.29	8.05	123.71
341	22.38	147.90	1.21	-1.09	7.86	123.78
342	22.44	148.37	1.20	-1.09	7.76	123.74
343	22.51	148.65	1.17	-0.99	7.66	123.54
344	22.58	146.32	1.12	-0.99	7.63	123.20
345	22.65	141.75	1.05	-1.29	7.65	122.59
346	22.73	135.03	0.94	-1.29	7.71	121.91
347	22.77	130.46	0.88	-1.29	7.95	121.28
348	22.85	123.10	0.86	-1.20	8.34	120.80
349	22.92	116.38	0.81	-1.20	8.80	120.30
350	22.97	111.44	0.75	-1.29	9.12	119.56
351	23.04	103.98	0.67	-1.19	9.85	118.53
352	23.11	86.82	0.57	-1.18	10.40	117.37
353	23.17	86.35	0.51	-1.18	10.95	116.17
354	23.23	81.13	0.45	-1.20	10.99	115.17
355	23.31	75.35	0.40	-0.99	11.50	114.19
356	23.38	69.75	0.37	-1.20	12.11	113.31
357	23.45	65.65	0.34	-1.20	12.73	112.64
358	23.50	62.76	0.32	-1.09	13.48	112.30
359	23.57	59.50	0.34	-1.09	14.84	112.53
360	23.65	54.93	0.39	-1.09	16.77	113.25
361	23.70	52.69	0.45	-1.09	19.33	114.63
362	23.77	51.76	0.61	-1.09	21.42	116.12
363	23.84	52.97	0.72	-1.15	22.66	117.51
364	23.91	56.23	0.81	-1.20	22.53	118.47
365	23.96	60.62	0.86	-0.90	21.19	119.30
366	24.03	69.48	0.93	-1.20	19.17	120.02
367	24.10	79.36	0.97	-1.29	16.99	120.59
368	24.15	87.66	0.97	-1.20	14.76	120.92
369	24.22	99.32	0.95	-1.29	12.82	121.14
370	24.30	109.48	0.95	-0.90	11.27	121.27
371	24.34	115.45	0.94	-0.90	10.23	121.61
372	24.42	124.87	1.01	-0.90	9.51	122.17
373	24.49	135.50	1.11	-0.90	8.97	123.05
374	24.56	146.60	1.24	-0.90	8.64	123.89
375	24.61	152.10	1.33	-1.20	8.51	124.62
376	24.68	156.76	1.43	-0.90	8.50	125.16
377	24.75	160.68	1.50	-1.20	8.47	125.59
378	24.82	164.41	1.55	-0.90	8.39	125.88
379	24.87	167.39	1.57	-1.20	8.20	126.07
380	24.95	172.15	1.58	-0.90	8.02	126.16
381	25.00	173.27	1.58	-1.20	7.65	126.24
382	25.07	182.41	1.58	-0.90	7.26	126.39
383	25.15	190.89	1.63	-0.90	6.88	126.59
384	25.20	194.06	1.65	-0.90	6.72	126.79

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.27	195.18	1.68	-0.90	6.66	126.89
386	25.34	196.95	1.68	-0.90	6.70	126.91
387	25.40	193.78	1.67	-1.20	6.82	126.89
388	25.47	190.05	1.68	-1.20	7.07	126.89
389	25.54	187.44	1.71	-1.09	7.38	126.98
390	25.61	185.39	1.76	-1.09	7.69	127.12
391	25.66	183.62	1.80	-1.09	8.00	127.29
392	25.73	181.66	1.85	-0.90	8.32	127.43
393	25.80	179.14	1.88	-1.09	8.60	127.52
394	25.86	177.65	1.89	-1.09	8.84	127.57
395	25.93	175.60	1.91	-1.09	8.92	127.59
396	25.99	177.65	1.90	-1.29	8.94	127.58
397	26.06	176.90	1.88	-0.90	8.88	127.57
398	26.14	177.65	1.90	-0.94	8.92	127.59
399	26.19	177.46	1.92	-0.98	8.96	127.64
400	26.25	177.46	1.92	-0.98	9.03	127.70
401	26.32	177.28	1.94	-0.99	9.07	127.80
402	26.39	179.70	1.99	-0.80	9.09	127.98
403	26.46	182.87	2.05	-0.80	9.23	128.17
404	26.51	179.05	2.09	-0.99	9.27	128.41
405	26.58	185.95	2.17	-1.09	9.27	128.64
406	26.64	190.71	2.22	-1.20	8.91	128.90
407	26.71	199.57	2.24	-0.90	8.52	129.11
408	26.77	207.77	2.28	-0.90	8.11	129.40
409	26.85	216.63	2.40	-0.90	7.92	129.79
410	26.91	221.95	2.53	-0.90	8.01	130.25
411	26.98	221.85	2.69	-1.20	8.01	130.69
412	27.04	234.91	2.80	-1.20	7.98	131.06
413	27.11	238.83	2.88	-1.09	7.88	131.30
414	27.17	236.96	2.91	-1.20	8.01	131.40
415	27.23	233.23	2.92	-0.99	8.18	131.39
416	27.30	231.37	2.90	-1.20	8.29	131.32
417	27.36	230.15	2.86	-0.99	8.29	131.23
418	27.43	229.59	2.83	-1.09	8.28	131.13
419	27.50	228.38	2.80	-0.99	8.24	131.02
420	27.57	227.45	2.74	-0.99	8.23	130.88
421	27.63	225.12	2.69	-1.29	8.18	130.72
422	27.70	224.18	2.64	-0.90	8.09	130.57
423	27.76	225.49	2.58	-0.90	7.90	130.39
424	27.83	226.52	2.50	-0.90	7.62	130.25
425	27.90	231.09	2.46	-1.20	7.41	130.24
426	27.96	234.72	2.53	-1.20	7.22	130.36
427	28.02	240.69	2.57	-1.20	6.96	130.53
428	28.09	250.86	2.57	-1.15	6.63	130.70
429	28.16	259.34	2.63	-1.11	6.59	130.78
430	28.22	246.75	2.64	-1.12	6.30	130.79
431	28.28	267.18	2.52	-1.12	5.89	130.68
432	28.35	277.06	2.45	-1.14	4.99	130.46

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.41	291.52	2.29	-1.14	4.59	130.21
434	28.48	282.47	2.22	-1.15	4.46	130.07
435	28.55	280.32	2.32	-1.19	4.64	129.99
436	28.62	275.48	2.26	-1.19	4.86	129.77
437	28.68	257.76	2.09	-1.23	5.29	129.12
438	28.74	224.87	1.89	-1.23	5.67	128.16
439	28.81	216.17	1.65	-1.27	5.95	127.00
440	28.88	201.34	1.40	-1.27	5.90	125.78
441	28.94	186.70	1.22	-1.27	6.12	124.84
442	29.00	178.02	1.21	-1.28	6.54	124.34
443	29.07	170.94	1.21	-1.29	6.95	124.21
444	29.14	168.70	1.20	-1.20	7.18	124.14
445	29.20	168.33	1.20	-1.26	7.23	124.16
446	29.27	170.19	1.23	-1.32	7.10	124.36
447	29.34	178.68	1.27	-1.32	6.86	124.71
448	29.40	186.98	1.33	-1.29	6.56	125.30
449	29.47	198.73	1.48	-1.49	6.39	125.99
450	29.53	206.93	1.60	-1.39	6.34	126.71
451	29.60	213.18	1.72	-1.39	6.31	127.33
452	29.66	221.57	1.84	-1.49	6.21	127.87
453	29.73	231.74	1.93	-1.59	5.99	128.34
454	29.80	241.90	2.00	-1.49	5.74	128.70
455	29.86	249.46	2.05	-1.29	5.47	129.01
456	29.93	259.06	2.11	-1.29	5.20	129.28
457	29.99	269.60	2.16	-1.29	4.97	129.56
458	30.06	276.13	2.22	-1.29	4.82	129.80
459	30.12	280.70	2.26	-1.29	4.74	129.99
460	30.19	284.89	2.30	-1.29	4.73	130.13
461	30.25	283.96	2.33	-1.29	4.81	130.24
462	30.32	281.07	2.37	-1.29	4.95	130.33
463	30.39	280.23	2.40	-1.29	5.04	130.40
464	30.45	281.63	2.40	-1.29	5.06	130.43
465	30.52	281.82	2.40	-1.29	5.01	130.44
466	30.58	284.33	2.40	-1.29	4.98	130.48
467	30.65	286.20	2.43	-1.29	4.94	130.49
468	30.71	285.08	2.40	-1.35	4.88	130.40
469	30.78	284.94	2.30	-1.41	4.73	130.15
470	30.84	284.80	2.20	-1.41	4.52	129.88
471	30.91	287.32	2.14	-1.49	4.35	129.73
472	30.98	289.93	2.15	-1.39	4.24	129.75
473	31.04	294.41	2.20	-1.44	4.32	130.00
474	31.11	294.31	2.35	-1.49	4.45	130.33
475	31.17	297.39	2.44	-1.44	4.58	130.65
476	31.24	301.40	2.49	-1.40	4.53	130.83
477	31.30	308.02	2.49	-1.44	4.43	130.91
478	31.37	310.17	2.49	-1.44	4.36	130.95
479	31.43	309.65	2.51	-1.44	4.35	130.97
480	31.50	309.65	2.50	-1.48	4.32	130.89

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.56	309.14	2.42	-1.48	4.23	130.76
482	31.63	310.45	2.38	-1.45	4.23	130.72
483	31.70	307.74	2.47	-1.45	4.35	130.78
484	31.76	303.27	2.49	-1.43	4.54	130.87
485	31.83	300.65	2.49	-1.44	4.65	130.81
486	31.90	297.11	2.44	-1.42	4.66	130.69
487	31.96	296.74	2.38	-1.40	4.66	130.50
488	32.03	291.14	2.34	-1.40	4.65	130.37
489	32.10	291.98	2.33	-1.39	4.67	130.33
490	32.16	292.91	2.34	-1.39	4.69	130.37
491	32.23	292.63	2.38	-1.34	4.73	130.44
492	32.29	293.10	2.40	-1.29	4.80	130.45
493	32.35	288.90	2.37	-1.29	4.79	130.44
494	32.41	293.75	2.36	-1.59	4.86	130.40
495	32.48	285.92	2.37	-1.38	4.80	130.41
496	32.55	294.41	2.37	-1.41	4.63	130.38
497	32.61	304.38	2.30	-1.48	4.10	130.19
498	32.68	317.81	2.11	-1.46	3.50	129.70
499	32.75	318.47	1.87	-1.49	3.00	129.12
500	32.81	319.21	1.80	-1.47	2.80	128.66
501	32.88	312.59	1.77	-1.48	2.73	128.22
502	32.94	303.55	1.58	-1.48	2.70	127.77
503	33.02	299.91	1.52	-1.49	2.68	127.43
504	33.07	298.70	1.57	-1.50	2.68	127.35
505	33.14	299.95	1.54	-1.52	2.84	127.61
506	33.21	297.86	1.69	-1.52	3.21	128.29
507	33.27	300.00	2.03	-1.54	3.78	129.17
508	33.34	296.27	2.22	-1.55	4.16	129.95
509	33.40	307.09	2.33	-1.55	4.18	130.29
510	33.47	317.16	2.31	-1.57	3.91	130.40
511	33.53	324.34	2.26	-1.59	3.81	130.28
512	33.60	309.70	2.21	-1.49	3.80	130.11
513	33.67	308.67	2.17	-1.59	3.78	129.81
514	33.73	311.47	2.02	-1.49	3.52	129.43
515	33.79	311.89	1.88	-1.59	3.20	128.95
516	33.86	312.40	1.78	-1.49	3.02	128.63
517	33.93	312.31	1.78	-1.64	3.02	128.54
518	34.00	307.09	1.82	-1.64	3.10	128.66
519	34.06	312.08	1.87	-1.64	3.22	128.77
520	34.13	308.11	1.87	-1.79	3.19	128.81
521	34.19	311.84	1.83	-1.69	3.09	128.72
522	34.26	316.60	1.80	-1.59	2.91	128.55
523	34.33	317.07	1.73	-1.69	2.74	128.34
524	34.39	317.25	1.67	-1.49	2.65	128.10
525	34.45	313.80	1.64	-1.49	2.66	127.87
526	34.52	304.38	1.59	-1.49	2.73	127.64
527	34.58	300.09	1.55	-1.49	2.89	127.38
528	34.65	287.78	1.51	-1.39	3.16	127.26

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.71	275.29	1.57	-1.50	3.88	127.28
530	34.78	245.54	1.67	-1.51	4.76	127.37
531	34.85	232.67	1.69	-1.51	5.78	127.31
532	34.92	216.63	1.66	-1.49	6.65	127.18
533	34.98	201.15	1.69	-1.49	8.10	127.17
534	35.05	174.95	1.84	-1.69	10.26	127.35
535	35.12	152.57	1.99	-1.69	13.07	127.48
536	35.18	134.19	2.05	-1.69	16.06	127.44
537	35.25	116.29	2.08	-1.69	18.43	126.70
538	35.31	100.90	1.65	-1.39	20.94	125.35
539	35.38	80.11	1.35	-1.59	24.44	123.97
540	35.45	63.88	1.49	-1.59	29.72	123.21
541	35.52	55.86	1.50	-1.53	35.04	122.94
542	35.58	50.45	1.42	-1.49	38.23	122.42
543	35.64	46.53	1.34	-1.46	39.64	121.83
544	35.70	46.39	1.25	-1.46	39.83	121.31
545	35.76	46.16	1.19	-1.46	39.13	120.92
546	35.84	46.25	1.14	-1.20	39.29	120.61
547	35.91	43.83	1.13	-1.39	40.56	120.37
548	35.98	40.57	1.12	-1.39	42.82	120.17
549	36.03	38.42	1.12	-1.39	45.49	119.95
550	36.10	35.53	1.11	-1.39	46.95	119.82
551	36.17	36.37	1.10	-1.29	47.33	119.76
552	36.22	37.30	1.10	-1.09	46.80	119.74
553	36.30	36.74	1.09	-1.20	46.39	119.69
554	36.37	37.16	1.07	-0.90	46.30	119.34
555	36.44	35.72	0.97	-0.90	45.11	118.84
556	36.49	37.02	0.88	-0.90	42.40	118.48
557	36.57	42.15	0.89	-0.90	38.20	118.78
558	36.64	49.80	0.97	-0.90	34.67	119.47
559	36.69	54.18	1.02	-0.99	32.55	120.19
560	36.76	56.33	1.09	0.90	33.58	120.51
561	36.82	47.93	1.12	1.49	35.98	120.63
562	36.88	45.42	1.14	1.89	40.17	120.46
563	36.95	40.47	1.14	2.29	43.66	120.27
564	37.03	36.46	1.14	3.08	46.52	120.01
565	37.10	36.56	1.10	3.48	47.66	119.79
566	37.14	36.56	1.08	3.58	47.79	119.86
567	37.22	36.65	1.17	3.78	48.06	120.27
568	37.29	38.23	1.28	3.78	48.56	120.84
569	37.34	38.70	1.34	3.78	47.40	121.55
570	37.41	43.74	1.47	3.78	41.70	122.66
571	37.49	62.67	1.67	3.98	33.13	124.25
572	37.56	89.15	1.90	4.28	26.70	125.68
573	37.60	102.67	2.05	4.48	23.60	126.79
574	37.67	106.96	2.24	3.28	23.59	127.33
575	37.75	98.48	2.30	-0.20	25.40	127.43
576	37.82	86.91	2.27	-2.89	27.88	127.17

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	37.87	81.69	2.20	-3.48	29.06	126.49
578	37.94	79.92	1.85	-3.48	27.90	125.61
579	38.01	84.02	1.58	-3.48	25.60	124.89
580	38.06	90.08	1.61	-4.38	22.67	124.90
581	38.14	106.12	1.69	-4.68	20.08	125.47
582	38.21	120.95	1.76	-6.77	17.65	126.05
583	38.26	132.24	1.81	-3.58	15.17	126.51
584	38.33	155.18	1.80	-1.99	12.79	126.71
585	38.39	173.08	1.69	-2.09	10.34	126.81
586	38.46	196.21	1.66	-2.09	8.79	126.99
587	38.52	208.61	1.76	-1.89	7.97	127.52
588	38.59	219.90	1.94	-1.69	7.71	128.31
589	38.66	234.16	2.15	-1.69	7.60	129.21
590	38.71	247.22	2.39	-1.69	7.42	129.98
591	38.78	259.72	2.53	-1.69	7.21	130.55
592	38.85	269.04	2.60	-1.77	6.96	131.11
593	38.92	285.36	2.86	-1.76	7.06	131.87
594	38.98	291.52	3.30	-1.77	7.48	132.65
595	39.05	285.36	3.52	-1.75	8.05	133.25
596	39.12	286.67	3.68	-1.75	8.04	133.37
597	39.18	298.79	3.45	-1.75	7.59	132.88
598	39.24	284.15	2.83	-1.74	6.93	132.32
599	39.31	294.78	2.92	-1.72	6.47	131.91
600	39.38	304.20	2.93	-1.70	5.87	131.78
601	39.44	314.36	2.58	-1.69	4.81	131.06
602	39.51	329.66	2.04	-1.68	3.76	130.19
603	39.57	343.92	2.00	-1.64	3.07	129.80
604	39.64	358.57	2.14	-1.61	3.03	130.22
605	39.70	357.82	2.34	-1.55	3.09	130.77
606	39.77	371.71	2.44	-1.51	3.37	131.23
607	39.83	357.91	2.59	-1.53	3.66	131.69
608	39.90	358.01	2.82	-1.50	3.79	131.99
609	39.97	378.52	2.75	-1.45	3.51	131.92
610	40.03	381.32	2.46	-1.41	2.63	131.27
611	40.09	413.03	2.02	-1.44	1.78	130.55
612	40.16	438.48	1.97	-1.48	1.01	130.08
613	40.23	466.18	1.93	-1.49	0.42	129.92
614	40.29	507.68	1.76	-1.50	0.13	130.34
615	40.36	531.74	2.18	-1.49	0.00	130.99
616	40.42	571.75	2.33	-1.42	0.00	131.86
617	40.49	581.35	2.44	-1.42	0.00	132.54
618	40.56	580.09	2.78	-1.36	0.31	133.38
619	40.62	578.83	3.24	-1.38	0.49	134.03
620	40.69	607.09	3.19	-1.35	0.58	134.33
621	40.75	591.52	3.15	-1.33	0.63	134.69
622	40.82	605.13	3.66	-1.27	0.91	135.13
623	40.88	593.29	3.84	-1.32	1.11	135.63
624	40.95	603.17	3.88	-1.29	1.23	135.66

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
625	41.02	581.44	3.75	-1.32	1.06	135.58
626	41.08	623.69	3.67	-1.32	0.78	135.25
627	41.15	629.38	3.33	-1.34	0.32	134.73
628	41.22	637.86	2.91	-1.33	0.00	134.23
629	41.27	653.90	2.96	-1.30	0.00	134.16
630	41.35	679.36	3.17	-1.30	0.00	134.75
631	41.41	670.04	3.61	-1.28	0.14	135.46
632	41.48	677.78	3.92	-1.29	0.33	135.68
633	41.54	655.02	3.54	-1.30	0.33	135.46
634	41.61	643.18	3.33	-1.28	0.26	134.89
635	41.67	629.10	3.18	-1.31	0.24	134.41
636	41.74	608.12	2.98	-1.30	0.29	133.91
637	41.80	575.01	2.81	-1.28	0.49	133.71
638	41.87	562.05	3.05	-1.23	1.03	134.36
639	41.94	556.08	3.89	-1.21	1.56	135.06
640	42.00	540.60	3.87	-1.26	2.02	135.40
641	42.07	513.56	3.68	-1.26	2.11	134.92
642	42.13	495.74	3.31	-1.30	2.04	134.23
643	42.20	490.61	3.01	-1.40	1.70	133.75
644	42.27	526.61	3.02	-1.45	1.35	133.58
645	42.33	542.18	3.00	-1.42	1.05	133.55
646	42.39	545.17	2.86	-1.44	0.88	133.43
647	42.45	549.36	2.83	-1.47	0.94	133.60
648	42.52	547.31	3.19	-1.47	1.08	134.00
649	42.59	556.45	3.35	-1.46	1.29	134.38
650	42.66	545.54	3.34	-1.46	1.30	134.51
651	42.72	558.97	3.34	-1.53	1.33	134.51
652	42.79	552.07	3.36	-1.53	1.50	134.53
653	42.85	514.49	3.43	-1.59	1.77	134.59
654	42.91	515.98	3.51	-1.61	2.03	134.49
655	42.98	500.13	3.34	-1.63	1.98	134.13
656	43.05	490.52	2.99	-1.63	1.96	133.66
657	43.11	478.49	2.98	-1.63	1.94	133.37
658	43.18	478.40	3.02	-1.64	1.99	133.39
659	43.25	485.58	3.02	-1.64	1.89	133.47
660	43.31	501.43	3.04	-1.61	1.68	133.59
661	43.38	523.72	3.07	-1.55	1.37	133.73
662	43.44	553.84	3.07	-1.55	1.02	133.88
663	43.51	584.52	3.06	-1.55	0.71	133.99
664	43.57	601.40	3.07	-1.54	0.43	134.12
665	43.64	634.69	3.09	-1.51	0.23	134.38
666	43.71	663.60	3.27	-1.54	0.15	134.84
667	43.77	678.34	3.55	-1.48	0.21	135.29
668	43.84	669.76	3.65	-1.53	0.34	135.68
669	43.90	676.66	3.82	-1.57	0.48	135.96
670	43.97	674.14	3.99	-1.64	0.44	135.96
671	44.04	684.31	3.63	-1.68	0.22	135.50
672	44.10	680.48	3.10	-1.71	0.00	134.89

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
673	44.16	700.72	3.10	-1.67	0.00	134.40
674	44.23	681.32	3.00	-1.69	0.00	134.15
675	44.29	678.90	2.80	-1.67	0.00	133.81
676	44.36	668.08	2.73	-1.67	0.00	133.63
677	44.43	676.47	2.81	-1.58	0.00	133.63
678	44.49	672.65	2.80	-1.55	0.00	133.85
679	44.56	692.23	2.96	-1.58	0.00	134.17
680	44.63	694.00	3.16	-1.58	0.00	134.41
681	44.69	707.71	3.04	-1.61	0.00	134.51
682	44.75	707.25	3.06	-1.58	0.00	131.46
683	44.82	701.84	0.00	-1.61	0.00	126.39
684	44.88	694.66	0.00	-1.61	N/A	87.36
685	44.95	730.19	0.00	-1.61	N/A	87.36
686	45.02	725.90	0.00	-1.79	N/A	87.36
687	45.08	781.10	0.00	-1.39	N/A	87.36
688	45.15	802.18	0.00	-1.69	N/A	87.36

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.07	0.00	0.00	0.00	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
2	0.13	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
3	0.20	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
4	0.27	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
5	0.34	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
6	0.40	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
7	0.46	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
8	0.53	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
9	0.60	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
10	0.66	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
11	0.73	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
12	0.79	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
13	0.86	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
14	0.93	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
15	0.99	0.05	0.00	0.05	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
16	1.06	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
17	1.13	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
18	1.18	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
19	1.25	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
20	1.32	0.07	0.00	0.07	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
21	1.38	0.07	0.00	0.07	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
22	1.45	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
23	1.51	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
24	1.58	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
25	1.64	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
26	1.71	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
27	1.77	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
28	1.84	0.10	0.00	0.10	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
29	1.91	0.10	0.00	0.10	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
30	1.97	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
31	2.04	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
32	2.10	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
33	2.18	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
34	2.24	0.12	0.00	0.12	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
35	2.30	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
36	2.37	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
37	2.43	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
38	2.50	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
39	2.56	0.14	0.00	0.14	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
40	2.63	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
41	2.69	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
42	2.76	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
43	2.83	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
44	2.89	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
45	2.96	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
46	3.02	0.17	0.00	0.17	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
47	3.10	0.17	0.00	0.17	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
48	3.15	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.22	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
50	3.29	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
51	3.35	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
52	3.42	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
53	3.48	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
54	3.55	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
55	3.62	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
56	3.68	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
57	3.75	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
58	3.81	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
59	3.87	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
60	3.94	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
61	4.01	0.23	0.00	0.23	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
62	4.08	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
63	4.15	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
64	4.20	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
65	4.27	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
66	4.33	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
67	4.40	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
68	4.47	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
69	4.53	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
70	4.60	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
71	4.67	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
72	4.72	0.27	0.00	0.27	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
73	4.80	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
74	4.86	0.28	0.00	0.28	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
75	4.93	0.28	0.00	0.28	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
76	4.99	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
77	5.05	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
78	5.13	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
79	5.18	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
80	5.25	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
81	5.33	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
82	5.38	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
83	5.45	0.31	0.00	0.31	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
84	5.51	0.31	0.00	0.31	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
85	5.58	0.31	0.00	0.31	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
86	5.65	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
87	5.72	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
88	5.79	0.33	0.00	0.33	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
89	5.85	0.33	0.00	0.33	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
90	5.92	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
91	5.98	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
92	6.05	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
93	6.12	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
94	6.19	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
95	6.24	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
96	6.30	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.37	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
98	6.45	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
99	6.51	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
100	6.58	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
101	6.64	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
102	6.70	0.38	0.00	0.38	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
103	6.77	0.38	0.00	0.38	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
104	6.83	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
105	6.91	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
106	6.96	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
107	7.03	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
108	7.10	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
109	7.17	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
110	7.22	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
111	7.29	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
112	7.36	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
113	7.43	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
114	7.50	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
115	7.55	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
116	7.61	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
117	7.69	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
118	7.75	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
119	7.83	0.45	0.00	0.45	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
120	7.88	0.45	0.00	0.45	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
121	7.96	0.45	0.00	0.45	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
122	8.01	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
123	8.09	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
124	8.14	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
125	8.21	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
126	8.27	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
127	8.35	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
128	8.42	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
129	8.47	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
130	8.54	0.49	0.00	0.49	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
131	8.61	0.49	0.00	0.49	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
132	8.69	0.50	0.00	0.50	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
133	8.74	0.50	0.00	0.50	0.98	0.460	0.83	0.554	1.00	1.00	2.000	No
134	8.81	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
135	8.86	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
136	8.93	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
137	9.00	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
138	9.07	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
139	9.12	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
140	9.20	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
141	9.27	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
142	9.32	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
143	9.39	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
144	9.47	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.54	0.55	0.00	0.55	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
146	9.59	0.55	0.00	0.55	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
147	9.66	0.55	0.00	0.55	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
148	9.73	0.56	0.00	0.56	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
149	9.80	0.56	0.00	0.56	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
150	9.85	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
151	9.92	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
152	9.99	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
153	10.04	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
154	10.12	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
155	10.19	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
156	10.24	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
157	10.31	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
158	10.38	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
159	10.46	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
160	10.50	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
161	10.58	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
162	10.65	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
163	10.70	0.62	0.00	0.62	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
164	10.77	0.62	0.00	0.62	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
165	10.84	0.62	0.00	0.62	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
166	10.91	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
167	10.96	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
168	11.04	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
169	11.11	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
170	11.16	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
171	11.22	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
172	11.29	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
173	11.37	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
174	11.44	0.66	0.00	0.66	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
175	11.48	0.66	0.00	0.66	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
176	11.56	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
177	11.63	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
178	11.70	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
179	11.76	0.68	0.00	0.68	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
180	11.83	0.68	0.00	0.68	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
181	11.90	0.69	0.00	0.69	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
182	11.95	0.69	0.00	0.69	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
183	12.02	0.69	0.00	0.69	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
184	12.09	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
185	12.16	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
186	12.21	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
187	12.28	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
188	12.36	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
189	12.41	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
190	12.48	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
191	12.55	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
192	12.60	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.67	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
194	12.75	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
195	12.82	0.74	0.00	0.74	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
196	12.87	0.74	0.00	0.74	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
197	12.94	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
198	13.01	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
199	13.06	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
200	13.13	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
201	13.21	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
202	13.26	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
203	13.33	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
204	13.40	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
205	13.47	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
206	13.52	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
207	13.59	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
208	13.67	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
209	13.72	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
210	13.79	0.80	0.00	0.80	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
211	13.86	0.80	0.00	0.80	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
212	13.93	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
213	13.98	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
214	14.06	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
215	14.13	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
216	14.18	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
217	14.24	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
218	14.31	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
219	14.38	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
220	14.46	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
221	14.53	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
222	14.58	0.85	0.00	0.85	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
223	14.65	0.85	0.00	0.85	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
224	14.72	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
225	14.77	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
226	14.84	0.86	0.00	0.86	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
227	14.92	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
228	14.96	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
229	15.03	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
230	15.11	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
231	15.18	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
232	15.23	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
233	15.30	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
234	15.37	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
235	15.43	0.90	0.00	0.90	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
236	15.50	0.90	0.00	0.90	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
237	15.56	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
238	15.62	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
239	15.68	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
240	15.76	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.82	0.92	0.00	0.92	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
242	15.89	0.93	0.00	0.93	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
243	15.96	0.93	0.00	0.93	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
244	16.03	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
245	16.08	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
246	16.15	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
247	16.21	0.95	0.00	0.95	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
248	16.27	0.95	0.00	0.95	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
249	16.34	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
250	16.41	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
251	16.48	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
252	16.54	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
253	16.61	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
254	16.68	0.98	0.00	0.98	0.96	0.452	0.83	0.545	1.00	1.00	2.000	No
255	16.75	0.98	0.00	0.98	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
256	16.81	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
257	16.88	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
258	16.95	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
259	17.00	1.00	0.00	1.00	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
260	17.06	1.00	0.00	1.00	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
261	17.13	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
262	17.20	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
263	17.27	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
264	17.33	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
265	17.40	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
266	17.47	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
267	17.52	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
268	17.59	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
269	17.67	1.04	0.00	1.04	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
270	17.73	1.04	0.00	1.04	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
271	17.78	1.05	0.00	1.05	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
272	17.86	1.05	0.00	1.05	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
273	17.93	1.05	0.00	1.05	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
274	17.98	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
275	18.05	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
276	18.13	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
277	18.18	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
278	18.25	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
279	18.33	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
280	18.38	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
281	18.45	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
282	18.52	1.09	0.00	1.09	0.96	0.450	0.83	0.542	0.99	1.00	2.000	No
283	18.57	1.09	0.00	1.09	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
284	18.65	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
285	18.72	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
286	18.77	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
287	18.84	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
288	18.91	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.98	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
290	19.04	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
291	19.11	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
292	19.18	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
293	19.24	1.13	0.00	1.13	0.96	0.449	0.83	0.541	0.99	1.00	2.000	No
294	19.29	1.13	0.00	1.13	0.96	0.449	0.83	0.541	0.99	1.00	2.000	No
295	19.36	1.14	0.00	1.14	0.96	0.449	0.83	0.541	0.99	1.00	2.000	No
296	19.44	1.14	0.00	1.14	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
297	19.50	1.15	0.00	1.15	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
298	19.55	1.15	0.00	1.15	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
299	19.62	1.15	0.00	1.15	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
300	19.69	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
301	19.75	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
302	19.82	1.17	0.00	1.17	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
303	19.89	1.17	0.00	1.17	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
304	19.96	1.17	0.00	1.17	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
305	20.04	1.18	0.00	1.18	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
306	20.09	1.18	0.00	1.18	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
307	20.16	1.18	0.00	1.18	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
308	20.23	1.19	0.00	1.19	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
309	20.30	1.19	0.00	1.19	0.96	0.447	0.83	0.540	0.98	1.00	2.000	No
310	20.35	1.20	0.00	1.20	0.96	0.447	0.83	0.540	0.98	1.00	2.000	No
311	20.42	1.20	0.00	1.20	0.96	0.447	0.83	0.540	0.98	1.00	2.000	No
312	20.49	1.20	0.00	1.20	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
313	20.54	1.21	0.00	1.21	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
314	20.61	1.21	0.00	1.21	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
315	20.69	1.22	0.00	1.22	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
316	20.74	1.22	0.00	1.22	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
317	20.81	1.22	0.00	1.22	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
318	20.88	1.23	0.00	1.23	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
319	20.95	1.23	0.00	1.23	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
320	21.00	1.23	0.00	1.23	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
321	21.07	1.24	0.00	1.24	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
322	21.14	1.24	0.00	1.24	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
323	21.22	1.25	0.00	1.25	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
324	21.27	1.25	0.00	1.25	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
325	21.34	1.26	0.00	1.26	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
326	21.41	1.26	0.00	1.26	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
327	21.46	1.26	0.00	1.26	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
328	21.53	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
329	21.60	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
330	21.67	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
331	21.72	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
332	21.80	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
333	21.87	1.29	0.00	1.29	0.95	0.445	0.83	0.538	0.96	1.00	2.000	No
334	21.94	1.29	0.00	1.29	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
335	21.99	1.30	0.00	1.30	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
336	22.06	1.30	0.00	1.30	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.11	1.30	0.00	1.30	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
338	22.18	1.31	0.00	1.31	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
339	22.26	1.31	0.00	1.31	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
340	22.33	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
341	22.38	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
342	22.44	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
343	22.51	1.33	0.00	1.33	0.95	0.445	0.83	0.536	0.96	1.00	2.000	No
344	22.58	1.33	0.00	1.33	0.95	0.444	0.83	0.536	0.96	1.00	2.000	No
345	22.65	1.34	0.00	1.34	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
346	22.73	1.34	0.00	1.34	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
347	22.77	1.34	0.00	1.34	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
348	22.85	1.35	0.00	1.35	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
349	22.92	1.35	0.00	1.35	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
350	22.97	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
351	23.04	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
352	23.11	1.36	0.00	1.36	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
353	23.17	1.37	0.00	1.37	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
354	23.23	1.37	0.00	1.37	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
355	23.31	1.38	0.00	1.38	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
356	23.38	1.38	0.00	1.38	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
357	23.45	1.38	0.00	1.38	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
358	23.50	1.39	0.00	1.39	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
359	23.57	1.39	0.00	1.39	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
360	23.65	1.39	0.00	1.39	0.95	0.443	0.83	0.534	0.95	1.00	2.000	No
361	23.70	1.40	0.00	1.40	0.95	0.443	0.83	0.534	0.95	1.00	2.000	No
362	23.77	1.40	0.00	1.40	0.95	0.443	0.83	0.534	0.95	1.00	2.000	No
363	23.84	1.41	0.00	1.41	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
364	23.91	1.41	0.00	1.41	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
365	23.96	1.41	0.00	1.41	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
366	24.03	1.42	0.00	1.42	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
367	24.10	1.42	0.00	1.42	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
368	24.15	1.42	0.00	1.42	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
369	24.22	1.43	0.00	1.43	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
370	24.30	1.43	0.00	1.43	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
371	24.34	1.44	0.00	1.44	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
372	24.42	1.44	0.00	1.44	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
373	24.49	1.44	0.00	1.44	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
374	24.56	1.45	0.00	1.45	0.94	0.441	0.83	0.533	0.94	1.00	2.000	No
375	24.61	1.45	0.00	1.45	0.94	0.441	0.83	0.533	0.94	1.00	2.000	No
376	24.68	1.46	0.00	1.46	0.94	0.441	0.83	0.533	0.94	1.00	2.000	No
377	24.75	1.46	0.00	1.46	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
378	24.82	1.47	0.00	1.47	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
379	24.87	1.47	0.00	1.47	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
380	24.95	1.47	0.00	1.47	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
381	25.00	1.48	0.00	1.48	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
382	25.07	1.48	0.00	1.48	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
383	25.15	1.49	0.00	1.49	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
384	25.20	1.49	0.00	1.49	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.27	1.49	0.00	1.49	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
386	25.34	1.50	0.00	1.50	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
387	25.40	1.50	0.00	1.50	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
388	25.47	1.51	0.00	1.51	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
389	25.54	1.51	0.00	1.51	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
390	25.61	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
391	25.66	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
392	25.73	1.52	0.00	1.52	0.94	0.440	0.83	0.530	0.93	1.00	2.000	No
393	25.80	1.53	0.00	1.53	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
394	25.86	1.53	0.00	1.53	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
395	25.93	1.54	0.00	1.54	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
396	25.99	1.54	0.00	1.54	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
397	26.06	1.54	0.00	1.54	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
398	26.14	1.55	0.00	1.55	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
399	26.19	1.55	0.00	1.55	0.94	0.439	0.83	0.529	0.93	1.00	2.000	No
400	26.25	1.56	0.00	1.56	0.94	0.439	0.83	0.529	0.93	1.00	2.000	No
401	26.32	1.56	0.00	1.56	0.94	0.438	0.83	0.529	0.93	1.00	2.000	No
402	26.39	1.57	0.00	1.57	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
403	26.46	1.57	0.00	1.57	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
404	26.51	1.57	0.00	1.57	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
405	26.58	1.58	0.00	1.58	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
406	26.64	1.58	0.00	1.58	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
407	26.71	1.59	0.00	1.59	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
408	26.77	1.59	0.00	1.59	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
409	26.85	1.59	0.00	1.59	0.93	0.438	0.83	0.528	0.92	1.00	2.000	No
410	26.91	1.60	0.00	1.60	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
411	26.98	1.60	0.00	1.60	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
412	27.04	1.61	0.00	1.61	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
413	27.11	1.61	0.00	1.61	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
414	27.17	1.62	0.00	1.62	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
415	27.23	1.62	0.00	1.62	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
416	27.30	1.62	0.00	1.62	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
417	27.36	1.63	0.00	1.63	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
418	27.43	1.63	0.00	1.63	0.93	0.436	0.83	0.527	0.92	1.00	2.000	No
419	27.50	1.64	0.00	1.64	0.93	0.436	0.83	0.526	0.92	1.00	2.000	No
420	27.57	1.64	0.00	1.64	0.93	0.436	0.83	0.526	0.92	1.00	2.000	No
421	27.63	1.65	0.00	1.65	0.93	0.436	0.83	0.526	0.92	1.00	2.000	No
422	27.70	1.65	0.00	1.65	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
423	27.76	1.65	0.00	1.65	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
424	27.83	1.66	0.00	1.66	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
425	27.90	1.66	0.00	1.66	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
426	27.96	1.67	0.00	1.67	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
427	28.02	1.67	0.00	1.67	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
428	28.09	1.68	0.00	1.68	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
429	28.16	1.68	0.00	1.68	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
430	28.22	1.68	0.00	1.68	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
431	28.28	1.69	0.00	1.69	0.93	0.435	0.83	0.524	0.91	1.00	2.000	No
432	28.35	1.69	0.00	1.69	0.93	0.435	0.83	0.524	0.91	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.41	1.70	0.00	1.70	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
434	28.48	1.70	0.00	1.70	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
435	28.55	1.71	0.00	1.71	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
436	28.62	1.71	0.00	1.71	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
437	28.68	1.71	0.00	1.71	0.93	0.434	0.83	0.523	0.91	1.00	2.000	No
438	28.74	1.72	0.00	1.72	0.93	0.434	0.83	0.523	0.91	1.00	2.000	No
439	28.81	1.72	0.00	1.72	0.93	0.434	0.83	0.523	0.91	1.00	2.000	No
440	28.88	1.73	0.00	1.73	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
441	28.94	1.73	0.00	1.73	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
442	29.00	1.73	0.00	1.73	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
443	29.07	1.74	0.00	1.74	0.93	0.433	0.83	0.522	0.91	1.00	2.000	No
444	29.14	1.74	0.00	1.74	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
445	29.20	1.75	0.00	1.75	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
446	29.27	1.75	0.00	1.75	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
447	29.34	1.76	0.00	1.76	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
448	29.40	1.76	0.00	1.76	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
449	29.47	1.76	0.00	1.76	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
450	29.53	1.77	0.00	1.77	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
451	29.60	1.77	0.00	1.77	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
452	29.66	1.78	0.00	1.78	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
453	29.73	1.78	0.00	1.78	0.92	0.431	0.83	0.521	0.90	1.00	2.000	No
454	29.80	1.79	0.00	1.79	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
455	29.86	1.79	0.00	1.79	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
456	29.93	1.79	0.00	1.79	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
457	29.99	1.80	0.00	1.80	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
458	30.06	1.80	0.00	1.80	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
459	30.12	1.81	0.00	1.81	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
460	30.19	1.81	0.00	1.81	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
461	30.25	1.81	0.00	1.81	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
462	30.32	1.82	0.00	1.82	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
463	30.39	1.82	0.00	1.82	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
464	30.45	1.83	0.00	1.83	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
465	30.52	1.83	0.00	1.83	0.92	0.430	0.83	0.518	0.90	1.00	2.000	No
466	30.58	1.84	0.00	1.84	0.92	0.429	0.83	0.518	0.90	1.00	2.000	No
467	30.65	1.84	0.00	1.84	0.92	0.429	0.83	0.518	0.90	1.00	2.000	No
468	30.71	1.84	0.00	1.84	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
469	30.78	1.85	0.00	1.85	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
470	30.84	1.85	0.00	1.85	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
471	30.91	1.86	0.00	1.86	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
472	30.98	1.86	0.00	1.86	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
473	31.04	1.87	0.00	1.87	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
474	31.11	1.87	0.00	1.87	0.91	0.428	0.83	0.517	0.89	1.00	2.000	No
475	31.17	1.87	0.00	1.87	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
476	31.24	1.88	0.00	1.88	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
477	31.30	1.88	0.00	1.88	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
478	31.37	1.89	0.00	1.89	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
479	31.43	1.89	0.00	1.89	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
480	31.50	1.90	0.00	1.90	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.56	1.90	0.00	1.90	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
482	31.63	1.90	0.00	1.90	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
483	31.70	1.91	0.00	1.91	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
484	31.76	1.91	0.00	1.91	0.91	0.426	0.83	0.515	0.89	1.00	2.000	No
485	31.83	1.92	0.00	1.92	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
486	31.90	1.92	0.00	1.92	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
487	31.96	1.93	0.00	1.93	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
488	32.03	1.93	0.00	1.93	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
489	32.10	1.93	0.00	1.93	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
490	32.16	1.94	0.00	1.94	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
491	32.23	1.94	0.00	1.94	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
492	32.29	1.95	0.00	1.95	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
493	32.35	1.95	0.00	1.95	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
494	32.41	1.96	0.00	1.96	0.91	0.425	0.83	0.512	0.88	1.00	2.000	No
495	32.48	1.96	0.00	1.96	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
496	32.55	1.96	0.00	1.96	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
497	32.61	1.97	0.00	1.97	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
498	32.68	1.97	0.00	1.97	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
499	32.75	1.98	0.00	1.98	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
500	32.81	1.98	0.00	1.98	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
501	32.88	1.99	0.00	1.99	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
502	32.94	1.99	0.00	1.99	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
503	33.02	1.99	0.00	1.99	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
504	33.07	2.00	0.00	2.00	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
505	33.14	2.00	0.00	2.00	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
506	33.21	2.01	0.00	2.01	0.90	0.422	0.83	0.510	0.88	1.00	2.000	No
507	33.27	2.01	0.00	2.01	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
508	33.34	2.01	0.00	2.01	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
509	33.40	2.02	0.00	2.02	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
510	33.47	2.02	0.00	2.02	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
511	33.53	2.03	0.00	2.03	0.90	0.421	0.83	0.509	0.88	1.00	2.000	No
512	33.60	2.03	0.00	2.03	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
513	33.67	2.04	0.00	2.04	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
514	33.73	2.04	0.00	2.04	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
515	33.79	2.04	0.00	2.04	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
516	33.86	2.05	0.00	2.05	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
517	33.93	2.05	0.00	2.05	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
518	34.00	2.06	0.00	2.06	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
519	34.06	2.06	0.00	2.06	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
520	34.13	2.07	0.00	2.07	0.90	0.420	0.83	0.506	0.87	1.00	2.000	No
521	34.19	2.07	0.00	2.07	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
522	34.26	2.07	0.00	2.07	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
523	34.33	2.08	0.00	2.08	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
524	34.39	2.08	0.00	2.08	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
525	34.45	2.09	0.00	2.09	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
526	34.52	2.09	0.00	2.09	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
527	34.58	2.10	0.00	2.10	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
528	34.65	2.10	0.00	2.10	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.71	2.10	0.00	2.10	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
530	34.78	2.11	0.00	2.11	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
531	34.85	2.11	0.00	2.11	0.89	0.417	0.83	0.504	0.87	1.00	2.000	No
532	34.92	2.12	0.00	2.12	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
533	34.98	2.12	0.00	2.12	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
534	35.05	2.13	0.00	2.13	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
535	35.12	2.13	0.00	2.13	0.89	0.416	0.83	0.503	0.87	1.00	2.000	No
536	35.18	2.13	0.00	2.13	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
537	35.25	2.14	0.00	2.14	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
538	35.31	2.14	0.00	2.14	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
539	35.38	2.15	0.00	2.15	0.89	0.416	0.83	0.501	0.87	1.00	2.000	No
540	35.45	2.15	0.00	2.15	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
541	35.52	2.15	0.00	2.15	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
542	35.58	2.16	0.00	2.16	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
543	35.64	2.16	0.00	2.16	0.89	0.415	0.83	0.500	0.87	1.00	2.000	No
544	35.70	2.17	0.00	2.17	0.89	0.414	0.83	0.500	0.87	1.00	2.000	No
545	35.76	2.17	0.00	2.17	0.89	0.414	0.83	0.500	0.87	1.00	2.000	No
546	35.84	2.17	0.00	2.17	0.88	0.414	0.83	0.500	0.87	1.00	2.000	No
547	35.91	2.18	0.00	2.18	0.88	0.414	0.83	0.499	0.87	1.00	2.000	No
548	35.98	2.18	0.00	2.18	0.88	0.414	0.83	0.499	0.87	1.00	2.000	No
549	36.03	2.19	0.00	2.19	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
550	36.10	2.19	0.00	2.19	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
551	36.17	2.19	0.00	2.19	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
552	36.22	2.20	0.00	2.20	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
553	36.30	2.20	0.00	2.20	0.88	0.412	0.83	0.498	0.86	1.00	2.000	No
554	36.37	2.21	0.00	2.21	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
555	36.44	2.21	0.00	2.21	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
556	36.49	2.21	0.00	2.21	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
557	36.57	2.22	0.00	2.22	0.88	0.411	0.83	0.497	0.86	1.00	2.000	No
558	36.64	2.22	0.00	2.22	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
559	36.69	2.22	0.00	2.22	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
560	36.76	2.23	0.00	2.23	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
561	36.82	2.23	0.00	2.23	0.88	0.411	0.83	0.495	0.86	1.00	2.000	No
562	36.88	2.24	0.00	2.24	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
563	36.95	2.24	0.00	2.24	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
564	37.03	2.24	0.00	2.24	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
565	37.10	2.25	0.00	2.25	0.88	0.410	0.83	0.494	0.86	1.00	2.000	No
566	37.14	2.25	0.00	2.25	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
567	37.22	2.26	0.00	2.26	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
568	37.29	2.26	0.00	2.26	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
569	37.34	2.26	0.00	2.26	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
570	37.41	2.27	0.00	2.27	0.87	0.408	0.83	0.493	0.86	1.00	2.000	No
571	37.49	2.27	0.00	2.27	0.87	0.408	0.83	0.492	0.86	1.00	2.000	No
572	37.56	2.28	0.00	2.28	0.87	0.408	0.83	0.492	0.86	1.00	2.000	No
573	37.60	2.28	0.00	2.28	0.87	0.408	0.83	0.492	0.86	1.00	2.000	No
574	37.67	2.28	0.00	2.28	0.87	0.407	0.83	0.492	0.86	1.00	2.000	No
575	37.75	2.29	0.00	2.29	0.87	0.407	0.83	0.491	0.86	1.00	2.000	No
576	37.82	2.29	0.00	2.29	0.87	0.407	0.83	0.491	0.86	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	37.87	2.30	0.00	2.30	0.87	0.407	0.83	0.491	0.86	1.00	2.000	No
578	37.94	2.30	0.00	2.30	0.87	0.406	0.83	0.490	0.86	1.00	2.000	No
579	38.01	2.31	0.00	2.31	0.87	0.406	0.83	0.490	0.86	1.00	2.000	No
580	38.06	2.31	0.00	2.31	0.87	0.406	0.83	0.490	0.86	1.00	2.000	No
581	38.14	2.31	0.00	2.31	0.87	0.406	0.83	0.490	0.86	1.00	2.000	No
582	38.21	2.32	0.00	2.32	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
583	38.26	2.32	0.00	2.32	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
584	38.33	2.33	0.00	2.33	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
585	38.39	2.33	0.00	2.33	0.86	0.405	0.83	0.488	0.85	1.00	2.000	No
586	38.46	2.33	0.00	2.33	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
587	38.52	2.34	0.00	2.34	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
588	38.59	2.34	0.00	2.34	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
589	38.66	2.35	0.00	2.35	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
590	38.71	2.35	0.00	2.35	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
591	38.78	2.36	0.00	2.36	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
592	38.85	2.36	0.00	2.36	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
593	38.92	2.36	0.00	2.36	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
594	38.98	2.37	0.00	2.37	0.86	0.402	0.83	0.486	0.85	1.00	2.000	No
595	39.05	2.37	0.00	2.37	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
596	39.12	2.38	0.00	2.38	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
597	39.18	2.38	0.00	2.38	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
598	39.24	2.39	0.00	2.39	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
599	39.31	2.39	0.00	2.39	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
600	39.38	2.39	0.00	2.39	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
601	39.44	2.40	0.00	2.40	0.86	0.401	0.83	0.483	0.85	1.00	2.000	No
602	39.51	2.40	0.00	2.40	0.86	0.400	0.83	0.483	0.85	1.00	2.000	No
603	39.57	2.41	0.00	2.41	0.85	0.400	0.83	0.483	0.85	1.00	2.000	No
604	39.64	2.41	0.00	2.41	0.85	0.400	0.83	0.482	0.85	1.00	2.000	No
605	39.70	2.42	0.00	2.42	0.85	0.399	0.83	0.482	0.85	1.00	2.000	No
606	39.77	2.42	0.00	2.42	0.85	0.399	0.83	0.482	0.85	1.00	2.000	No
607	39.83	2.42	0.00	2.42	0.85	0.399	0.83	0.481	0.85	1.00	2.000	No
608	39.90	2.43	0.00	2.43	0.85	0.399	0.83	0.481	0.85	1.00	2.000	No
609	39.97	2.43	0.00	2.43	0.85	0.398	0.83	0.481	0.85	1.00	2.000	No
610	40.03	2.44	0.00	2.44	0.85	0.398	0.83	0.480	0.85	1.00	2.000	No
611	40.09	2.44	0.00	2.44	0.85	0.398	0.83	0.480	0.85	1.00	2.000	No
612	40.16	2.45	0.00	2.45	0.85	0.398	0.83	0.480	0.85	1.00	2.000	No
613	40.23	2.45	0.00	2.45	0.85	0.397	0.83	0.479	0.85	1.00	2.000	No
614	40.29	2.45	0.00	2.45	0.85	0.397	0.83	0.479	0.85	1.00	2.000	No
615	40.36	2.46	0.00	2.46	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
616	40.42	2.46	0.00	2.46	0.85	0.397	0.83	0.478	0.84	1.00	2.000	No
617	40.49	2.47	0.00	2.47	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
618	40.56	2.47	0.00	2.47	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
619	40.62	2.48	0.00	2.48	0.85	0.396	0.83	0.477	0.84	1.00	2.000	No
620	40.69	2.48	0.00	2.48	0.84	0.395	0.83	0.477	0.84	1.00	2.000	No
621	40.75	2.48	0.00	2.48	0.84	0.395	0.83	0.477	0.84	1.00	2.000	No
622	40.82	2.49	0.00	2.49	0.84	0.395	0.83	0.476	0.84	1.00	2.000	No
623	40.88	2.49	0.00	2.49	0.84	0.395	0.83	0.476	0.84	1.00	2.000	No
624	40.95	2.50	0.00	2.50	0.84	0.394	0.83	0.476	0.84	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
625	41.02	2.50	0.00	2.50	0.84	0.394	0.83	0.475	0.84	1.00	2.000	No
626	41.08	2.51	0.00	2.51	0.84	0.394	0.83	0.475	0.84	1.00	2.000	No
627	41.15	2.51	0.00	2.51	0.84	0.393	0.83	0.475	0.84	1.00	2.000	No
628	41.22	2.52	0.00	2.52	0.84	0.393	0.83	0.474	0.84	1.00	2.000	No
629	41.27	2.52	0.00	2.52	0.84	0.393	0.83	0.474	0.84	1.00	2.000	No
630	41.35	2.53	0.00	2.53	0.84	0.393	0.83	0.474	0.84	1.00	2.000	No
631	41.41	2.53	0.00	2.53	0.84	0.392	0.83	0.473	0.84	1.00	2.000	No
632	41.48	2.53	0.00	2.53	0.84	0.392	0.83	0.473	0.84	1.00	2.000	No
633	41.54	2.54	0.00	2.54	0.84	0.392	0.83	0.473	0.84	1.00	2.000	No
634	41.61	2.54	0.00	2.54	0.84	0.391	0.83	0.472	0.84	1.00	2.000	No
635	41.67	2.55	0.00	2.55	0.84	0.391	0.83	0.472	0.84	1.00	2.000	No
636	41.74	2.55	0.00	2.55	0.84	0.391	0.83	0.472	0.84	1.00	2.000	No
637	41.80	2.56	0.00	2.56	0.83	0.391	0.83	0.471	0.84	1.00	2.000	No
638	41.87	2.56	0.00	2.56	0.83	0.390	0.83	0.471	0.84	1.00	2.000	No
639	41.94	2.56	0.00	2.56	0.83	0.390	0.83	0.471	0.84	1.00	2.000	No
640	42.00	2.57	0.00	2.57	0.83	0.390	0.83	0.470	0.84	1.00	2.000	No
641	42.07	2.57	0.00	2.57	0.83	0.389	0.83	0.470	0.84	1.00	2.000	No
642	42.13	2.58	0.00	2.58	0.83	0.389	0.83	0.470	0.84	1.00	2.000	No
643	42.20	2.58	0.00	2.58	0.83	0.389	0.83	0.469	0.84	1.00	2.000	No
644	42.27	2.59	0.00	2.59	0.83	0.389	0.83	0.469	0.84	1.00	2.000	No
645	42.33	2.59	0.00	2.59	0.83	0.388	0.83	0.469	0.84	1.00	2.000	No
646	42.39	2.60	0.00	2.60	0.83	0.388	0.83	0.468	0.84	1.00	2.000	No
647	42.45	2.60	0.00	2.60	0.83	0.388	0.83	0.468	0.84	1.00	2.000	No
648	42.52	2.60	0.00	2.60	0.83	0.387	0.83	0.468	0.84	1.00	2.000	No
649	42.59	2.61	0.00	2.61	0.83	0.387	0.83	0.467	0.83	1.00	2.000	No
650	42.66	2.61	0.00	2.61	0.83	0.387	0.83	0.467	0.83	1.00	2.000	No
651	42.72	2.62	0.00	2.62	0.83	0.387	0.83	0.466	0.83	1.00	2.000	No
652	42.79	2.62	0.00	2.62	0.83	0.386	0.83	0.466	0.83	1.00	2.000	No
653	42.85	2.63	0.00	2.63	0.82	0.386	0.83	0.466	0.83	1.00	2.000	No
654	42.91	2.63	0.00	2.63	0.82	0.386	0.83	0.465	0.83	1.00	2.000	No
655	42.98	2.63	0.00	2.63	0.82	0.385	0.83	0.465	0.83	1.00	2.000	No
656	43.05	2.64	0.00	2.64	0.82	0.385	0.83	0.465	0.83	1.00	2.000	No
657	43.11	2.64	0.00	2.64	0.82	0.385	0.83	0.464	0.83	1.00	2.000	No
658	43.18	2.65	0.00	2.65	0.82	0.384	0.83	0.464	0.83	1.00	2.000	No
659	43.25	2.65	0.00	2.65	0.82	0.384	0.83	0.464	0.83	1.00	2.000	No
660	43.31	2.66	0.00	2.66	0.82	0.384	0.83	0.463	0.83	1.00	2.000	No
661	43.38	2.66	0.00	2.66	0.82	0.384	0.83	0.463	0.83	1.00	2.000	No
662	43.44	2.67	0.00	2.67	0.82	0.383	0.83	0.463	0.83	1.00	2.000	No
663	43.51	2.67	0.00	2.67	0.82	0.383	0.83	0.462	0.83	1.00	2.000	No
664	43.57	2.67	0.00	2.67	0.82	0.383	0.83	0.462	0.83	1.00	2.000	No
665	43.64	2.68	0.00	2.68	0.82	0.382	0.83	0.461	0.83	1.00	2.000	No
666	43.71	2.68	0.00	2.68	0.82	0.382	0.83	0.461	0.83	1.00	2.000	No
667	43.77	2.69	0.00	2.69	0.82	0.382	0.83	0.461	0.83	1.00	2.000	No
668	43.84	2.69	0.00	2.69	0.82	0.381	0.83	0.460	0.83	1.00	2.000	No
669	43.90	2.70	0.00	2.70	0.81	0.381	0.83	0.460	0.83	1.00	2.000	No
670	43.97	2.70	0.00	2.70	0.81	0.381	0.83	0.460	0.83	1.00	2.000	No
671	44.04	2.71	0.00	2.71	0.81	0.381	0.83	0.459	0.83	1.00	2.000	No
672	44.10	2.71	0.00	2.71	0.81	0.380	0.83	0.459	0.83	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
673	44.16	2.71	0.00	2.71	0.81	0.380	0.83	0.459	0.83	1.00	2.000	No
674	44.23	2.72	0.00	2.72	0.81	0.380	0.83	0.458	0.83	1.00	2.000	No
675	44.29	2.72	0.00	2.72	0.81	0.379	0.83	0.458	0.83	1.00	2.000	No
676	44.36	2.73	0.00	2.73	0.81	0.379	0.83	0.457	0.83	1.00	2.000	No
677	44.43	2.73	0.00	2.73	0.81	0.379	0.83	0.457	0.83	1.00	2.000	No
678	44.49	2.74	0.00	2.74	0.81	0.378	0.83	0.457	0.83	1.00	2.000	No
679	44.56	2.74	0.00	2.74	0.81	0.378	0.83	0.456	0.83	1.00	2.000	No
680	44.63	2.75	0.00	2.75	0.81	0.378	0.83	0.456	0.83	1.00	2.000	No
681	44.69	2.75	0.00	2.75	0.81	0.378	0.83	0.456	0.83	1.00	2.000	No
682	44.75	2.75	0.00	2.75	0.81	0.377	0.83	0.455	0.83	1.00	2.000	No
683	44.82	2.76	0.00	2.76	0.81	0.377	0.83	0.455	0.83	1.00	2.000	No
684	44.88	2.76	0.00	2.76	0.80	0.377	0.83	0.454	0.83	1.00	2.000	No
685	44.95	2.76	0.00	2.76	0.80	0.376	0.83	0.454	0.83	1.00	2.000	No
686	45.02	2.77	0.00	2.77	0.80	0.376	0.83	0.454	0.83	1.00	2.000	No
687	45.08	2.77	0.00	2.77	0.80	0.376	0.83	0.453	0.82	1.00	2.000	No
688	45.15	2.77	0.00	2.77	0.80	0.375	0.83	0.453	0.82	1.00	2.000	No

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.07	3.20	3.06	1.28	1.00	5.14	9.88	50.75	4.000	No	Yes	2.00
2	0.13	3.92	2.97	1.21	1.00	6.28	8.34	52.39	4.000	No	Yes	2.00
3	0.20	5.19	2.87	1.23	0.87	8.33	6.73	56.06	4.000	No	Yes	2.00
4	0.27	7.00	2.75	1.25	0.83	11.22	5.31	59.56	4.000	No	Yes	2.00
5	0.34	9.45	2.63	1.21	0.80	15.16	4.05	61.41	4.000	No	Yes	2.00
6	0.40	12.10	2.54	1.19	0.77	19.40	3.25	63.12	4.000	No	No	2.00
7	0.46	16.51	2.40	1.09	0.73	26.48	2.38	63.11	4.000	No	No	2.00
8	0.53	24.06	2.22	0.89	0.67	38.61	1.66	64.08	4.000	No	No	2.00
9	0.60	33.82	2.04	0.72	0.62	54.29	1.35	73.14	4.000	No	No	2.00
10	0.66	42.62	1.93	0.63	0.59	68.41	1.26	85.89	4.000	No	No	2.00
11	0.73	49.08	1.87	0.61	0.57	78.80	1.21	95.61	4.000	No	No	2.00
12	0.79	55.52	1.81	0.59	0.55	89.13	1.17	104.17	4.000	No	No	2.00
13	0.86	61.95	1.77	0.57	0.54	99.46	1.11	110.60	4.000	No	No	2.00
14	0.93	67.77	1.73	0.56	0.53	108.80	1.05	114.15	4.000	No	No	2.00
15	0.99	70.72	1.72	0.57	0.52	113.54	1.03	116.61	4.000	No	No	2.00
16	1.06	71.59	1.72	0.59	0.53	114.94	1.04	119.34	4.000	No	No	2.00
17	1.13	70.75	1.74	0.63	0.53	113.58	1.07	121.61	4.000	No	No	2.00
18	1.18	69.23	1.76	0.66	0.54	111.13	1.11	122.80	4.000	No	No	2.00
19	1.25	67.58	1.78	0.69	0.54	108.47	1.13	122.94	4.000	No	No	2.00
20	1.32	65.93	1.80	0.72	0.55	105.81	1.16	122.32	4.000	No	No	2.00
21	1.38	64.34	1.82	0.74	0.55	103.26	1.17	121.05	4.000	No	No	2.00
22	1.45	62.76	1.83	0.75	0.56	100.71	1.18	119.23	4.000	No	No	2.00
23	1.51	61.70	1.84	0.75	0.56	99.01	1.19	117.81	4.000	No	No	2.00
24	1.58	61.52	1.84	0.75	0.56	98.70	1.19	117.58	4.000	No	No	2.00
25	1.64	62.48	1.83	0.75	0.56	100.24	1.18	118.75	4.000	No	No	2.00
26	1.71	63.48	1.82	0.74	0.56	101.84	1.18	119.89	4.000	No	No	2.00
27	1.77	63.20	1.82	0.74	0.56	101.38	1.18	119.46	4.000	No	No	2.00
28	1.84	61.02	1.83	0.73	0.56	97.88	1.19	116.02	4.000	No	No	2.00
29	1.91	58.19	1.83	0.68	0.56	93.32	1.19	110.65	4.000	No	No	2.00
30	1.97	55.67	1.83	0.64	0.56	89.26	1.19	106.00	4.000	No	No	2.00
31	2.04	54.05	1.85	0.65	0.56	86.66	1.20	103.81	4.000	No	No	2.00
32	2.10	52.65	1.88	0.71	0.57	84.41	1.22	103.17	4.000	No	No	2.00
33	2.18	51.69	1.90	0.76	0.58	82.85	1.24	102.66	4.000	No	No	2.00
34	2.24	50.94	1.92	0.80	0.58	81.65	1.25	102.15	4.000	No	No	2.00
35	2.30	51.13	1.93	0.82	0.59	81.95	1.25	102.74	4.000	No	No	2.00
36	2.37	51.82	1.92	0.83	0.59	83.04	1.25	104.07	4.000	No	No	2.00
37	2.43	53.06	1.92	0.84	0.58	85.04	1.25	106.18	4.000	No	No	2.00
38	2.50	54.22	1.91	0.83	0.58	86.88	1.24	107.99	4.000	No	No	2.00
39	2.56	55.77	1.89	0.81	0.58	89.38	1.23	110.17	4.000	No	No	2.00
40	2.63	57.86	1.87	0.79	0.57	92.72	1.22	112.98	4.000	No	No	2.00
41	2.69	60.40	1.85	0.78	0.56	96.80	1.20	116.45	4.000	No	No	2.00
42	2.76	62.54	1.84	0.77	0.56	100.23	1.19	119.54	4.000	No	No	2.00
43	2.83	63.16	1.84	0.79	0.56	101.22	1.20	120.99	4.000	No	No	2.00
44	2.89	62.01	1.86	0.83	0.57	99.36	1.21	120.21	4.000	No	No	2.00
45	2.96	59.77	1.89	0.87	0.57	95.76	1.23	117.63	4.000	No	No	2.00
46	3.02	57.56	1.91	0.90	0.58	92.22	1.24	114.70	4.000	No	No	2.00
47	3.10	56.17	1.92	0.92	0.59	89.97	1.25	112.72	4.000	No	No	2.00
48	3.15	55.43	1.93	0.93	0.59	88.77	1.26	111.60	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.22	54.93	1.94	0.94	0.59	87.96	1.26	110.92	4.000	No	No	2.00
50	3.29	54.12	1.95	0.96	0.59	86.65	1.27	109.86	4.000	No	No	2.00
51	3.35	52.96	1.96	0.99	0.60	84.79	1.28	108.40	4.000	No	No	2.00
52	3.42	51.57	1.98	1.02	0.60	82.55	1.29	106.55	4.000	No	No	2.00
53	3.48	50.39	1.99	1.04	0.61	80.64	1.30	104.95	4.000	No	No	2.00
54	3.55	49.92	2.00	1.05	0.61	79.89	1.31	104.47	4.000	No	No	2.00
55	3.62	50.82	2.00	1.07	0.61	81.32	1.31	106.20	4.000	No	No	2.00
56	3.68	53.64	1.99	1.09	0.60	85.86	1.30	111.27	4.000	No	No	2.00
57	3.75	58.49	1.96	1.12	0.60	93.64	1.28	119.80	4.000	No	No	2.00
58	3.81	64.65	1.94	1.15	0.59	103.53	1.26	130.76	4.000	No	No	2.00
59	3.87	70.32	1.92	1.20	0.59	112.63	1.25	141.12	4.000	No	No	2.00
60	3.94	73.65	1.92	1.27	0.59	117.97	1.25	147.84	4.000	No	No	2.00
61	4.01	73.80	1.94	1.33	0.59	118.21	1.26	149.25	4.000	No	No	2.00
62	4.08	71.72	1.96	1.38	0.60	114.85	1.28	146.48	4.000	No	No	2.00
63	4.15	69.72	1.97	1.37	0.60	111.65	1.28	142.98	4.000	No	No	2.00
64	4.20	68.73	1.96	1.31	0.59	110.05	1.27	140.26	4.000	No	No	2.00
65	4.27	68.73	1.94	1.24	0.59	110.04	1.26	138.98	4.000	No	No	2.00
66	4.33	69.13	1.92	1.16	0.58	110.68	1.25	138.38	4.000	No	No	2.00
67	4.40	69.88	1.90	1.09	0.58	111.87	1.24	138.28	4.000	No	No	2.00
68	4.47	70.94	1.87	1.01	0.57	113.56	1.22	138.18	4.000	No	No	2.00
69	4.53	71.68	1.85	0.94	0.56	114.75	1.20	137.42	4.000	No	No	2.00
70	4.60	71.90	1.83	0.89	0.56	115.10	1.18	136.22	4.000	No	No	2.00
71	4.67	71.43	1.81	0.81	0.55	114.34	1.16	132.72	4.000	No	No	2.00
72	4.72	70.00	1.75	0.65	0.53	112.04	1.09	122.35	4.000	No	No	2.00
73	4.80	67.98	1.70	0.50	0.52	108.79	1.00	108.79	4.000	No	No	2.00
74	4.86	65.22	1.68	0.42	0.51	104.34	1.00	104.34	4.000	No	No	2.00
75	4.93	62.17	1.72	0.47	0.52	99.44	1.00	99.44	4.000	No	No	2.00
76	4.99	58.91	1.76	0.50	0.53	94.19	1.00	94.19	4.000	No	No	2.00
77	5.05	55.43	1.78	0.51	0.54	88.59	1.13	100.16	4.000	No	No	2.00
78	5.13	52.51	1.79	0.49	0.55	83.89	1.00	83.89	4.000	No	No	2.00
79	5.18	49.80	1.81	0.47	0.55	79.54	1.00	79.54	4.000	No	No	2.00
80	5.25	47.62	1.82	0.46	0.55	76.03	1.00	76.03	4.000	No	No	2.00
81	5.33	45.73	1.84	0.47	0.56	72.98	1.00	72.98	4.000	No	No	2.00
82	5.38	44.17	1.86	0.48	0.56	70.48	1.00	70.48	4.000	No	No	2.00
83	5.45	42.99	1.87	0.48	0.57	68.58	1.00	68.58	4.000	No	No	2.00
84	5.51	41.78	1.88	0.49	0.57	66.62	1.00	66.62	4.000	No	No	2.00
85	5.58	41.00	1.89	0.50	0.58	65.37	1.00	65.37	4.000	No	No	2.00
86	5.65	40.65	1.90	0.50	0.58	64.81	1.00	64.81	4.000	No	No	2.00
87	5.72	41.02	1.89	0.50	0.58	65.39	1.00	65.39	4.000	No	No	2.00
88	5.79	41.99	1.88	0.50	0.57	66.93	1.23	82.10	4.000	No	No	2.00
89	5.85	43.70	1.88	0.52	0.57	69.68	1.22	85.03	4.000	No	No	2.00
90	5.92	45.90	1.87	0.54	0.57	73.22	1.21	88.89	4.000	No	No	2.00
91	5.98	48.67	1.86	0.57	0.56	77.66	1.21	93.64	4.000	No	No	2.00
92	6.05	52.06	1.84	0.60	0.56	83.09	1.19	99.28	4.000	No	No	2.00
93	6.12	56.13	1.83	0.63	0.56	89.63	1.18	105.98	4.000	No	No	2.00
94	6.19	60.33	1.82	0.67	0.55	96.36	1.17	112.73	4.000	No	No	2.00
95	6.24	65.08	1.80	0.70	0.55	104.00	1.16	120.15	4.000	No	No	2.00
96	6.30	70.40	1.79	0.74	0.54	112.53	1.14	128.07	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.37	77.39	1.77	0.77	0.54	123.77	1.11	137.74	4.000	No	No	2.00
98	6.45	85.38	1.75	0.81	0.53	136.60	1.08	147.41	4.000	No	No	2.00
99	6.51	94.49	1.72	0.83	0.52	151.23	1.03	155.74	4.000	No	No	2.00
100	6.58	102.67	1.70	0.84	0.52	164.36	1.00	164.36	4.000	No	No	2.00
101	6.64	108.42	1.69	0.86	0.51	173.59	1.00	173.59	4.000	No	No	2.00
102	6.70	110.41	1.69	0.88	0.52	176.54	1.00	176.54	4.000	No	No	2.00
103	6.77	109.69	1.70	0.91	0.52	175.05	1.00	175.05	4.000	No	No	2.00
104	6.83	107.11	1.72	0.93	0.52	170.88	1.02	174.56	4.000	No	No	2.00
105	6.91	104.31	1.73	0.94	0.53	165.81	1.04	173.16	4.000	No	No	2.00
106	6.96	100.80	1.74	0.94	0.53	160.13	1.06	170.47	4.000	No	No	2.00
107	7.03	97.35	1.75	0.94	0.53	154.27	1.08	167.36	4.000	No	No	2.00
108	7.10	93.40	1.77	0.94	0.54	147.75	1.11	163.71	4.000	No	No	2.00
109	7.17	90.08	1.78	0.95	0.54	142.28	1.13	160.75	4.000	No	No	2.00
110	7.22	86.85	1.80	0.98	0.55	137.38	1.15	158.36	4.000	No	No	2.00
111	7.29	83.80	1.82	1.01	0.55	132.54	1.17	155.62	4.000	No	No	2.00
112	7.36	80.69	1.84	1.04	0.56	127.63	1.19	152.31	4.000	No	No	2.00
113	7.43	77.95	1.86	1.07	0.57	123.21	1.21	148.95	4.000	No	No	2.00
114	7.50	75.80	1.88	1.10	0.57	119.68	1.22	146.20	4.000	No	No	2.00
115	7.55	73.28	1.90	1.14	0.58	115.87	1.24	143.17	4.000	No	No	2.00
116	7.61	71.54	1.91	1.17	0.58	113.02	1.25	140.86	4.000	No	No	2.00
117	7.69	70.08	1.93	1.20	0.59	110.48	1.26	138.82	4.000	No	No	2.00
118	7.75	69.52	1.93	1.18	0.59	109.01	1.26	136.88	4.000	No	No	2.00
119	7.83	68.72	1.92	1.11	0.58	106.85	1.25	133.45	4.000	No	No	2.00
120	7.88	67.60	1.91	1.04	0.58	104.36	1.24	129.67	4.000	No	No	2.00
121	7.96	66.36	1.91	1.03	0.58	101.95	1.24	126.91	4.000	No	No	2.00
122	8.01	64.77	1.93	1.07	0.59	99.56	1.26	125.23	4.000	No	No	2.00
123	8.09	63.25	1.95	1.12	0.59	97.14	1.27	123.49	4.000	No	No	2.00
124	8.14	60.82	1.98	1.18	0.60	93.62	1.29	120.81	4.000	No	No	2.00
125	8.21	59.27	2.00	1.22	0.61	91.10	1.30	118.81	4.000	No	No	2.00
126	8.27	57.74	2.01	1.25	0.61	88.69	1.32	116.94	4.000	No	No	2.00
127	8.35	57.03	2.02	1.28	0.62	87.33	1.33	116.02	4.000	No	No	2.00
128	8.42	55.69	2.04	1.33	0.62	85.19	1.35	114.90	4.000	No	No	2.00
129	8.47	54.17	2.07	1.41	0.63	83.02	1.38	114.38	4.000	No	No	2.00
130	8.54	52.65	2.10	1.52	0.64	80.76	1.42	114.44	4.000	No	No	2.00
131	8.61	50.93	2.14	1.67	0.65	78.35	1.48	115.88	4.000	No	No	2.00
132	8.69	49.35	2.18	1.86	0.66	76.14	1.56	118.90	4.000	No	No	2.00
133	8.74	47.48	2.22	2.11	0.68	73.70	1.68	123.79	4.000	No	No	2.00
134	8.81	45.49	2.27	2.35	0.69	70.88	1.82	129.06	4.000	No	No	2.00
135	8.86	42.94	2.32	2.65	0.70	67.34	2.01	135.56	4.000	No	No	2.00
136	8.93	40.26	2.37	2.92	0.72	63.39	2.23	141.19	4.000	No	No	2.00
137	9.00	37.69	2.41	3.14	0.73	59.44	2.44	145.31	4.000	No	No	2.00
138	9.07	35.76	2.44	3.25	0.74	56.35	2.60	146.44	4.000	No	No	2.00
139	9.12	34.55	2.45	3.25	0.74	54.31	2.66	144.70	4.000	No	No	2.00
140	9.20	34.11	2.45	3.14	0.74	53.22	2.64	140.32	4.000	No	No	2.00
141	9.27	34.19	2.43	2.95	0.74	52.85	2.54	134.28	4.000	No	No	2.00
142	9.32	34.65	2.40	2.72	0.73	53.06	2.40	127.26	4.000	No	No	2.00
143	9.39	35.21	2.38	2.49	0.72	53.31	2.26	120.30	4.000	No	No	2.00
144	9.47	35.89	2.35	2.27	0.71	53.73	2.12	113.98	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.54	36.64	2.32	2.11	0.71	54.29	2.02	109.45	4.000	No	No	2.00
146	9.59	37.48	2.30	1.98	0.70	55.09	1.92	105.99	4.000	No	No	2.00
147	9.66	38.39	2.27	1.84	0.69	55.87	1.83	102.30	4.000	No	No	2.00
148	9.73	39.45	2.24	1.67	0.68	56.78	1.73	98.23	4.000	No	No	2.00
149	9.80	40.48	2.21	1.53	0.67	57.66	1.65	94.84	4.000	No	No	2.00
150	9.85	41.67	2.19	1.42	0.66	58.87	1.58	92.98	4.000	No	No	2.00
151	9.92	43.01	2.16	1.35	0.66	60.24	1.53	92.29	4.000	No	No	2.00
152	9.99	44.38	2.15	1.30	0.65	61.67	1.49	92.19	4.000	No	No	2.00
153	10.04	45.78	2.13	1.27	0.65	63.28	1.47	92.94	4.000	No	No	2.00
154	10.12	47.27	2.12	1.28	0.64	64.94	1.45	94.45	4.000	No	No	2.00
155	10.19	48.76	2.12	1.30	0.64	66.65	1.45	96.58	4.000	No	No	2.00
156	10.24	50.22	2.12	1.34	0.64	68.44	1.45	99.00	4.000	No	No	2.00
157	10.31	51.43	2.12	1.38	0.64	69.80	1.45	101.19	4.000	No	No	2.00
158	10.38	52.61	2.12	1.43	0.64	71.14	1.45	103.50	4.000	No	No	2.00
159	10.46	53.46	2.13	1.47	0.65	71.99	1.46	105.20	4.000	No	No	2.00
160	10.50	54.08	2.13	1.50	0.65	72.66	1.47	106.58	4.000	No	No	2.00
161	10.58	54.45	2.13	1.53	0.65	72.87	1.47	107.48	4.000	No	No	2.00
162	10.65	54.59	2.14	1.56	0.65	72.81	1.49	108.24	4.000	No	No	2.00
163	10.70	54.65	2.15	1.59	0.65	72.72	1.50	108.87	4.000	No	No	2.00
164	10.77	54.56	2.14	1.54	0.65	72.19	1.48	107.13	4.000	No	No	2.00
165	10.84	54.62	2.12	1.42	0.64	71.71	1.45	103.87	4.000	No	No	2.00
166	10.91	54.80	2.09	1.29	0.64	71.35	1.41	100.67	4.000	No	No	2.00
167	10.96	55.39	2.08	1.23	0.63	71.74	1.39	99.63	4.000	No	No	2.00
168	11.04	56.55	2.07	1.21	0.63	72.82	1.38	100.27	4.000	No	No	2.00
169	11.11	57.92	2.06	1.19	0.63	74.16	1.36	101.15	4.000	No	No	2.00
170	11.16	57.77	2.06	1.19	0.63	73.80	1.37	100.93	4.000	No	No	2.00
171	11.22	58.86	2.05	1.17	0.62	74.82	1.36	101.46	4.000	No	No	2.00
172	11.29	60.05	2.04	1.16	0.62	75.94	1.35	102.28	4.000	No	No	2.00
173	11.37	62.78	2.03	1.14	0.62	78.92	1.33	104.99	4.000	No	No	2.00
174	11.44	63.84	2.03	1.17	0.62	79.99	1.33	106.69	4.000	No	No	2.00
175	11.48	64.81	2.03	1.22	0.62	81.05	1.34	108.51	4.000	No	No	2.00
176	11.56	65.93	2.04	1.25	0.62	82.15	1.34	110.20	4.000	No	No	2.00
177	11.63	67.48	2.04	1.28	0.62	83.77	1.34	112.41	4.000	No	No	2.00
178	11.70	69.16	2.04	1.31	0.62	85.53	1.34	114.80	4.000	No	No	2.00
179	11.76	71.08	2.04	1.35	0.62	87.69	1.34	117.75	4.000	No	No	2.00
180	11.83	72.76	2.04	1.39	0.62	89.44	1.35	120.36	4.000	No	No	2.00
181	11.90	73.97	2.05	1.44	0.62	90.65	1.35	122.42	4.000	No	No	2.00
182	11.95	74.38	2.05	1.48	0.62	90.98	1.36	123.52	4.000	No	No	2.00
183	12.02	74.07	2.06	1.50	0.63	90.32	1.37	123.34	4.000	No	No	2.00
184	12.09	73.38	2.06	1.50	0.63	89.17	1.37	122.29	4.000	No	No	2.00
185	12.16	72.42	2.07	1.49	0.63	87.69	1.38	120.61	4.000	No	No	2.00
186	12.21	71.08	2.07	1.48	0.63	85.87	1.38	118.52	4.000	No	No	2.00
187	12.28	69.31	2.08	1.47	0.63	83.44	1.39	115.99	4.000	No	No	2.00
188	12.36	67.41	2.09	1.47	0.63	80.90	1.40	113.55	4.000	No	No	2.00
189	12.41	65.30	2.10	1.50	0.64	78.27	1.43	111.63	4.000	No	No	2.00
190	12.48	62.75	2.13	1.57	0.65	75.11	1.47	110.44	4.000	No	No	2.00
191	12.55	60.04	2.17	1.67	0.66	71.81	1.53	110.20	4.000	No	No	2.00
192	12.60	57.46	2.20	1.81	0.67	68.79	1.62	111.24	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.67	55.66	2.23	1.91	0.68	66.53	1.69	112.30	4.000	No	No	2.00
194	12.75	54.11	2.25	1.99	0.68	64.54	1.76	113.29	4.000	No	No	2.00
195	12.82	53.72	2.26	2.02	0.69	63.85	1.78	113.62	4.000	No	No	2.00
196	12.87	53.46	2.26	2.04	0.69	63.42	1.80	113.94	4.000	No	No	2.00
197	12.94	53.87	2.26	2.02	0.69	63.61	1.78	113.46	4.000	No	No	2.00
198	13.01	53.88	2.26	2.00	0.69	63.35	1.78	112.48	4.000	No	No	2.00
199	13.06	54.23	2.25	1.93	0.68	63.52	1.74	110.54	4.000	No	No	2.00
200	13.13	54.44	2.23	1.84	0.68	63.45	1.70	108.11	4.000	No	No	2.00
201	13.21	54.82	2.22	1.76	0.67	63.55	1.67	105.83	4.000	No	No	2.00
202	13.26	55.22	2.21	1.71	0.67	63.80	1.64	104.52	4.000	No	No	2.00
203	13.33	55.51	2.21	1.69	0.67	63.86	1.63	104.03	4.000	No	No	2.00
204	13.40	55.66	2.21	1.68	0.67	63.79	1.63	103.83	4.000	No	No	2.00
205	13.47	55.75	2.21	1.68	0.67	63.66	1.63	103.73	4.000	No	No	2.00
206	13.52	55.82	2.21	1.69	0.67	63.60	1.63	103.96	4.000	No	No	2.00
207	13.59	55.63	2.22	1.72	0.67	63.18	1.65	104.43	4.000	No	No	2.00
208	13.67	55.33	2.22	1.76	0.68	62.64	1.68	105.13	4.000	No	No	2.00
209	13.72	54.98	2.23	1.81	0.68	62.14	1.71	106.10	4.000	No	No	2.00
210	13.79	55.01	2.24	1.84	0.68	61.97	1.72	106.89	4.000	No	No	2.00
211	13.86	55.51	2.24	1.85	0.68	62.30	1.72	107.34	4.000	No	No	2.00
212	13.93	56.38	2.23	1.83	0.68	63.01	1.70	107.27	4.000	No	No	2.00
213	13.98	57.65	2.22	1.79	0.67	64.24	1.67	107.22	4.000	No	No	2.00
214	14.06	58.68	2.21	1.77	0.67	65.11	1.65	107.34	4.000	No	No	2.00
215	14.13	59.23	2.21	1.76	0.67	65.47	1.64	107.40	4.000	No	No	2.00
216	14.18	58.27	2.22	1.78	0.67	64.28	1.66	106.97	4.000	No	No	2.00
217	14.24	57.15	2.23	1.78	0.68	62.85	1.68	105.73	4.000	No	No	2.00
218	14.31	55.88	2.23	1.75	0.68	61.26	1.70	103.88	4.000	No	No	2.00
219	14.38	55.22	2.23	1.71	0.68	60.30	1.69	101.96	4.000	No	No	2.00
220	14.46	54.26	2.23	1.70	0.68	59.04	1.70	100.58	4.000	No	No	2.00
221	14.53	53.14	2.24	1.72	0.68	57.64	1.74	100.09	4.000	No	No	2.00
222	14.58	51.83	2.26	1.76	0.69	56.12	1.79	100.21	4.000	No	No	2.00
223	14.65	50.31	2.28	1.82	0.69	54.32	1.85	100.58	4.000	No	No	2.00
224	14.72	49.23	2.30	1.86	0.70	52.99	1.91	101.00	4.000	No	No	2.00
225	14.77	48.67	2.31	1.92	0.70	52.30	1.95	102.23	4.000	No	No	2.00
226	14.84	48.67	2.32	2.01	0.70	52.15	2.01	104.84	4.000	No	No	2.00
227	14.92	49.35	2.33	2.11	0.71	52.73	2.05	108.28	4.000	No	No	2.00
228	14.96	51.03	2.34	2.21	0.71	54.44	2.07	112.52	4.000	No	No	2.00
229	15.03	54.29	2.32	2.23	0.70	57.72	2.00	115.47	4.000	No	No	2.00
230	15.11	60.10	2.28	2.13	0.69	63.61	1.84	116.80	4.000	No	No	2.00
231	15.18	67.57	2.21	1.95	0.67	71.13	1.65	117.21	4.000	No	No	2.00
232	15.23	78.51	2.12	1.69	0.65	82.24	1.46	119.86	4.000	No	No	2.00
233	15.30	89.86	2.04	1.46	0.62	93.54	1.34	125.72	4.000	No	No	2.00
234	15.37	100.23	1.97	1.27	0.60	103.74	1.28	132.86	4.000	No	No	2.00
235	15.43	107.42	1.91	1.12	0.58	110.67	1.24	137.48	4.000	No	No	2.00
236	15.50	111.92	1.87	1.02	0.57	114.79	1.22	139.53	4.000	No	No	2.00
237	15.56	115.53	1.84	0.96	0.56	118.10	1.20	141.19	4.000	No	No	2.00
238	15.62	118.21	1.84	0.96	0.56	120.55	1.19	143.41	4.000	No	No	2.00
239	15.68	121.44	1.84	0.99	0.56	123.58	1.19	147.00	4.000	No	No	2.00
240	15.76	124.95	1.84	1.03	0.56	126.82	1.19	151.17	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.82	129.03	1.84	1.06	0.56	130.70	1.19	155.90	4.000	No	No	2.00
242	15.89	132.97	1.84	1.10	0.56	134.38	1.19	160.31	4.000	No	No	2.00
243	15.96	137.23	1.84	1.12	0.56	138.31	1.19	164.70	4.000	No	No	2.00
244	16.03	140.90	1.84	1.14	0.56	141.65	1.19	168.44	4.000	No	No	2.00
245	16.08	142.76	1.84	1.18	0.56	143.29	1.19	171.05	4.000	No	No	2.00
246	16.15	144.10	1.85	1.21	0.56	144.26	1.20	172.98	4.000	No	No	2.00
247	16.21	144.53	1.86	1.25	0.57	144.45	1.21	174.34	4.000	No	No	2.00
248	16.27	145.65	1.86	1.28	0.57	145.22	1.21	175.87	4.000	No	No	2.00
249	16.34	146.12	1.87	1.31	0.57	145.34	1.22	176.78	4.000	No	No	2.00
250	16.41	146.21	1.88	1.34	0.57	145.10	1.22	177.17	4.000	No	No	2.00
251	16.48	145.56	1.88	1.36	0.57	144.08	1.23	176.63	4.000	No	No	2.00
252	16.54	143.76	1.89	1.38	0.58	141.97	1.23	174.91	4.000	No	No	2.00
253	16.61	141.49	1.90	1.39	0.58	139.38	1.24	172.44	4.000	No	No	2.00
254	16.68	138.50	1.91	1.39	0.58	136.09	1.24	169.14	4.000	No	No	2.00
255	16.75	135.21	1.92	1.39	0.58	132.52	1.25	165.48	4.000	No	No	2.00
256	16.81	131.48	1.92	1.38	0.59	128.53	1.25	160.96	4.000	No	No	2.00
257	16.88	128.06	1.92	1.33	0.58	124.85	1.25	156.12	4.000	No	No	2.00
258	16.95	124.86	1.92	1.27	0.58	121.38	1.25	151.44	4.000	No	No	2.00
259	17.00	121.53	1.92	1.24	0.58	117.91	1.25	147.24	4.000	No	No	2.00
260	17.06	117.21	1.93	1.25	0.59	113.42	1.26	142.71	4.000	No	No	2.00
261	17.13	111.08	1.96	1.27	0.59	107.21	1.27	136.60	4.000	No	No	2.00
262	17.20	99.11	2.02	1.37	0.61	95.40	1.32	125.97	4.000	No	No	2.00
263	17.27	88.39	2.08	1.48	0.63	84.81	1.39	117.55	4.000	No	No	2.00
264	17.33	77.64	2.15	1.65	0.65	74.25	1.50	111.67	4.000	No	No	2.00
265	17.40	70.80	2.21	1.81	0.67	67.50	1.64	110.45	4.000	No	No	2.00
266	17.47	62.19	2.30	2.12	0.70	59.04	1.91	112.96	4.000	No	No	2.00
267	17.52	53.58	2.40	2.52	0.73	50.66	2.36	119.35	4.000	No	No	2.00
268	17.59	46.59	2.48	2.89	0.75	43.80	2.87	125.61	4.000	No	No	2.00
269	17.67	41.39	2.55	3.19	0.77	38.69	3.37	130.21	4.000	No	No	2.00
270	17.73	39.66	2.57	3.27	0.78	36.92	3.54	130.76	4.000	No	No	2.00
271	17.78	38.20	2.60	3.36	0.79	35.44	3.71	131.64	4.000	No	No	2.00
272	17.86	38.76	2.58	3.26	0.78	35.86	3.61	129.42	4.000	No	No	2.00
273	17.93	40.99	2.54	3.01	0.77	37.84	3.29	124.51	4.000	No	No	2.00
274	17.98	47.33	2.45	2.53	0.74	43.75	2.63	114.94	4.000	No	No	2.00
275	18.05	52.61	2.37	2.21	0.72	48.59	2.23	108.48	4.000	No	No	2.00
276	18.13	55.25	2.34	2.06	0.71	50.91	2.07	105.54	4.000	No	No	2.00
277	18.18	54.16	2.35	2.11	0.71	49.79	2.13	106.27	4.000	No	No	2.00
278	18.25	50.71	2.40	2.30	0.73	46.41	2.36	109.72	4.000	No	No	2.00
279	18.33	46.24	2.46	2.57	0.75	42.08	2.73	115.03	4.000	No	No	2.00
280	18.38	40.90	2.54	2.94	0.77	37.00	3.29	121.84	4.000	No	No	2.00
281	18.45	36.39	2.61	3.27	0.79	32.68	3.88	126.68	4.000	No	Yes	2.00
282	18.52	32.53	2.68	3.54	0.81	29.00	4.46	129.38	4.000	No	Yes	2.00
283	18.57	29.55	2.72	3.68	0.82	26.18	4.92	128.81	4.000	No	Yes	2.00
284	18.65	27.25	2.75	3.68	0.83	23.97	5.25	125.83	4.000	No	Yes	2.00
285	18.72	25.20	2.78	3.65	0.84	22.01	5.55	122.12	4.000	No	Yes	2.00
286	18.77	23.55	2.79	3.56	0.85	20.46	5.77	117.94	4.000	No	Yes	2.00
287	18.84	21.88	2.82	3.52	0.85	18.86	6.07	114.38	4.000	No	Yes	2.00
288	18.91	20.51	2.84	3.44	0.86	17.55	6.31	110.77	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.98	20.26	2.83	3.31	0.86	17.27	6.24	107.78	4.000	No	Yes	2.00
290	19.04	22.93	2.75	2.86	0.83	19.66	5.22	102.69	4.000	No	Yes	2.00
291	19.11	29.02	2.60	2.24	0.79	25.14	3.74	93.97	4.000	No	No	2.00
292	19.18	36.14	2.46	1.82	0.75	31.54	2.75	86.67	4.000	No	No	2.00
293	19.24	41.11	2.38	1.58	0.72	35.98	2.29	82.24	4.000	No	No	2.00
294	19.29	43.04	2.35	1.47	0.71	37.67	2.12	79.99	4.000	No	No	2.00
295	19.36	43.28	2.34	1.44	0.71	37.80	2.09	78.94	4.000	No	No	2.00
296	19.44	42.82	2.35	1.45	0.71	37.28	2.12	79.20	4.000	No	No	2.00
297	19.50	41.92	2.37	1.55	0.72	36.36	2.24	81.61	4.000	No	No	2.00
298	19.55	40.58	2.41	1.71	0.73	35.07	2.43	85.37	4.000	No	No	2.00
299	19.62	38.59	2.47	1.96	0.75	33.16	2.76	91.49	4.000	No	No	2.00
300	19.69	37.13	2.51	2.20	0.76	31.74	3.07	97.48	4.000	No	No	2.00
301	19.75	35.42	2.56	2.45	0.78	30.12	3.42	102.96	4.000	No	No	2.00
302	19.82	33.62	2.60	2.66	0.79	28.42	3.77	107.19	4.000	No	Yes	2.00
303	19.89	30.60	2.66	2.87	0.81	25.66	4.28	109.87	4.000	No	Yes	2.00
304	19.96	27.77	2.70	2.95	0.82	23.09	4.71	108.73	4.000	No	Yes	2.00
305	20.04	25.72	2.72	2.86	0.82	21.23	4.93	104.69	4.000	No	Yes	2.00
306	20.09	23.98	2.74	2.75	0.83	19.67	5.11	100.48	4.000	No	Yes	2.00
307	20.16	23.49	2.73	2.63	0.83	19.19	5.06	97.19	4.000	No	Yes	2.00
308	20.23	22.21	2.76	2.72	0.84	18.02	5.42	97.67	4.000	No	Yes	2.00
309	20.30	22.68	2.76	2.77	0.84	18.37	5.40	99.10	4.000	No	Yes	2.00
310	20.35	26.35	2.69	2.61	0.82	21.52	4.62	99.45	4.000	No	Yes	2.00
311	20.42	35.06	2.54	2.18	0.77	29.04	3.27	95.00	4.000	No	No	2.00
312	20.49	44.62	2.42	1.89	0.73	37.32	2.46	91.93	4.000	No	No	2.00
313	20.54	52.82	2.33	1.71	0.71	44.43	2.05	90.87	4.000	No	No	2.00
314	20.61	59.97	2.26	1.56	0.69	50.60	1.79	90.54	4.000	No	No	2.00
315	20.69	67.27	2.19	1.41	0.67	56.89	1.60	91.11	4.000	No	No	2.00
316	20.74	75.27	2.13	1.26	0.65	63.86	1.46	93.15	4.000	No	No	2.00
317	20.81	82.91	2.06	1.14	0.63	70.48	1.37	96.70	4.000	No	No	2.00
318	20.88	90.19	2.01	1.05	0.61	76.77	1.32	101.17	4.000	No	No	2.00
319	20.95	95.41	1.98	0.99	0.60	81.23	1.29	104.74	4.000	No	No	2.00
320	21.00	99.77	1.95	0.95	0.59	84.96	1.27	107.94	4.000	No	No	2.00
321	21.07	104.37	1.93	0.92	0.59	88.84	1.26	111.49	4.000	No	No	2.00
322	21.14	109.75	1.91	0.90	0.58	93.38	1.24	115.84	4.000	No	No	2.00
323	21.22	113.97	1.89	0.90	0.58	96.87	1.23	119.37	4.000	No	No	2.00
324	21.27	115.65	1.89	0.92	0.58	98.15	1.23	121.03	4.000	No	No	2.00
325	21.34	114.47	1.91	0.95	0.58	96.87	1.24	120.29	4.000	No	No	2.00
326	21.41	112.07	1.92	0.98	0.59	94.55	1.25	118.47	4.000	No	No	2.00
327	21.46	109.49	1.94	1.01	0.59	92.14	1.26	116.40	4.000	No	No	2.00
328	21.53	108.75	1.94	1.01	0.59	91.29	1.27	115.62	4.000	No	No	2.00
329	21.60	108.25	1.95	1.02	0.59	90.66	1.27	115.11	4.000	No	No	2.00
330	21.67	109.06	1.95	1.03	0.59	91.16	1.27	115.68	4.000	No	No	2.00
331	21.72	110.37	1.95	1.03	0.59	92.14	1.27	116.82	4.000	No	No	2.00
332	21.80	113.60	1.93	1.02	0.59	94.74	1.26	119.36	4.000	No	No	2.00
333	21.87	117.48	1.92	1.01	0.58	97.91	1.25	122.33	4.000	No	No	2.00
334	21.94	120.50	1.91	0.99	0.58	100.32	1.24	124.50	4.000	No	No	2.00
335	21.99	122.93	1.90	0.97	0.58	102.28	1.23	126.18	4.000	No	No	2.00
336	22.06	125.10	1.88	0.96	0.57	103.97	1.23	127.52	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.11	128.86	1.87	0.93	0.57	107.10	1.21	129.95	4.000	No	No	2.00
338	22.18	134.33	1.84	0.89	0.56	111.65	1.19	133.20	4.000	No	No	2.00
339	22.26	140.42	1.81	0.85	0.55	116.73	1.17	136.39	4.000	No	No	2.00
340	22.33	145.12	1.80	0.83	0.55	120.59	1.15	138.53	4.000	No	No	2.00
341	22.38	147.45	1.79	0.82	0.54	122.46	1.14	139.44	4.000	No	No	2.00
342	22.44	148.29	1.78	0.81	0.54	123.00	1.13	139.27	4.000	No	No	2.00
343	22.51	147.77	1.78	0.79	0.54	122.39	1.13	137.86	4.000	No	No	2.00
344	22.58	145.56	1.78	0.77	0.54	120.35	1.12	135.29	4.000	No	No	2.00
345	22.65	141.02	1.78	0.74	0.54	116.34	1.13	130.91	4.000	No	No	2.00
346	22.73	135.73	1.78	0.71	0.54	111.70	1.13	126.14	4.000	No	No	2.00
347	22.77	129.51	1.79	0.69	0.55	106.32	1.14	121.57	4.000	No	No	2.00
348	22.85	123.30	1.81	0.69	0.55	100.84	1.16	117.39	4.000	No	No	2.00
349	22.92	116.96	1.83	0.70	0.56	95.29	1.18	112.86	4.000	No	No	2.00
350	22.97	110.58	1.85	0.68	0.56	89.82	1.20	107.51	4.000	No	No	2.00
351	23.04	100.73	1.88	0.67	0.57	81.38	1.22	99.39	4.000	No	No	2.00
352	23.11	92.37	1.90	0.64	0.58	74.27	1.24	91.89	4.000	No	No	2.00
353	23.17	84.75	1.92	0.61	0.58	67.84	1.25	84.93	4.000	No	No	2.00
354	23.23	80.93	1.92	0.57	0.59	64.61	1.25	80.95	4.000	No	No	2.00
355	23.31	75.39	1.94	0.55	0.59	59.91	1.27	75.86	4.000	No	No	2.00
356	23.38	70.23	1.97	0.53	0.60	55.53	1.28	71.23	4.000	No	No	2.00
357	23.45	66.04	1.99	0.53	0.61	51.95	1.30	67.57	4.000	No	No	2.00
358	23.50	62.62	2.02	0.54	0.61	49.03	1.32	64.93	4.000	No	No	2.00
359	23.57	59.05	2.07	0.61	0.63	45.91	1.38	63.13	4.000	No	No	2.00
360	23.65	55.69	2.13	0.72	0.65	42.92	1.47	63.05	4.000	No	No	2.00
361	23.70	53.11	2.21	0.93	0.67	40.55	1.64	66.47	4.000	No	No	2.00
362	23.77	52.46	2.27	1.16	0.69	39.76	1.82	72.24	4.000	No	No	2.00
363	23.84	53.64	2.30	1.37	0.70	40.47	1.94	78.44	4.000	No	No	2.00
364	23.91	56.59	2.30	1.45	0.70	42.68	1.92	82.16	4.000	No	No	2.00
365	23.96	62.09	2.26	1.43	0.69	47.02	1.80	84.46	4.000	No	No	2.00
366	24.03	69.80	2.21	1.35	0.67	53.14	1.63	86.46	4.000	No	No	2.00
367	24.10	78.82	2.14	1.23	0.65	60.38	1.48	89.49	4.000	No	No	2.00
368	24.15	88.76	2.06	1.10	0.63	68.50	1.37	93.97	4.000	No	No	2.00
369	24.22	98.80	2.00	0.98	0.61	76.70	1.30	99.97	4.000	No	No	2.00
370	24.30	108.07	1.94	0.88	0.59	84.29	1.26	106.23	4.000	No	No	2.00
371	24.34	116.59	1.89	0.84	0.58	91.27	1.23	112.49	4.000	No	No	2.00
372	24.42	125.26	1.86	0.82	0.57	98.25	1.21	118.93	4.000	No	No	2.00
373	24.49	135.64	1.84	0.83	0.56	106.54	1.19	126.90	4.000	No	No	2.00
374	24.56	144.72	1.82	0.86	0.56	113.69	1.18	133.92	4.000	No	No	2.00
375	24.61	151.81	1.82	0.89	0.55	119.24	1.17	139.76	4.000	No	No	2.00
376	24.68	156.50	1.82	0.92	0.55	122.76	1.17	143.80	4.000	No	No	2.00
377	24.75	160.60	1.82	0.94	0.55	125.81	1.17	147.24	4.000	No	No	2.00
378	24.82	164.14	1.81	0.95	0.55	128.44	1.17	149.82	4.000	No	No	2.00
379	24.87	167.97	1.80	0.94	0.55	131.42	1.16	152.07	4.000	No	No	2.00
380	24.95	170.92	1.79	0.93	0.55	133.62	1.15	153.29	4.000	No	No	2.00
381	25.00	175.93	1.78	0.91	0.54	137.64	1.13	154.88	4.000	No	No	2.00
382	25.07	182.18	1.76	0.88	0.54	142.62	1.10	156.58	4.000	No	No	2.00
383	25.15	189.11	1.74	0.86	0.53	148.10	1.07	157.96	4.000	No	No	2.00
384	25.20	193.36	1.73	0.86	0.53	151.40	1.05	159.26	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.27	195.38	1.73	0.86	0.53	152.81	1.05	159.83	4.000	No	No	2.00
386	25.34	195.29	1.73	0.86	0.53	152.46	1.05	160.06	4.000	No	No	2.00
387	25.40	193.58	1.74	0.87	0.53	150.81	1.06	160.01	4.000	No	No	2.00
388	25.47	190.41	1.75	0.89	0.53	147.87	1.08	160.20	4.000	No	No	2.00
389	25.54	187.61	1.76	0.92	0.54	145.23	1.11	160.76	4.000	No	No	2.00
390	25.61	185.47	1.78	0.95	0.54	143.11	1.13	161.38	4.000	No	No	2.00
391	25.66	183.54	1.79	0.99	0.55	141.22	1.15	161.91	4.000	No	No	2.00
392	25.73	181.46	1.81	1.02	0.55	139.15	1.16	161.82	4.000	No	No	2.00
393	25.80	179.47	1.82	1.05	0.55	137.17	1.18	161.29	4.000	No	No	2.00
394	25.86	177.45	1.83	1.08	0.56	135.25	1.19	160.42	4.000	No	No	2.00
395	25.93	176.95	1.84	1.08	0.56	134.62	1.19	160.09	4.000	No	No	2.00
396	25.99	176.70	1.84	1.08	0.56	134.20	1.19	159.71	4.000	No	No	2.00
397	26.06	177.38	1.83	1.08	0.56	134.54	1.19	159.80	4.000	No	No	2.00
398	26.14	177.32	1.84	1.08	0.56	134.25	1.19	159.64	4.000	No	No	2.00
399	26.19	177.51	1.84	1.09	0.56	134.20	1.19	159.79	4.000	No	No	2.00
400	26.25	177.39	1.84	1.10	0.56	133.84	1.19	159.75	4.000	No	No	2.00
401	26.32	178.13	1.84	1.10	0.56	134.16	1.19	160.32	4.000	No	No	2.00
402	26.39	179.94	1.84	1.12	0.56	135.32	1.20	161.79	4.000	No	No	2.00
403	26.46	180.53	1.85	1.14	0.56	135.44	1.20	162.64	4.000	No	No	2.00
404	26.51	182.61	1.85	1.16	0.56	136.81	1.20	164.51	4.000	No	No	2.00
405	26.58	185.22	1.85	1.18	0.56	138.56	1.20	166.59	4.000	No	No	2.00
406	26.64	192.06	1.84	1.16	0.56	143.80	1.19	170.99	4.000	No	No	2.00
407	26.71	199.34	1.82	1.14	0.55	149.39	1.17	175.12	4.000	No	No	2.00
408	26.77	207.98	1.80	1.12	0.55	156.04	1.15	179.83	4.000	No	No	2.00
409	26.85	215.44	1.79	1.12	0.55	161.59	1.14	184.56	4.000	No	No	2.00
410	26.91	220.13	1.79	1.16	0.55	164.82	1.15	189.08	4.000	No	No	2.00
411	26.98	226.22	1.79	1.19	0.55	169.16	1.15	194.00	4.000	No	No	2.00
412	27.04	231.85	1.79	1.21	0.55	173.20	1.15	198.31	4.000	No	No	2.00
413	27.11	236.88	1.79	1.22	0.54	176.80	1.14	201.41	4.000	No	No	2.00
414	27.17	236.32	1.79	1.24	0.55	176.01	1.15	201.87	4.000	No	No	2.00
415	27.23	233.84	1.80	1.25	0.55	173.71	1.16	200.81	4.000	No	No	2.00
416	27.30	231.57	1.81	1.26	0.55	171.65	1.16	199.34	4.000	No	No	2.00
417	27.36	230.35	1.81	1.25	0.55	170.49	1.16	198.04	4.000	No	No	2.00
418	27.43	229.36	1.81	1.24	0.55	169.51	1.16	196.78	4.000	No	No	2.00
419	27.50	228.46	1.81	1.23	0.55	168.59	1.16	195.44	4.000	No	No	2.00
420	27.57	226.97	1.80	1.22	0.55	167.26	1.16	193.76	4.000	No	No	2.00
421	27.63	225.57	1.80	1.20	0.55	166.03	1.16	191.96	4.000	No	No	2.00
422	27.70	224.92	1.80	1.18	0.55	165.40	1.15	190.43	4.000	No	No	2.00
423	27.76	225.38	1.79	1.15	0.54	165.71	1.14	189.07	4.000	No	No	2.00
424	27.83	227.69	1.78	1.11	0.54	167.49	1.12	188.21	4.000	No	No	2.00
425	27.90	230.76	1.77	1.09	0.54	169.74	1.11	188.33	4.000	No	No	2.00
426	27.96	235.48	1.76	1.08	0.54	173.23	1.10	189.76	4.000	No	No	2.00
427	28.02	242.07	1.74	1.06	0.53	178.21	1.07	191.40	4.000	No	No	2.00
428	28.09	250.28	1.73	1.04	0.53	184.47	1.04	192.34	4.000	No	No	2.00
429	28.16	252.30	1.72	1.04	0.53	185.74	1.04	192.98	4.000	No	No	2.00
430	28.22	257.74	1.71	1.01	0.52	189.93	1.01	191.24	4.000	No	No	2.00
431	28.28	263.65	1.69	0.97	0.51	194.65	1.00	194.65	4.000	No	No	2.00
432	28.35	278.57	1.64	0.87	0.50	206.87	1.00	206.87	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.41	283.67	1.61	0.82	0.50	210.42	1.00	210.42	4.000	No	No	2.00
434	28.48	284.75	1.61	0.80	0.50	210.96	1.00	210.96	4.000	No	No	2.00
435	28.55	279.41	1.62	0.82	0.50	206.70	1.00	206.70	4.000	No	No	2.00
436	28.62	271.17	1.63	0.82	0.50	200.28	1.00	200.28	4.000	No	No	2.00
437	28.68	252.69	1.65	0.83	0.50	185.93	1.00	185.93	4.000	No	No	2.00
438	28.74	232.92	1.68	0.81	0.51	170.57	1.00	170.57	4.000	No	No	2.00
439	28.81	214.11	1.69	0.77	0.52	156.14	1.00	156.14	4.000	No	No	2.00
440	28.88	201.39	1.69	0.71	0.51	146.66	1.00	146.66	4.000	No	No	2.00
441	28.94	188.67	1.70	0.68	0.52	136.90	1.00	136.90	4.000	No	No	2.00
442	29.00	178.53	1.72	0.69	0.52	128.90	1.03	133.28	4.000	No	No	2.00
443	29.07	172.54	1.74	0.71	0.53	123.98	1.07	133.03	4.000	No	No	2.00
444	29.14	169.31	1.75	0.72	0.53	121.26	1.09	132.45	4.000	No	No	2.00
445	29.20	169.06	1.76	0.72	0.54	120.89	1.10	132.52	4.000	No	No	2.00
446	29.27	172.38	1.75	0.72	0.53	123.25	1.09	133.83	4.000	No	No	2.00
447	29.34	178.60	1.74	0.72	0.53	127.80	1.06	136.11	4.000	No	No	2.00
448	29.40	188.11	1.72	0.73	0.53	134.84	1.04	139.70	4.000	No	No	2.00
449	29.47	197.53	1.71	0.75	0.52	141.65	1.02	144.20	4.000	No	No	2.00
450	29.53	206.26	1.71	0.78	0.52	147.87	1.01	149.63	4.000	No	No	2.00
451	29.60	213.87	1.71	0.81	0.52	153.22	1.01	154.55	4.000	No	No	2.00
452	29.66	222.14	1.70	0.83	0.52	159.12	1.00	159.12	4.000	No	No	2.00
453	29.73	231.71	1.69	0.84	0.52	166.13	1.00	166.13	4.000	No	No	2.00
454	29.80	241.01	1.68	0.83	0.51	172.98	1.00	172.98	4.000	No	No	2.00
455	29.86	250.12	1.66	0.83	0.51	179.78	1.00	179.78	4.000	No	No	2.00
456	29.93	259.35	1.65	0.82	0.50	186.70	1.00	186.70	4.000	No	No	2.00
457	29.99	268.24	1.64	0.81	0.50	193.22	1.00	193.22	4.000	No	No	2.00
458	30.06	275.46	1.63	0.81	0.50	198.19	1.00	198.19	4.000	No	No	2.00
459	30.12	280.55	1.62	0.81	0.50	201.65	1.00	201.65	4.000	No	No	2.00
460	30.19	283.16	1.62	0.82	0.50	203.29	1.00	203.29	4.000	No	No	2.00
461	30.25	283.29	1.63	0.83	0.50	203.14	1.00	203.14	4.000	No	No	2.00
462	30.32	281.73	1.63	0.85	0.50	201.77	1.00	201.77	4.000	No	No	2.00
463	30.39	280.96	1.64	0.86	0.50	200.94	1.00	200.94	4.000	No	No	2.00
464	30.45	281.21	1.64	0.86	0.50	200.86	1.00	200.86	4.000	No	No	2.00
465	30.52	282.57	1.64	0.85	0.50	201.66	1.00	201.66	4.000	No	No	2.00
466	30.58	284.10	1.64	0.85	0.50	202.51	1.00	202.51	4.000	No	No	2.00
467	30.65	285.18	1.63	0.85	0.50	203.04	1.00	203.04	4.000	No	No	2.00
468	30.71	285.39	1.63	0.84	0.50	202.97	1.00	202.97	4.000	No	No	2.00
469	30.78	284.92	1.62	0.81	0.50	202.39	1.00	202.39	4.000	No	No	2.00
470	30.84	285.67	1.61	0.78	0.50	202.69	1.00	202.69	4.000	No	No	2.00
471	30.91	287.33	1.60	0.76	0.50	203.64	1.00	203.64	4.000	No	No	2.00
472	30.98	290.53	1.59	0.75	0.50	205.68	1.00	205.68	4.000	No	No	2.00
473	31.04	292.86	1.60	0.77	0.50	207.12	1.00	207.12	4.000	No	No	2.00
474	31.11	295.35	1.61	0.79	0.50	208.62	1.00	208.62	4.000	No	No	2.00
475	31.17	297.68	1.61	0.82	0.50	210.05	1.00	210.05	4.000	No	No	2.00
476	31.24	302.25	1.61	0.82	0.50	213.03	1.00	213.03	4.000	No	No	2.00
477	31.30	306.51	1.60	0.82	0.50	215.81	1.00	215.81	4.000	No	No	2.00
478	31.37	309.26	1.60	0.81	0.50	217.50	1.00	217.50	4.000	No	No	2.00
479	31.43	309.80	1.60	0.81	0.50	217.66	1.00	217.66	4.000	No	No	2.00
480	31.50	309.46	1.60	0.80	0.50	217.15	1.00	217.15	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.56	309.73	1.59	0.79	0.50	217.10	1.00	217.10	4.000	No	No	2.00
482	31.63	309.09	1.59	0.79	0.50	216.42	1.00	216.42	4.000	No	No	2.00
483	31.70	307.13	1.60	0.80	0.50	214.78	1.00	214.78	4.000	No	No	2.00
484	31.76	303.87	1.61	0.82	0.50	212.24	1.00	212.24	4.000	No	No	2.00
485	31.83	300.32	1.62	0.83	0.50	209.50	1.00	209.50	4.000	No	No	2.00
486	31.90	298.15	1.62	0.82	0.50	207.73	1.00	207.73	4.000	No	No	2.00
487	31.96	294.98	1.62	0.81	0.50	205.28	1.00	205.28	4.000	No	No	2.00
488	32.03	293.27	1.62	0.81	0.50	203.85	1.00	203.85	4.000	No	No	2.00
489	32.10	291.99	1.62	0.81	0.50	202.73	1.00	202.73	4.000	No	No	2.00
490	32.16	292.49	1.62	0.81	0.50	202.86	1.00	202.86	4.000	No	No	2.00
491	32.23	292.86	1.62	0.81	0.50	202.89	1.00	202.89	4.000	No	No	2.00
492	32.29	291.52	1.63	0.82	0.50	201.74	1.00	201.74	4.000	No	No	2.00
493	32.35	291.90	1.63	0.82	0.50	201.77	1.00	201.77	4.000	No	No	2.00
494	32.41	289.50	1.63	0.82	0.50	199.90	1.00	199.90	4.000	No	No	2.00
495	32.48	291.34	1.63	0.82	0.50	200.94	1.00	200.94	4.000	No	No	2.00
496	32.55	294.88	1.62	0.80	0.50	203.19	1.00	203.19	4.000	No	No	2.00
497	32.61	305.51	1.58	0.74	0.50	210.33	1.00	210.33	4.000	No	No	2.00
498	32.68	313.53	1.55	0.67	0.50	215.64	1.00	215.64	4.000	No	No	2.00
499	32.75	318.48	1.51	0.61	0.50	218.82	1.00	218.82	4.000	No	No	2.00
500	32.81	316.74	1.50	0.58	0.50	217.38	1.00	217.38	4.000	No	No	2.00
501	32.88	311.76	1.49	0.55	0.50	213.73	1.00	213.73	4.000	No	No	2.00
502	32.94	305.33	1.49	0.53	0.50	209.07	1.00	209.07	4.000	No	No	2.00
503	33.02	300.70	1.49	0.52	0.50	205.63	1.00	205.63	4.000	No	No	2.00
504	33.07	299.50	1.49	0.52	0.50	204.61	1.00	204.61	4.000	No	No	2.00
505	33.14	298.81	1.50	0.54	0.50	203.93	1.00	203.93	4.000	No	No	2.00
506	33.21	299.25	1.53	0.59	0.50	204.00	1.00	204.00	4.000	No	No	2.00
507	33.27	298.02	1.56	0.67	0.50	202.95	1.00	202.95	4.000	No	No	2.00
508	33.34	301.10	1.59	0.73	0.50	204.83	1.00	204.83	4.000	No	No	2.00
509	33.40	306.82	1.59	0.75	0.50	208.53	1.00	208.53	4.000	No	No	2.00
510	33.47	316.17	1.57	0.73	0.50	214.68	1.00	214.68	4.000	No	No	2.00
511	33.53	317.04	1.57	0.72	0.50	215.07	1.00	215.07	4.000	No	No	2.00
512	33.60	314.21	1.57	0.71	0.50	212.89	1.00	212.89	4.000	No	No	2.00
513	33.67	309.92	1.56	0.69	0.50	209.75	1.00	209.75	4.000	No	No	2.00
514	33.73	310.65	1.55	0.66	0.50	210.03	1.00	210.03	4.000	No	No	2.00
515	33.79	311.90	1.53	0.61	0.50	210.67	1.00	210.67	4.000	No	No	2.00
516	33.86	312.18	1.51	0.58	0.50	210.62	1.00	210.62	4.000	No	No	2.00
517	33.93	310.58	1.51	0.58	0.50	209.32	1.00	209.32	4.000	No	No	2.00
518	34.00	310.47	1.52	0.59	0.50	209.01	1.00	209.01	4.000	No	No	2.00
519	34.06	309.07	1.53	0.60	0.50	207.85	1.00	207.85	4.000	No	No	2.00
520	34.13	310.65	1.52	0.60	0.50	208.70	1.00	208.70	4.000	No	No	2.00
521	34.19	312.16	1.52	0.59	0.50	209.51	1.00	209.51	4.000	No	No	2.00
522	34.26	315.15	1.51	0.57	0.50	211.31	1.00	211.31	4.000	No	No	2.00
523	34.33	316.95	1.49	0.55	0.50	212.30	1.00	212.30	4.000	No	No	2.00
524	34.39	316.02	1.49	0.53	0.50	211.46	1.00	211.46	4.000	No	No	2.00
525	34.45	311.79	1.49	0.53	0.50	208.42	1.00	208.42	4.000	No	No	2.00
526	34.52	306.07	1.49	0.52	0.50	204.37	1.00	204.37	4.000	No	No	2.00
527	34.58	297.40	1.50	0.53	0.50	198.33	1.00	198.33	4.000	No	No	2.00
528	34.65	287.70	1.52	0.54	0.50	191.63	1.00	191.63	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.71	269.52	1.57	0.59	0.50	179.24	1.00	179.24	4.000	No	No	2.00
530	34.78	251.14	1.62	0.66	0.50	166.77	1.00	166.77	4.000	No	No	2.00
531	34.85	231.59	1.68	0.73	0.51	152.16	1.00	152.16	4.000	No	No	2.00
532	34.92	216.80	1.73	0.78	0.53	140.84	1.04	147.13	4.000	No	No	2.00
533	34.98	197.55	1.80	0.88	0.55	126.21	1.15	145.34	4.000	No	No	2.00
534	35.05	176.20	1.89	1.06	0.58	110.06	1.23	135.73	4.000	No	No	2.00
535	35.12	153.88	2.00	1.29	0.61	93.65	1.31	122.78	4.000	No	No	2.00
536	35.18	134.33	2.11	1.54	0.64	79.72	1.43	114.09	4.000	No	No	2.00
537	35.25	117.10	2.18	1.68	0.66	68.17	1.57	107.25	4.000	No	No	2.00
538	35.31	99.08	2.26	1.75	0.69	56.52	1.77	100.22	4.000	No	No	2.00
539	35.38	81.61	2.35	1.89	0.71	45.35	2.13	96.75	4.000	No	No	2.00
540	35.45	66.59	2.48	2.24	0.75	35.74	2.83	101.28	4.000	No	No	2.00
541	35.52	56.71	2.59	2.70	0.79	29.48	3.70	109.01	4.000	No	No	2.00
542	35.58	50.93	2.66	2.91	0.81	25.96	4.28	111.03	4.000	No	Yes	2.00
543	35.64	47.77	2.68	2.93	0.81	24.11	4.55	109.61	4.000	No	Yes	2.00
544	35.70	46.34	2.69	2.85	0.81	23.30	4.58	106.81	4.000	No	Yes	2.00
545	35.76	46.25	2.67	2.71	0.81	23.28	4.45	103.56	4.000	No	Yes	2.00
546	35.84	45.39	2.68	2.66	0.81	22.78	4.48	102.01	4.000	No	Yes	2.00
547	35.91	43.53	2.70	2.73	0.82	21.64	4.73	102.32	4.000	No	Yes	2.00
548	35.98	40.92	2.74	2.90	0.83	20.06	5.18	103.95	4.000	No	Yes	2.00
549	36.03	38.15	2.79	3.10	0.85	18.41	5.74	105.77	4.000	No	Yes	2.00
550	36.10	36.75	2.82	3.21	0.85	17.57	6.06	106.47	4.000	No	Yes	2.00
551	36.17	36.38	2.82	3.23	0.85	17.32	6.14	106.43	4.000	No	Yes	2.00
552	36.22	36.79	2.81	3.17	0.85	17.54	6.03	105.73	4.000	No	Yes	2.00
553	36.30	37.05	2.81	3.12	0.85	17.67	5.94	104.93	4.000	No	Yes	2.00
554	36.37	36.53	2.81	3.03	0.85	17.38	5.92	102.88	4.000	No	Yes	2.00
555	36.44	36.62	2.78	2.82	0.84	17.47	5.66	98.95	4.000	No	Yes	2.00
556	36.49	38.28	2.74	2.53	0.83	18.49	5.10	94.26	4.000	No	Yes	2.00
557	36.57	42.98	2.66	2.24	0.81	21.23	4.27	90.72	4.000	No	Yes	2.00
558	36.64	48.70	2.59	2.07	0.78	24.56	3.63	89.20	4.000	No	No	2.00
559	36.69	53.43	2.54	2.01	0.77	27.30	3.28	89.42	4.000	No	No	2.00
560	36.76	52.82	2.56	2.13	0.78	26.80	3.45	92.35	4.000	No	No	2.00
561	36.82	49.91	2.61	2.35	0.79	24.95	3.86	96.37	4.000	No	Yes	2.00
562	36.88	44.63	2.69	2.68	0.82	21.75	4.65	101.18	4.000	No	Yes	2.00
563	36.95	40.82	2.76	2.95	0.84	19.48	5.36	104.35	4.000	No	Yes	2.00
564	37.03	37.87	2.81	3.16	0.85	17.76	5.97	105.93	4.000	No	Yes	2.00
565	37.10	36.58	2.83	3.22	0.86	17.00	6.22	105.74	4.000	No	Yes	2.00
566	37.14	36.64	2.83	3.25	0.86	17.01	6.25	106.23	4.000	No	Yes	2.00
567	37.22	37.20	2.84	3.36	0.86	17.24	6.31	108.70	4.000	No	Yes	2.00
568	37.29	37.91	2.84	3.54	0.86	17.51	6.42	112.41	4.000	No	Yes	2.00
569	37.34	40.28	2.82	3.59	0.86	18.75	6.16	115.48	4.000	No	Yes	2.00
570	37.41	48.43	2.72	3.23	0.83	23.25	4.96	115.23	4.000	No	Yes	2.00
571	37.49	65.24	2.55	2.67	0.77	32.93	3.37	111.00	4.000	No	No	2.00
572	37.56	84.89	2.41	2.26	0.73	44.61	2.41	107.59	4.000	No	No	2.00
573	37.60	99.65	2.33	2.12	0.71	53.49	2.04	109.02	4.000	No	No	2.00
574	37.67	102.74	2.33	2.19	0.71	55.11	2.04	112.26	4.000	No	No	2.00
575	37.75	97.45	2.37	2.38	0.72	51.57	2.25	115.89	4.000	No	No	2.00
576	37.82	89.00	2.44	2.60	0.74	46.27	2.57	118.87	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	37.87	82.79	2.46	2.61	0.75	42.64	2.74	116.68	4.000	No	No	2.00
578	37.94	81.83	2.44	2.36	0.74	42.33	2.57	108.88	4.000	No	No	2.00
579	38.01	84.62	2.38	2.04	0.72	44.32	2.27	100.70	4.000	No	No	2.00
580	38.06	93.35	2.30	1.79	0.70	49.85	1.94	96.70	4.000	No	No	2.00
581	38.14	105.64	2.23	1.63	0.68	57.47	1.70	97.63	4.000	No	No	2.00
582	38.21	119.70	2.16	1.49	0.66	66.32	1.52	100.91	4.000	No	No	2.00
583	38.26	136.06	2.08	1.34	0.63	76.95	1.39	106.89	4.000	No	No	2.00
584	38.33	153.46	1.99	1.17	0.61	88.60	1.30	115.37	4.000	No	No	2.00
585	38.39	174.79	1.90	0.99	0.58	103.32	1.24	127.65	4.000	No	No	2.00
586	38.46	192.60	1.83	0.89	0.56	115.69	1.18	136.97	4.000	No	No	2.00
587	38.52	208.21	1.79	0.87	0.55	126.20	1.14	144.44	4.000	No	No	2.00
588	38.59	220.86	1.78	0.89	0.54	134.20	1.13	151.54	4.000	No	No	2.00
589	38.66	233.74	1.78	0.93	0.54	142.14	1.12	159.51	4.000	No	No	2.00
590	38.71	247.01	1.77	0.96	0.54	150.49	1.11	167.01	4.000	No	No	2.00
591	38.78	258.64	1.76	0.98	0.53	157.87	1.09	172.72	4.000	No	No	2.00
592	38.85	271.35	1.74	0.99	0.53	166.03	1.07	178.27	4.000	No	No	2.00
593	38.92	281.95	1.75	1.04	0.53	172.18	1.08	186.33	4.000	No	No	2.00
594	38.98	287.39	1.77	1.13	0.54	174.47	1.11	194.42	4.000	No	No	2.00
595	39.05	287.82	1.80	1.23	0.55	173.43	1.15	199.28	4.000	No	No	2.00
596	39.12	290.25	1.80	1.23	0.55	174.74	1.15	200.67	4.000	No	No	2.00
597	39.18	289.84	1.77	1.16	0.54	175.24	1.12	196.50	4.000	No	No	2.00
598	39.24	292.55	1.74	1.06	0.53	178.12	1.07	190.75	4.000	No	No	2.00
599	39.31	294.35	1.72	0.99	0.52	180.05	1.03	184.88	4.000	No	No	2.00
600	39.38	304.42	1.69	0.93	0.51	187.56	1.00	187.56	4.000	No	No	2.00
601	39.44	316.05	1.63	0.80	0.50	196.88	1.00	196.88	4.000	No	No	2.00
602	39.51	329.29	1.56	0.67	0.50	204.99	1.00	204.99	4.000	No	No	2.00
603	39.57	344.03	1.52	0.60	0.50	214.06	1.00	214.06	4.000	No	No	2.00
604	39.64	353.41	1.51	0.62	0.50	219.74	1.00	219.74	4.000	No	No	2.00
605	39.70	362.68	1.52	0.64	0.50	225.33	1.00	225.33	4.000	No	No	2.00
606	39.77	362.46	1.54	0.68	0.50	225.00	1.00	225.00	4.000	No	No	2.00
607	39.83	362.52	1.56	0.73	0.50	224.85	1.00	224.85	4.000	No	No	2.00
608	39.90	364.79	1.56	0.75	0.50	226.04	1.00	226.04	4.000	No	No	2.00
609	39.97	372.60	1.55	0.72	0.50	230.70	1.00	230.70	4.000	No	No	2.00
610	40.03	390.94	1.49	0.62	0.50	241.92	1.00	241.92	4.000	No	No	2.00
611	40.09	410.92	1.42	0.53	0.50	254.15	1.00	254.15	4.000	No	No	2.00
612	40.16	439.21	1.36	0.45	0.50	271.49	1.00	271.49	4.000	No	No	2.00
613	40.23	470.76	1.30	0.40	0.50	290.85	1.00	290.85	4.000	No	No	2.00
614	40.29	501.85	1.27	0.39	0.50	309.89	1.00	309.89	4.000	No	No	2.00
615	40.36	537.04	1.25	0.39	0.50	331.44	1.00	331.44	4.000	No	No	2.00
616	40.42	561.59	1.25	0.41	0.50	346.37	1.00	346.37	4.000	No	No	2.00
617	40.49	577.71	1.26	0.44	0.50	356.03	1.00	356.03	4.000	No	No	2.00
618	40.56	580.07	1.29	0.49	0.50	357.14	1.00	357.14	4.000	No	No	2.00
619	40.62	588.65	1.31	0.52	0.50	362.13	1.00	362.13	4.000	No	No	2.00
620	40.69	592.46	1.32	0.54	0.50	364.15	1.00	364.15	4.000	No	No	2.00
621	40.75	601.23	1.32	0.56	0.50	369.26	1.00	369.26	4.000	No	No	2.00
622	40.82	596.63	1.35	0.60	0.50	366.08	1.00	366.08	4.000	No	No	2.00
623	40.88	600.51	1.36	0.63	0.50	368.14	1.00	368.14	4.000	No	No	2.00
624	40.95	592.61	1.38	0.65	0.50	362.94	1.00	362.94	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
625	41.02	602.75	1.36	0.63	0.50	368.84	1.00	368.84	4.000	No	No	2.00
626	41.08	611.48	1.34	0.59	0.50	373.88	1.00	373.88	4.000	No	No	2.00
627	41.15	630.29	1.29	0.53	0.50	385.10	1.00	385.10	4.000	No	No	2.00
628	41.22	640.36	1.26	0.48	0.50	390.91	1.00	390.91	4.000	No	No	2.00
629	41.27	657.02	1.24	0.46	0.50	400.81	1.00	400.81	4.000	No	No	2.00
630	41.35	667.75	1.25	0.49	0.50	406.98	1.00	406.98	4.000	No	No	2.00
631	41.41	675.71	1.27	0.53	0.50	411.50	1.00	411.50	4.000	No	No	2.00
632	41.48	667.59	1.29	0.55	0.50	406.16	1.00	406.16	4.000	No	No	2.00
633	41.54	658.64	1.29	0.55	0.50	400.36	1.00	400.36	4.000	No	No	2.00
634	41.61	642.41	1.29	0.52	0.50	390.10	1.00	390.10	4.000	No	No	2.00
635	41.67	626.78	1.28	0.51	0.50	380.24	1.00	380.24	4.000	No	No	2.00
636	41.74	604.06	1.29	0.50	0.50	366.07	1.00	366.07	4.000	No	No	2.00
637	41.80	581.71	1.31	0.51	0.50	352.17	1.00	352.17	4.000	No	No	2.00
638	41.87	564.36	1.36	0.58	0.50	341.35	1.00	341.35	4.000	No	No	2.00
639	41.94	552.89	1.40	0.66	0.50	334.07	1.00	334.07	4.000	No	No	2.00
640	42.00	536.73	1.44	0.71	0.50	323.97	1.00	323.97	4.000	No	No	2.00
641	42.07	516.61	1.45	0.70	0.50	311.51	1.00	311.51	4.000	No	No	2.00
642	42.13	499.95	1.44	0.67	0.50	301.15	1.00	301.15	4.000	No	No	2.00
643	42.20	504.30	1.41	0.62	0.50	303.53	1.00	303.53	4.000	No	No	2.00
644	42.27	519.78	1.39	0.58	0.50	312.61	1.00	312.61	4.000	No	No	2.00
645	42.33	537.97	1.36	0.55	0.50	323.34	1.00	323.34	4.000	No	No	2.00
646	42.39	545.55	1.34	0.53	0.50	327.66	1.00	327.66	4.000	No	No	2.00
647	42.45	547.26	1.35	0.54	0.50	328.41	1.00	328.41	4.000	No	No	2.00
648	42.52	551.02	1.36	0.57	0.50	330.39	1.00	330.39	4.000	No	No	2.00
649	42.59	549.75	1.38	0.60	0.50	329.33	1.00	329.33	4.000	No	No	2.00
650	42.66	553.63	1.38	0.61	0.50	331.38	1.00	331.38	4.000	No	No	2.00
651	42.72	552.17	1.38	0.61	0.50	330.21	1.00	330.21	4.000	No	No	2.00
652	42.79	541.82	1.40	0.63	0.50	323.72	1.00	323.72	4.000	No	No	2.00
653	42.85	527.49	1.42	0.65	0.50	314.85	1.00	314.85	4.000	No	No	2.00
654	42.91	510.18	1.44	0.68	0.50	304.23	1.00	304.23	4.000	No	No	2.00
655	42.98	502.19	1.44	0.66	0.50	299.18	1.00	299.18	4.000	No	No	2.00
656	43.05	489.69	1.44	0.64	0.50	291.45	1.00	291.45	4.000	No	No	2.00
657	43.11	482.45	1.43	0.62	0.50	286.87	1.00	286.87	4.000	No	No	2.00
658	43.18	480.80	1.44	0.63	0.50	285.65	1.00	285.65	4.000	No	No	2.00
659	43.25	488.45	1.43	0.62	0.50	289.96	1.00	289.96	4.000	No	No	2.00
660	43.31	503.55	1.41	0.61	0.50	298.76	1.00	298.76	4.000	No	No	2.00
661	43.38	526.31	1.39	0.58	0.50	312.06	1.00	312.06	4.000	No	No	2.00
662	43.44	554.00	1.36	0.56	0.50	328.27	1.00	328.27	4.000	No	No	2.00
663	43.51	579.90	1.33	0.53	0.50	343.41	1.00	343.41	4.000	No	No	2.00
664	43.57	606.85	1.30	0.51	0.50	359.16	1.00	359.16	4.000	No	No	2.00
665	43.64	633.21	1.28	0.50	0.50	374.52	1.00	374.52	4.000	No	No	2.00
666	43.71	658.85	1.27	0.50	0.50	389.41	1.00	389.41	4.000	No	No	2.00
667	43.77	670.54	1.28	0.52	0.50	396.02	1.00	396.02	4.000	No	No	2.00
668	43.84	674.90	1.29	0.55	0.50	398.27	1.00	398.27	4.000	No	No	2.00
669	43.90	673.50	1.31	0.57	0.50	397.10	1.00	397.10	4.000	No	No	2.00
670	43.97	678.35	1.30	0.56	0.50	399.66	1.00	399.66	4.000	No	No	2.00
671	44.04	679.62	1.28	0.53	0.50	400.05	1.00	400.05	4.000	No	No	2.00
672	44.10	688.48	1.25	0.48	0.50	404.98	1.00	404.98	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
673	44.16	687.48	1.23	0.45	0.50	404.05	1.00	404.05	4.000	No	No	2.00
674	44.23	686.96	1.22	0.43	0.50	403.41	1.00	403.41	4.000	No	No	2.00
675	44.29	676.08	1.21	0.42	0.50	396.69	1.00	396.69	4.000	No	No	2.00
676	44.36	674.46	1.21	0.41	0.50	395.39	1.00	395.39	4.000	No	No	2.00
677	44.43	672.38	1.21	0.41	0.50	393.84	1.00	393.84	4.000	No	No	2.00
678	44.49	680.43	1.21	0.42	0.50	398.27	1.00	398.27	4.000	No	No	2.00
679	44.56	686.27	1.22	0.43	0.50	401.39	1.00	401.39	4.000	No	No	2.00
680	44.63	697.96	1.22	0.44	0.50	407.90	1.00	407.90	4.000	No	No	2.00
681	44.69	702.96	1.22	0.44	0.50	410.53	1.00	410.53	4.000	No	No	2.00
682	44.75	705.58	1.09	0.29	0.50	411.74	1.00	411.74	4.000	No	No	2.00
683	44.82	701.23	0.94	0.15	0.50	408.85	1.00	408.85	4.000	No	No	2.00
684	44.88	708.87	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
685	44.95	716.89	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
686	45.02	745.71	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
687	45.08	769.70	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
688	45.15	795.13	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.07	2.00	0.00	0.00	0.06	0.00	0.13	2.00	0.00	0.00	0.06	0.00
0.20	2.00	0.00	0.00	0.07	0.00	0.27	2.00	0.00	0.00	0.07	0.00
0.34	2.00	0.00	0.00	0.07	0.00	0.40	2.00	0.00	0.00	0.06	0.00
0.46	2.00	0.00	0.00	0.07	0.00	0.53	2.00	0.00	0.00	0.07	0.00
0.60	2.00	0.00	0.00	0.07	0.00	0.66	2.00	0.00	0.00	0.06	0.00
0.73	2.00	0.00	0.00	0.07	0.00	0.79	2.00	0.00	0.00	0.07	0.00
0.86	2.00	0.00	0.00	0.07	0.00	0.93	2.00	0.00	0.00	0.07	0.00
0.99	2.00	0.00	0.00	0.07	0.00	1.06	2.00	0.00	0.00	0.07	0.00
1.13	2.00	0.00	0.00	0.07	0.00	1.18	2.00	0.00	0.00	0.06	0.00
1.25	2.00	0.00	0.00	0.07	0.00	1.32	2.00	0.00	0.00	0.07	0.00
1.38	2.00	0.00	0.00	0.06	0.00	1.45	2.00	0.00	0.00	0.07	0.00
1.51	2.00	0.00	0.00	0.06	0.00	1.58	2.00	0.00	0.00	0.07	0.00
1.64	2.00	0.00	0.00	0.06	0.00	1.71	2.00	0.00	0.00	0.07	0.00
1.77	2.00	0.00	0.00	0.06	0.00	1.84	2.00	0.00	0.00	0.07	0.00
1.91	2.00	0.00	0.00	0.07	0.00	1.97	2.00	0.00	0.00	0.06	0.00
2.04	2.00	0.00	0.00	0.07	0.00	2.10	2.00	0.00	0.00	0.06	0.00
2.18	2.00	0.00	0.00	0.07	0.00	2.24	2.00	0.00	0.00	0.06	0.00
2.30	2.00	0.00	0.00	0.06	0.00	2.37	2.00	0.00	0.00	0.06	0.00
2.43	2.00	0.00	0.00	0.06	0.00	2.50	2.00	0.00	0.00	0.07	0.00
2.56	2.00	0.00	0.00	0.06	0.00	2.63	2.00	0.00	0.00	0.07	0.00
2.69	2.00	0.00	0.00	0.07	0.00	2.76	2.00	0.00	0.00	0.06	0.00
2.83	2.00	0.00	0.00	0.07	0.00	2.89	2.00	0.00	0.00	0.07	0.00
2.96	2.00	0.00	0.00	0.07	0.00	3.02	2.00	0.00	0.00	0.06	0.00
3.10	2.00	0.00	0.00	0.07	0.00	3.15	2.00	0.00	0.00	0.06	0.00
3.22	2.00	0.00	0.00	0.06	0.00	3.29	2.00	0.00	0.00	0.07	0.00
3.35	2.00	0.00	0.00	0.06	0.00	3.42	2.00	0.00	0.00	0.07	0.00
3.48	2.00	0.00	0.00	0.07	0.00	3.55	2.00	0.00	0.00	0.07	0.00
3.62	2.00	0.00	0.00	0.07	0.00	3.68	2.00	0.00	0.00	0.06	0.00
3.75	2.00	0.00	0.00	0.07	0.00	3.81	2.00	0.00	0.00	0.06	0.00
3.87	2.00	0.00	0.00	0.07	0.00	3.94	2.00	0.00	0.00	0.07	0.00
4.01	2.00	0.00	0.00	0.07	0.00	4.08	2.00	0.00	0.00	0.07	0.00
4.15	2.00	0.00	0.00	0.07	0.00	4.20	2.00	0.00	0.00	0.06	0.00
4.27	2.00	0.00	0.00	0.07	0.00	4.33	2.00	0.00	0.00	0.06	0.00
4.40	2.00	0.00	0.00	0.07	0.00	4.47	2.00	0.00	0.00	0.06	0.00
4.53	2.00	0.00	0.00	0.07	0.00	4.60	2.00	0.00	0.00	0.07	0.00
4.67	2.00	0.00	0.00	0.06	0.00	4.72	2.00	0.00	0.00	0.06	0.00
4.80	2.00	0.00	0.00	0.08	0.00	4.86	2.00	0.00	0.00	0.06	0.00
4.93	2.00	0.00	0.00	0.07	0.00	4.99	2.00	0.00	0.00	0.07	0.00
5.05	2.00	0.00	0.00	0.06	0.00	5.13	2.00	0.00	0.00	0.07	0.00
5.18	2.00	0.00	0.00	0.06	0.00	5.25	2.00	0.00	0.00	0.07	0.00
5.33	2.00	0.00	0.00	0.07	0.00	5.38	2.00	0.00	0.00	0.06	0.00
5.45	2.00	0.00	0.00	0.07	0.00	5.51	2.00	0.00	0.00	0.07	0.00
5.58	2.00	0.00	0.00	0.07	0.00	5.65	2.00	0.00	0.00	0.07	0.00
5.72	2.00	0.00	0.00	0.07	0.00	5.79	2.00	0.00	0.00	0.07	0.00
5.85	2.00	0.00	0.00	0.07	0.00	5.92	2.00	0.00	0.00	0.07	0.00
5.98	2.00	0.00	0.00	0.07	0.00	6.05	2.00	0.00	0.00	0.07	0.00
6.12	2.00	0.00	0.00	0.07	0.00	6.19	2.00	0.00	0.00	0.07	0.00
6.24	2.00	0.00	0.00	0.05	0.00	6.30	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.37	2.00	0.00	0.00	0.07	0.00	6.45	2.00	0.00	0.00	0.07	0.00
6.51	2.00	0.00	0.00	0.06	0.00	6.58	2.00	0.00	0.00	0.07	0.00
6.64	2.00	0.00	0.00	0.06	0.00	6.70	2.00	0.00	0.00	0.07	0.00
6.77	2.00	0.00	0.00	0.07	0.00	6.83	2.00	0.00	0.00	0.05	0.00
6.91	2.00	0.00	0.00	0.09	0.00	6.96	2.00	0.00	0.00	0.05	0.00
7.03	2.00	0.00	0.00	0.07	0.00	7.10	2.00	0.00	0.00	0.07	0.00
7.17	2.00	0.00	0.00	0.07	0.00	7.22	2.00	0.00	0.00	0.05	0.00
7.29	2.00	0.00	0.00	0.07	0.00	7.36	2.00	0.00	0.00	0.07	0.00
7.43	2.00	0.00	0.00	0.07	0.00	7.50	2.00	0.00	0.00	0.07	0.00
7.55	2.00	0.00	0.00	0.05	0.00	7.61	2.00	0.00	0.00	0.06	0.00
7.69	2.00	0.00	0.00	0.08	0.00	7.75	2.00	0.00	0.00	0.06	0.00
7.83	2.00	0.00	0.00	0.07	0.00	7.88	2.00	0.00	0.00	0.06	0.00
7.96	2.00	0.00	0.00	0.07	0.00	8.01	2.00	0.00	0.00	0.06	0.00
8.09	2.00	0.00	0.00	0.08	0.00	8.14	2.00	0.00	0.00	0.05	0.00
8.21	2.00	0.00	0.00	0.07	0.00	8.27	2.00	0.00	0.00	0.06	0.00
8.35	2.00	0.00	0.00	0.07	0.00	8.42	2.00	0.00	0.00	0.07	0.00
8.47	2.00	0.00	0.00	0.05	0.00	8.54	2.00	0.00	0.00	0.07	0.00
8.61	2.00	0.00	0.00	0.07	0.00	8.69	2.00	0.00	0.00	0.07	0.00
8.74	2.00	0.00	0.00	0.05	0.00	8.81	2.00	0.00	0.00	0.07	0.00
8.86	2.00	0.00	0.00	0.05	0.00	8.93	2.00	0.00	0.00	0.07	0.00
9.00	2.00	0.00	0.00	0.08	0.00	9.07	2.00	0.00	0.00	0.07	0.00
9.12	2.00	0.00	0.00	0.05	0.00	9.20	2.00	0.00	0.00	0.07	0.00
9.27	2.00	0.00	0.00	0.07	0.00	9.32	2.00	0.00	0.00	0.05	0.00
9.39	2.00	0.00	0.00	0.07	0.00	9.47	2.00	0.00	0.00	0.07	0.00
9.54	2.00	0.00	0.00	0.07	0.00	9.59	2.00	0.00	0.00	0.05	0.00
9.66	2.00	0.00	0.00	0.07	0.00	9.73	2.00	0.00	0.00	0.07	0.00
9.80	2.00	0.00	0.00	0.07	0.00	9.85	2.00	0.00	0.00	0.05	0.00
9.92	2.00	0.00	0.00	0.07	0.00	9.99	2.00	0.00	0.00	0.07	0.00
10.04	2.00	0.00	0.00	0.05	0.00	10.12	2.00	0.00	0.00	0.07	0.00
10.19	2.00	0.00	0.00	0.08	0.00	10.24	2.00	0.00	0.00	0.05	0.00
10.31	2.00	0.00	0.00	0.07	0.00	10.38	2.00	0.00	0.00	0.07	0.00
10.46	2.00	0.00	0.00	0.07	0.00	10.50	2.00	0.00	0.00	0.05	0.00
10.58	2.00	0.00	0.00	0.07	0.00	10.65	2.00	0.00	0.00	0.07	0.00
10.70	2.00	0.00	0.00	0.05	0.00	10.77	2.00	0.00	0.00	0.07	0.00
10.84	2.00	0.00	0.00	0.07	0.00	10.91	2.00	0.00	0.00	0.07	0.00
10.96	2.00	0.00	0.00	0.05	0.00	11.04	2.00	0.00	0.00	0.07	0.00
11.11	2.00	0.00	0.00	0.07	0.00	11.16	2.00	0.00	0.00	0.05	0.00
11.22	2.00	0.00	0.00	0.07	0.00	11.29	2.00	0.00	0.00	0.07	0.00
11.37	2.00	0.00	0.00	0.07	0.00	11.44	2.00	0.00	0.00	0.07	0.00
11.48	2.00	0.00	0.00	0.05	0.00	11.56	2.00	0.00	0.00	0.07	0.00
11.63	2.00	0.00	0.00	0.07	0.00	11.70	2.00	0.00	0.00	0.07	0.00
11.76	2.00	0.00	0.00	0.05	0.00	11.83	2.00	0.00	0.00	0.07	0.00
11.90	2.00	0.00	0.00	0.07	0.00	11.95	2.00	0.00	0.00	0.05	0.00
12.02	2.00	0.00	0.00	0.07	0.00	12.09	2.00	0.00	0.00	0.07	0.00
12.16	2.00	0.00	0.00	0.07	0.00	12.21	2.00	0.00	0.00	0.05	0.00
12.28	2.00	0.00	0.00	0.08	0.00	12.36	2.00	0.00	0.00	0.07	0.00
12.41	2.00	0.00	0.00	0.05	0.00	12.48	2.00	0.00	0.00	0.07	0.00
12.55	2.00	0.00	0.00	0.07	0.00	12.60	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.67	2.00	0.00	0.00	0.07	0.00	12.75	2.00	0.00	0.00	0.07	0.00
12.82	2.00	0.00	0.00	0.07	0.00	12.87	2.00	0.00	0.00	0.05	0.00
12.94	2.00	0.00	0.00	0.07	0.00	13.01	2.00	0.00	0.00	0.07	0.00
13.06	2.00	0.00	0.00	0.05	0.00	13.13	2.00	0.00	0.00	0.07	0.00
13.21	2.00	0.00	0.00	0.08	0.00	13.26	2.00	0.00	0.00	0.05	0.00
13.33	2.00	0.00	0.00	0.07	0.00	13.40	2.00	0.00	0.00	0.07	0.00
13.47	2.00	0.00	0.00	0.07	0.00	13.52	2.00	0.00	0.00	0.05	0.00
13.59	2.00	0.00	0.00	0.07	0.00	13.67	2.00	0.00	0.00	0.07	0.00
13.72	2.00	0.00	0.00	0.05	0.00	13.79	2.00	0.00	0.00	0.07	0.00
13.86	2.00	0.00	0.00	0.07	0.00	13.93	2.00	0.00	0.00	0.07	0.00
13.98	2.00	0.00	0.00	0.05	0.00	14.06	2.00	0.00	0.00	0.08	0.00
14.13	2.00	0.00	0.00	0.07	0.00	14.18	2.00	0.00	0.00	0.05	0.00
14.24	2.00	0.00	0.00	0.07	0.00	14.31	2.00	0.00	0.00	0.06	0.00
14.38	2.00	0.00	0.00	0.07	0.00	14.46	2.00	0.00	0.00	0.07	0.00
14.53	2.00	0.00	0.00	0.07	0.00	14.58	2.00	0.00	0.00	0.05	0.00
14.65	2.00	0.00	0.00	0.07	0.00	14.72	2.00	0.00	0.00	0.07	0.00
14.77	2.00	0.00	0.00	0.05	0.00	14.84	2.00	0.00	0.00	0.07	0.00
14.92	2.00	0.00	0.00	0.07	0.00	14.96	2.00	0.00	0.00	0.05	0.00
15.03	2.00	0.00	0.00	0.07	0.00	15.11	2.00	0.00	0.00	0.08	0.00
15.18	2.00	0.00	0.00	0.07	0.00	15.23	2.00	0.00	0.00	0.05	0.00
15.30	2.00	0.00	0.00	0.07	0.00	15.37	2.00	0.00	0.00	0.07	0.00
15.43	2.00	0.00	0.00	0.05	0.00	15.50	2.00	0.00	0.00	0.08	0.00
15.56	2.00	0.00	0.00	0.06	0.00	15.62	2.00	0.00	0.00	0.06	0.00
15.68	2.00	0.00	0.00	0.06	0.00	15.76	2.00	0.00	0.00	0.08	0.00
15.82	2.00	0.00	0.00	0.06	0.00	15.89	2.00	0.00	0.00	0.07	0.00
15.96	2.00	0.00	0.00	0.07	0.00	16.03	2.00	0.00	0.00	0.07	0.00
16.08	2.00	0.00	0.00	0.05	0.00	16.15	2.00	0.00	0.00	0.07	0.00
16.21	2.00	0.00	0.00	0.05	0.00	16.27	2.00	0.00	0.00	0.07	0.00
16.34	2.00	0.00	0.00	0.07	0.00	16.41	2.00	0.00	0.00	0.06	0.00
16.48	2.00	0.00	0.00	0.07	0.00	16.54	2.00	0.00	0.00	0.06	0.00
16.61	2.00	0.00	0.00	0.07	0.00	16.68	2.00	0.00	0.00	0.07	0.00
16.75	2.00	0.00	0.00	0.07	0.00	16.81	2.00	0.00	0.00	0.07	0.00
16.88	2.00	0.00	0.00	0.07	0.00	16.95	2.00	0.00	0.00	0.07	0.00
17.00	2.00	0.00	0.00	0.05	0.00	17.06	2.00	0.00	0.00	0.07	0.00
17.13	2.00	0.00	0.00	0.07	0.00	17.20	2.00	0.00	0.00	0.07	0.00
17.27	2.00	0.00	0.00	0.07	0.00	17.33	2.00	0.00	0.00	0.06	0.00
17.40	2.00	0.00	0.00	0.06	0.00	17.47	2.00	0.00	0.00	0.07	0.00
17.52	2.00	0.00	0.00	0.05	0.00	17.59	2.00	0.00	0.00	0.07	0.00
17.67	2.00	0.00	0.00	0.07	0.00	17.73	2.00	0.00	0.00	0.07	0.00
17.78	2.00	0.00	0.00	0.05	0.00	17.86	2.00	0.00	0.00	0.07	0.00
17.93	2.00	0.00	0.00	0.07	0.00	17.98	2.00	0.00	0.00	0.05	0.00
18.05	2.00	0.00	0.00	0.07	0.00	18.13	2.00	0.00	0.00	0.08	0.00
18.18	2.00	0.00	0.00	0.05	0.00	18.25	2.00	0.00	0.00	0.07	0.00
18.33	2.00	0.00	0.00	0.07	0.00	18.38	2.00	0.00	0.00	0.05	0.00
18.45	2.00	0.00	0.00	0.07	0.00	18.52	2.00	0.00	0.00	0.07	0.00
18.57	2.00	0.00	0.00	0.05	0.00	18.65	2.00	0.00	0.00	0.07	0.00
18.72	2.00	0.00	0.00	0.07	0.00	18.77	2.00	0.00	0.00	0.05	0.00
18.84	2.00	0.00	0.00	0.07	0.00	18.91	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.98	2.00	0.00	0.00	0.07	0.00	19.04	2.00	0.00	0.00	0.05	0.00
19.11	2.00	0.00	0.00	0.07	0.00	19.18	2.00	0.00	0.00	0.07	0.00
19.24	2.00	0.00	0.00	0.07	0.00	19.29	2.00	0.00	0.00	0.05	0.00
19.36	2.00	0.00	0.00	0.07	0.00	19.44	2.00	0.00	0.00	0.07	0.00
19.50	2.00	0.00	0.00	0.07	0.00	19.55	2.00	0.00	0.00	0.05	0.00
19.62	2.00	0.00	0.00	0.07	0.00	19.69	2.00	0.00	0.00	0.07	0.00
19.75	2.00	0.00	0.00	0.06	0.00	19.82	2.00	0.00	0.00	0.07	0.00
19.89	2.00	0.00	0.00	0.07	0.00	19.96	2.00	0.00	0.00	0.07	0.00
20.04	2.00	0.00	0.00	0.07	0.00	20.09	2.00	0.00	0.00	0.05	0.00
20.16	2.00	0.00	0.00	0.07	0.00	20.23	2.00	0.00	0.00	0.07	0.00
20.30	2.00	0.00	0.00	0.07	0.00	20.35	2.00	0.00	0.00	0.05	0.00
20.42	2.00	0.00	0.00	0.07	0.00	20.49	2.00	0.00	0.00	0.07	0.00
20.54	2.00	0.00	0.00	0.05	0.00	20.61	2.00	0.00	0.00	0.07	0.00
20.69	2.00	0.00	0.00	0.08	0.00	20.74	2.00	0.00	0.00	0.04	0.00
20.81	2.00	0.00	0.00	0.07	0.00	20.88	2.00	0.00	0.00	0.07	0.00
20.95	2.00	0.00	0.00	0.07	0.00	21.00	2.00	0.00	0.00	0.05	0.00
21.07	2.00	0.00	0.00	0.07	0.00	21.14	2.00	0.00	0.00	0.07	0.00
21.22	2.00	0.00	0.00	0.07	0.00	21.27	2.00	0.00	0.00	0.05	0.00
21.34	2.00	0.00	0.00	0.07	0.00	21.41	2.00	0.00	0.00	0.07	0.00
21.46	2.00	0.00	0.00	0.05	0.00	21.53	2.00	0.00	0.00	0.07	0.00
21.60	2.00	0.00	0.00	0.07	0.00	21.67	2.00	0.00	0.00	0.07	0.00
21.72	2.00	0.00	0.00	0.05	0.00	21.80	2.00	0.00	0.00	0.07	0.00
21.87	2.00	0.00	0.00	0.07	0.00	21.94	2.00	0.00	0.00	0.07	0.00
21.99	2.00	0.00	0.00	0.05	0.00	22.06	2.00	0.00	0.00	0.07	0.00
22.11	2.00	0.00	0.00	0.05	0.00	22.18	2.00	0.00	0.00	0.07	0.00
22.26	2.00	0.00	0.00	0.07	0.00	22.33	2.00	0.00	0.00	0.07	0.00
22.38	2.00	0.00	0.00	0.05	0.00	22.44	2.00	0.00	0.00	0.07	0.00
22.51	2.00	0.00	0.00	0.07	0.00	22.58	2.00	0.00	0.00	0.07	0.00
22.65	2.00	0.00	0.00	0.07	0.00	22.73	2.00	0.00	0.00	0.08	0.00
22.77	2.00	0.00	0.00	0.05	0.00	22.85	2.00	0.00	0.00	0.08	0.00
22.92	2.00	0.00	0.00	0.07	0.00	22.97	2.00	0.00	0.00	0.05	0.00
23.04	2.00	0.00	0.00	0.07	0.00	23.11	2.00	0.00	0.00	0.07	0.00
23.17	2.00	0.00	0.00	0.06	0.00	23.23	2.00	0.00	0.00	0.07	0.00
23.31	2.00	0.00	0.00	0.07	0.00	23.38	2.00	0.00	0.00	0.07	0.00
23.45	2.00	0.00	0.00	0.07	0.00	23.50	2.00	0.00	0.00	0.05	0.00
23.57	2.00	0.00	0.00	0.07	0.00	23.65	2.00	0.00	0.00	0.07	0.00
23.70	2.00	0.00	0.00	0.05	0.00	23.77	2.00	0.00	0.00	0.07	0.00
23.84	2.00	0.00	0.00	0.07	0.00	23.91	2.00	0.00	0.00	0.07	0.00
23.96	2.00	0.00	0.00	0.05	0.00	24.03	2.00	0.00	0.00	0.08	0.00
24.10	2.00	0.00	0.00	0.07	0.00	24.15	2.00	0.00	0.00	0.05	0.00
24.22	2.00	0.00	0.00	0.07	0.00	24.30	2.00	0.00	0.00	0.07	0.00
24.34	2.00	0.00	0.00	0.05	0.00	24.42	2.00	0.00	0.00	0.07	0.00
24.49	2.00	0.00	0.00	0.07	0.00	24.56	2.00	0.00	0.00	0.07	0.00
24.61	2.00	0.00	0.00	0.05	0.00	24.68	2.00	0.00	0.00	0.07	0.00
24.75	2.00	0.00	0.00	0.07	0.00	24.82	2.00	0.00	0.00	0.07	0.00
24.87	2.00	0.00	0.00	0.05	0.00	24.95	2.00	0.00	0.00	0.08	0.00
25.00	2.00	0.00	0.00	0.05	0.00	25.07	2.00	0.00	0.00	0.07	0.00
25.15	2.00	0.00	0.00	0.08	0.00	25.20	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.27	2.00	0.00	0.00	0.07	0.00	25.34	2.00	0.00	0.00	0.07	0.00
25.40	2.00	0.00	0.00	0.06	0.00	25.47	2.00	0.00	0.00	0.07	0.00
25.54	2.00	0.00	0.00	0.06	0.00	25.61	2.00	0.00	0.00	0.07	0.00
25.66	2.00	0.00	0.00	0.05	0.00	25.73	2.00	0.00	0.00	0.07	0.00
25.80	2.00	0.00	0.00	0.08	0.00	25.86	2.00	0.00	0.00	0.06	0.00
25.93	2.00	0.00	0.00	0.06	0.00	25.99	2.00	0.00	0.00	0.07	0.00
26.06	2.00	0.00	0.00	0.07	0.00	26.14	2.00	0.00	0.00	0.07	0.00
26.19	2.00	0.00	0.00	0.05	0.00	26.25	2.00	0.00	0.00	0.07	0.00
26.32	2.00	0.00	0.00	0.07	0.00	26.39	2.00	0.00	0.00	0.07	0.00
26.46	2.00	0.00	0.00	0.07	0.00	26.51	2.00	0.00	0.00	0.05	0.00
26.58	2.00	0.00	0.00	0.07	0.00	26.64	2.00	0.00	0.00	0.06	0.00
26.71	2.00	0.00	0.00	0.07	0.00	26.77	2.00	0.00	0.00	0.07	0.00
26.85	2.00	0.00	0.00	0.07	0.00	26.91	2.00	0.00	0.00	0.06	0.00
26.98	2.00	0.00	0.00	0.07	0.00	27.04	2.00	0.00	0.00	0.06	0.00
27.11	2.00	0.00	0.00	0.07	0.00	27.17	2.00	0.00	0.00	0.06	0.00
27.23	2.00	0.00	0.00	0.06	0.00	27.30	2.00	0.00	0.00	0.07	0.00
27.36	2.00	0.00	0.00	0.07	0.00	27.43	2.00	0.00	0.00	0.07	0.00
27.50	2.00	0.00	0.00	0.07	0.00	27.57	2.00	0.00	0.00	0.06	0.00
27.63	2.00	0.00	0.00	0.06	0.00	27.70	2.00	0.00	0.00	0.07	0.00
27.76	2.00	0.00	0.00	0.06	0.00	27.83	2.00	0.00	0.00	0.06	0.00
27.90	2.00	0.00	0.00	0.07	0.00	27.96	2.00	0.00	0.00	0.06	0.00
28.02	2.00	0.00	0.00	0.06	0.00	28.09	2.00	0.00	0.00	0.07	0.00
28.16	2.00	0.00	0.00	0.07	0.00	28.22	2.00	0.00	0.00	0.06	0.00
28.28	2.00	0.00	0.00	0.06	0.00	28.35	2.00	0.00	0.00	0.07	0.00
28.41	2.00	0.00	0.00	0.06	0.00	28.48	2.00	0.00	0.00	0.07	0.00
28.55	2.00	0.00	0.00	0.07	0.00	28.62	2.00	0.00	0.00	0.07	0.00
28.68	2.00	0.00	0.00	0.06	0.00	28.74	2.00	0.00	0.00	0.06	0.00
28.81	2.00	0.00	0.00	0.07	0.00	28.88	2.00	0.00	0.00	0.07	0.00
28.94	2.00	0.00	0.00	0.07	0.00	29.00	2.00	0.00	0.00	0.06	0.00
29.07	2.00	0.00	0.00	0.07	0.00	29.14	2.00	0.00	0.00	0.07	0.00
29.20	2.00	0.00	0.00	0.06	0.00	29.27	2.00	0.00	0.00	0.07	0.00
29.34	2.00	0.00	0.00	0.07	0.00	29.40	2.00	0.00	0.00	0.06	0.00
29.47	2.00	0.00	0.00	0.07	0.00	29.53	2.00	0.00	0.00	0.06	0.00
29.60	2.00	0.00	0.00	0.07	0.00	29.66	2.00	0.00	0.00	0.07	0.00
29.73	2.00	0.00	0.00	0.07	0.00	29.80	2.00	0.00	0.00	0.07	0.00
29.86	2.00	0.00	0.00	0.06	0.00	29.93	2.00	0.00	0.00	0.06	0.00
29.99	2.00	0.00	0.00	0.06	0.00	30.06	2.00	0.00	0.00	0.07	0.00
30.12	2.00	0.00	0.00	0.06	0.00	30.19	2.00	0.00	0.00	0.07	0.00
30.25	2.00	0.00	0.00	0.06	0.00	30.32	2.00	0.00	0.00	0.07	0.00
30.39	2.00	0.00	0.00	0.07	0.00	30.45	2.00	0.00	0.00	0.06	0.00
30.52	2.00	0.00	0.00	0.06	0.00	30.58	2.00	0.00	0.00	0.07	0.00
30.65	2.00	0.00	0.00	0.07	0.00	30.71	2.00	0.00	0.00	0.06	0.00
30.78	2.00	0.00	0.00	0.07	0.00	30.84	2.00	0.00	0.00	0.06	0.00
30.91	2.00	0.00	0.00	0.07	0.00	30.98	2.00	0.00	0.00	0.07	0.00
31.04	2.00	0.00	0.00	0.06	0.00	31.11	2.00	0.00	0.00	0.07	0.00
31.17	2.00	0.00	0.00	0.06	0.00	31.24	2.00	0.00	0.00	0.07	0.00
31.30	2.00	0.00	0.00	0.06	0.00	31.37	2.00	0.00	0.00	0.07	0.00
31.43	2.00	0.00	0.00	0.06	0.00	31.50	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.56	2.00	0.00	0.00	0.06	0.00	31.63	2.00	0.00	0.00	0.06	0.00
31.70	2.00	0.00	0.00	0.07	0.00	31.76	2.00	0.00	0.00	0.07	0.00
31.83	2.00	0.00	0.00	0.07	0.00	31.90	2.00	0.00	0.00	0.07	0.00
31.96	2.00	0.00	0.00	0.07	0.00	32.03	2.00	0.00	0.00	0.06	0.00
32.10	2.00	0.00	0.00	0.07	0.00	32.16	2.00	0.00	0.00	0.06	0.00
32.23	2.00	0.00	0.00	0.07	0.00	32.29	2.00	0.00	0.00	0.06	0.00
32.35	2.00	0.00	0.00	0.07	0.00	32.41	2.00	0.00	0.00	0.06	0.00
32.48	2.00	0.00	0.00	0.07	0.00	32.55	2.00	0.00	0.00	0.06	0.00
32.61	2.00	0.00	0.00	0.07	0.00	32.68	2.00	0.00	0.00	0.07	0.00
32.75	2.00	0.00	0.00	0.07	0.00	32.81	2.00	0.00	0.00	0.06	0.00
32.88	2.00	0.00	0.00	0.06	0.00	32.94	2.00	0.00	0.00	0.06	0.00
33.02	2.00	0.00	0.00	0.08	0.00	33.07	2.00	0.00	0.00	0.06	0.00
33.14	2.00	0.00	0.00	0.06	0.00	33.21	2.00	0.00	0.00	0.07	0.00
33.27	2.00	0.00	0.00	0.06	0.00	33.34	2.00	0.00	0.00	0.07	0.00
33.40	2.00	0.00	0.00	0.07	0.00	33.47	2.00	0.00	0.00	0.07	0.00
33.53	2.00	0.00	0.00	0.06	0.00	33.60	2.00	0.00	0.00	0.07	0.00
33.67	2.00	0.00	0.00	0.06	0.00	33.73	2.00	0.00	0.00	0.06	0.00
33.79	2.00	0.00	0.00	0.06	0.00	33.86	2.00	0.00	0.00	0.07	0.00
33.93	2.00	0.00	0.00	0.06	0.00	34.00	2.00	0.00	0.00	0.07	0.00
34.06	2.00	0.00	0.00	0.06	0.00	34.13	2.00	0.00	0.00	0.07	0.00
34.19	2.00	0.00	0.00	0.06	0.00	34.26	2.00	0.00	0.00	0.07	0.00
34.33	2.00	0.00	0.00	0.07	0.00	34.39	2.00	0.00	0.00	0.06	0.00
34.45	2.00	0.00	0.00	0.06	0.00	34.52	2.00	0.00	0.00	0.07	0.00
34.58	2.00	0.00	0.00	0.07	0.00	34.65	2.00	0.00	0.00	0.07	0.00
34.71	2.00	0.00	0.00	0.07	0.00	34.78	2.00	0.00	0.00	0.06	0.00
34.85	2.00	0.00	0.00	0.07	0.00	34.92	2.00	0.00	0.00	0.07	0.00
34.98	2.00	0.00	0.00	0.06	0.00	35.05	2.00	0.00	0.00	0.07	0.00
35.12	2.00	0.00	0.00	0.06	0.00	35.18	2.00	0.00	0.00	0.07	0.00
35.25	2.00	0.00	0.00	0.07	0.00	35.31	2.00	0.00	0.00	0.07	0.00
35.38	2.00	0.00	0.00	0.07	0.00	35.45	2.00	0.00	0.00	0.07	0.00
35.52	2.00	0.00	0.00	0.07	0.00	35.58	2.00	0.00	0.00	0.06	0.00
35.64	2.00	0.00	0.00	0.06	0.00	35.70	2.00	0.00	0.00	0.06	0.00
35.76	2.00	0.00	0.00	0.06	0.00	35.84	2.00	0.00	0.00	0.07	0.00
35.91	2.00	0.00	0.00	0.07	0.00	35.98	2.00	0.00	0.00	0.07	0.00
36.03	2.00	0.00	0.00	0.05	0.00	36.10	2.00	0.00	0.00	0.07	0.00
36.17	2.00	0.00	0.00	0.07	0.00	36.22	2.00	0.00	0.00	0.05	0.00
36.30	2.00	0.00	0.00	0.08	0.00	36.37	2.00	0.00	0.00	0.07	0.00
36.44	2.00	0.00	0.00	0.07	0.00	36.49	2.00	0.00	0.00	0.05	0.00
36.57	2.00	0.00	0.00	0.07	0.00	36.64	2.00	0.00	0.00	0.07	0.00
36.69	2.00	0.00	0.00	0.05	0.00	36.76	2.00	0.00	0.00	0.07	0.00
36.82	2.00	0.00	0.00	0.06	0.00	36.88	2.00	0.00	0.00	0.06	0.00
36.95	2.00	0.00	0.00	0.07	0.00	37.03	2.00	0.00	0.00	0.08	0.00
37.10	2.00	0.00	0.00	0.07	0.00	37.14	2.00	0.00	0.00	0.05	0.00
37.22	2.00	0.00	0.00	0.07	0.00	37.29	2.00	0.00	0.00	0.07	0.00
37.34	2.00	0.00	0.00	0.05	0.00	37.41	2.00	0.00	0.00	0.07	0.00
37.49	2.00	0.00	0.00	0.07	0.00	37.56	2.00	0.00	0.00	0.07	0.00
37.60	2.00	0.00	0.00	0.05	0.00	37.67	2.00	0.00	0.00	0.07	0.00
37.75	2.00	0.00	0.00	0.07	0.00	37.82	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
37.87	2.00	0.00	0.00	0.05	0.00	37.94	2.00	0.00	0.00	0.07	0.00
38.01	2.00	0.00	0.00	0.08	0.00	38.06	2.00	0.00	0.00	0.05	0.00
38.14	2.00	0.00	0.00	0.07	0.00	38.21	2.00	0.00	0.00	0.07	0.00
38.26	2.00	0.00	0.00	0.05	0.00	38.33	2.00	0.00	0.00	0.07	0.00
38.39	2.00	0.00	0.00	0.06	0.00	38.46	2.00	0.00	0.00	0.07	0.00
38.52	2.00	0.00	0.00	0.06	0.00	38.59	2.00	0.00	0.00	0.07	0.00
38.66	2.00	0.00	0.00	0.07	0.00	38.71	2.00	0.00	0.00	0.06	0.00
38.78	2.00	0.00	0.00	0.07	0.00	38.85	2.00	0.00	0.00	0.07	0.00
38.92	2.00	0.00	0.00	0.07	0.00	38.98	2.00	0.00	0.00	0.07	0.00
39.05	2.00	0.00	0.00	0.06	0.00	39.12	2.00	0.00	0.00	0.07	0.00
39.18	2.00	0.00	0.00	0.06	0.00	39.24	2.00	0.00	0.00	0.07	0.00
39.31	2.00	0.00	0.00	0.07	0.00	39.38	2.00	0.00	0.00	0.06	0.00
39.44	2.00	0.00	0.00	0.06	0.00	39.51	2.00	0.00	0.00	0.07	0.00
39.57	2.00	0.00	0.00	0.06	0.00	39.64	2.00	0.00	0.00	0.07	0.00
39.70	2.00	0.00	0.00	0.07	0.00	39.77	2.00	0.00	0.00	0.06	0.00
39.83	2.00	0.00	0.00	0.06	0.00	39.90	2.00	0.00	0.00	0.07	0.00
39.97	2.00	0.00	0.00	0.06	0.00	40.03	2.00	0.00	0.00	0.07	0.00
40.09	2.00	0.00	0.00	0.06	0.00	40.16	2.00	0.00	0.00	0.07	0.00
40.23	2.00	0.00	0.00	0.07	0.00	40.29	2.00	0.00	0.00	0.07	0.00
40.36	2.00	0.00	0.00	0.06	0.00	40.42	2.00	0.00	0.00	0.06	0.00
40.49	2.00	0.00	0.00	0.07	0.00	40.56	2.00	0.00	0.00	0.07	0.00
40.62	2.00	0.00	0.00	0.06	0.00	40.69	2.00	0.00	0.00	0.07	0.00
40.75	2.00	0.00	0.00	0.06	0.00	40.82	2.00	0.00	0.00	0.07	0.00
40.88	2.00	0.00	0.00	0.07	0.00	40.95	2.00	0.00	0.00	0.07	0.00
41.02	2.00	0.00	0.00	0.07	0.00	41.08	2.00	0.00	0.00	0.06	0.00
41.15	2.00	0.00	0.00	0.06	0.00	41.22	2.00	0.00	0.00	0.07	0.00
41.27	2.00	0.00	0.00	0.06	0.00	41.35	2.00	0.00	0.00	0.07	0.00
41.41	2.00	0.00	0.00	0.06	0.00	41.48	2.00	0.00	0.00	0.07	0.00
41.54	2.00	0.00	0.00	0.06	0.00	41.61	2.00	0.00	0.00	0.07	0.00
41.67	2.00	0.00	0.00	0.07	0.00	41.74	2.00	0.00	0.00	0.07	0.00
41.80	2.00	0.00	0.00	0.06	0.00	41.87	2.00	0.00	0.00	0.06	0.00
41.94	2.00	0.00	0.00	0.07	0.00	42.00	2.00	0.00	0.00	0.07	0.00
42.07	2.00	0.00	0.00	0.06	0.00	42.13	2.00	0.00	0.00	0.06	0.00
42.20	2.00	0.00	0.00	0.06	0.00	42.27	2.00	0.00	0.00	0.07	0.00
42.33	2.00	0.00	0.00	0.06	0.00	42.39	2.00	0.00	0.00	0.06	0.00
42.45	2.00	0.00	0.00	0.07	0.00	42.52	2.00	0.00	0.00	0.07	0.00
42.59	2.00	0.00	0.00	0.07	0.00	42.66	2.00	0.00	0.00	0.07	0.00
42.72	2.00	0.00	0.00	0.07	0.00	42.79	2.00	0.00	0.00	0.06	0.00
42.85	2.00	0.00	0.00	0.07	0.00	42.91	2.00	0.00	0.00	0.06	0.00
42.98	2.00	0.00	0.00	0.07	0.00	43.05	2.00	0.00	0.00	0.06	0.00
43.11	2.00	0.00	0.00	0.07	0.00	43.18	2.00	0.00	0.00	0.07	0.00
43.25	2.00	0.00	0.00	0.07	0.00	43.31	2.00	0.00	0.00	0.06	0.00
43.38	2.00	0.00	0.00	0.07	0.00	43.44	2.00	0.00	0.00	0.07	0.00
43.51	2.00	0.00	0.00	0.06	0.00	43.57	2.00	0.00	0.00	0.06	0.00
43.64	2.00	0.00	0.00	0.06	0.00	43.71	2.00	0.00	0.00	0.07	0.00
43.77	2.00	0.00	0.00	0.06	0.00	43.84	2.00	0.00	0.00	0.07	0.00
43.90	2.00	0.00	0.00	0.07	0.00	43.97	2.00	0.00	0.00	0.06	0.00
44.04	2.00	0.00	0.00	0.07	0.00	44.10	2.00	0.00	0.00	0.06	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
44.16	2.00	0.00	0.00	0.07	0.00	44.23	2.00	0.00	0.00	0.07	0.00
44.29	2.00	0.00	0.00	0.06	0.00	44.36	2.00	0.00	0.00	0.07	0.00
44.43	2.00	0.00	0.00	0.07	0.00	44.49	2.00	0.00	0.00	0.06	0.00
44.56	2.00	0.00	0.00	0.06	0.00	44.63	2.00	0.00	0.00	0.07	0.00
44.69	2.00	0.00	0.00	0.06	0.00	44.75	2.00	0.00	0.00	0.06	0.00
44.82	2.00	0.00	0.00	0.07	0.00	44.88	2.00	0.00	0.00	0.06	0.00
44.95	2.00	0.00	0.00	0.07	0.00	45.02	2.00	0.00	0.00	0.06	0.00
45.08	2.00	0.00	0.00	0.06	0.00	45.15	2.00	0.00	0.00	0.07	0.00

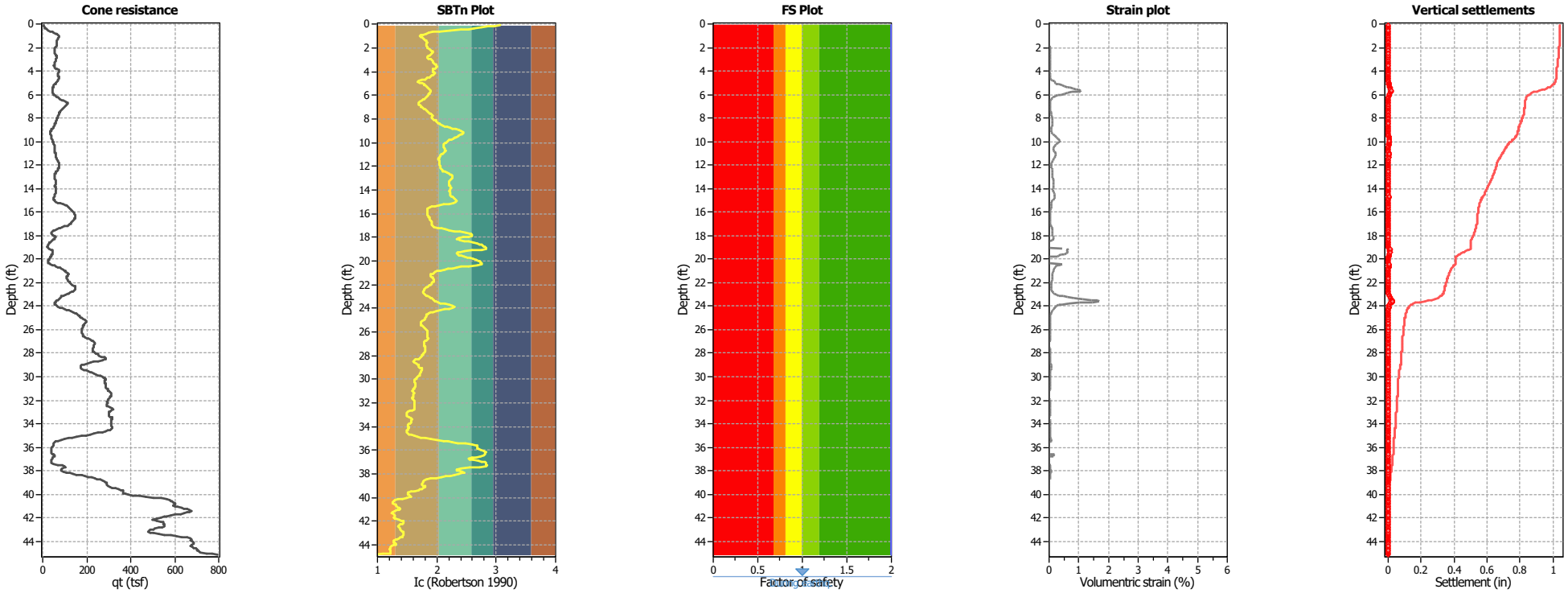
Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.07	3.06	5.14	9.88	50.75	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.13	2.97	6.28	8.34	52.39	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.20	2.87	8.33	6.73	56.06	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.27	2.75	11.22	5.31	59.56	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.34	2.63	15.16	4.05	61.41	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.40	2.54	19.40	3.25	63.12	17	270	0.57	0.007	0.01	21.03	0.01	0.000
0.46	2.40	26.48	2.38	63.11	16	311	0.57	0.006	0.01	21.03	0.01	0.000
0.53	2.22	38.61	1.66	64.08	15	359	0.56	0.006	0.01	21.03	0.01	0.000
0.60	2.04	54.29	1.35	73.14	15	404	0.56	0.006	0.01	21.03	0.01	0.000
0.66	1.93	68.41	1.26	85.89	17	440	0.56	0.005	0.01	21.03	0.01	0.000
0.73	1.87	78.80	1.21	95.61	19	469	0.56	0.006	0.01	21.03	0.01	0.000
0.79	1.81	89.13	1.17	104.17	20	497	0.56	0.006	0.01	21.03	0.01	0.000
0.86	1.77	99.46	1.11	110.60	21	523	0.56	0.006	0.01	21.03	0.01	0.000
0.93	1.73	108.80	1.05	114.15	22	545	0.56	0.006	0.01	21.03	0.01	0.000
0.99	1.72	113.54	1.03	116.61	22	561	0.56	0.006	0.01	21.03	0.01	0.000
1.06	1.72	114.94	1.04	119.34	22	572	0.56	0.007	0.01	21.03	0.01	0.000
1.13	1.74	113.58	1.07	121.61	23	577	0.56	0.007	0.01	21.03	0.01	0.000
1.18	1.76	111.13	1.11	122.80	23	580	0.56	0.008	0.01	21.03	0.01	0.000
1.25	1.78	108.47	1.13	122.94	24	582	0.56	0.008	0.01	21.03	0.01	0.000
1.32	1.80	105.81	1.16	122.32	24	581	0.56	0.009	0.01	21.03	0.01	0.000
1.38	1.82	103.26	1.17	121.05	24	578	0.56	0.010	0.01	21.03	0.01	0.000
1.45	1.83	100.71	1.18	119.23	23	573	0.56	0.011	0.01	21.03	0.01	0.000
1.51	1.84	99.01	1.19	117.81	23	568	0.56	0.012	0.01	21.03	0.01	0.000
1.58	1.84	98.70	1.19	117.58	23	567	0.56	0.012	0.01	21.03	0.01	0.000
1.64	1.83	100.24	1.18	118.75	23	571	0.56	0.013	0.01	21.03	0.01	0.000
1.71	1.82	101.84	1.18	119.89	23	574	0.56	0.014	0.01	21.03	0.01	0.000
1.77	1.82	101.38	1.18	119.46	23	572	0.56	0.014	0.01	21.03	0.01	0.000
1.84	1.83	97.88	1.19	116.02	23	558	0.56	0.016	0.01	21.03	0.02	0.000
1.91	1.83	93.32	1.19	110.65	22	532	0.56	0.019	0.02	21.03	0.02	0.000
1.97	1.83	89.26	1.19	106.00	21	510	0.56	0.022	0.02	21.03	0.02	0.000
2.04	1.85	86.66	1.20	103.81	20	503	0.56	0.024	0.02	21.03	0.03	0.000
2.10	1.88	84.41	1.22	103.17	21	510	0.56	0.025	0.02	21.03	0.03	0.000
2.18	1.90	82.85	1.24	102.66	21	517	0.56	0.025	0.02	21.03	0.03	0.000
2.24	1.92	81.65	1.25	102.15	21	521	0.56	0.026	0.03	21.03	0.03	0.000
2.30	1.93	81.95	1.25	102.74	21	526	0.56	0.027	0.03	21.03	0.03	0.000
2.37	1.92	83.04	1.25	104.07	21	532	0.56	0.027	0.03	21.03	0.03	0.000
2.43	1.92	85.04	1.25	106.18	21	540	0.56	0.027	0.03	21.03	0.03	0.000
2.50	1.91	86.88	1.24	107.99	22	546	0.56	0.028	0.03	21.03	0.03	0.000
2.56	1.89	89.38	1.23	110.17	22	551	0.56	0.028	0.03	21.03	0.03	0.000
2.63	1.87	92.72	1.22	112.98	22	557	0.56	0.029	0.03	21.03	0.03	0.000
2.69	1.85	96.80	1.20	116.45	23	567	0.56	0.029	0.02	21.03	0.03	0.000
2.76	1.84	100.23	1.19	119.54	23	577	0.56	0.028	0.02	21.03	0.03	0.000
2.83	1.84	101.22	1.20	120.99	24	585	0.56	0.029	0.02	21.03	0.03	0.000
2.89	1.86	99.36	1.21	120.21	24	588	0.56	0.029	0.02	21.03	0.03	0.000
2.96	1.89	95.76	1.23	117.63	23	585	0.56	0.031	0.03	21.03	0.03	0.000
3.02	1.91	92.22	1.24	114.70	23	580	0.56	0.033	0.03	21.03	0.03	0.000
3.10	1.92	89.97	1.25	112.72	23	576	0.56	0.035	0.03	21.03	0.03	0.001
3.15	1.93	88.77	1.26	111.60	23	573	0.56	0.037	0.03	21.03	0.03	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.22	1.94	87.96	1.26	110.92	23	572	0.56	0.038	0.03	21.03	0.04	0.001
3.29	1.95	86.65	1.27	109.86	22	571	0.56	0.040	0.03	21.03	0.04	0.001
3.35	1.96	84.79	1.28	108.40	22	570	0.56	0.041	0.04	21.03	0.04	0.001
3.42	1.98	82.55	1.29	106.55	22	567	0.56	0.044	0.04	21.03	0.04	0.001
3.48	1.99	80.64	1.30	104.95	22	563	0.56	0.046	0.04	21.03	0.05	0.001
3.55	2.00	79.89	1.31	104.47	22	564	0.56	0.048	0.04	21.03	0.05	0.001
3.62	2.00	81.32	1.31	106.20	22	572	0.56	0.047	0.04	21.03	0.05	0.001
3.68	1.99	85.86	1.30	111.27	23	595	0.56	0.043	0.04	21.03	0.04	0.001
3.75	1.96	93.64	1.28	119.80	25	630	0.56	0.038	0.03	21.03	0.03	0.001
3.81	1.94	103.53	1.26	130.76	27	676	0.56	0.033	0.02	21.03	0.03	0.000
3.87	1.92	112.63	1.25	141.12	29	722	0.56	0.029	0.02	21.03	0.02	0.000
3.94	1.92	117.97	1.25	147.84	30	756	0.56	0.027	0.02	21.03	0.02	0.000
4.01	1.94	118.21	1.26	149.25	30	772	0.56	0.026	0.02	21.03	0.02	0.000
4.08	1.96	114.85	1.28	146.48	30	768	0.56	0.027	0.02	21.03	0.02	0.000
4.15	1.97	111.65	1.28	142.98	29	753	0.56	0.029	0.02	21.03	0.02	0.000
4.20	1.96	110.05	1.27	140.26	29	734	0.56	0.032	0.02	21.03	0.02	0.000
4.27	1.94	110.04	1.26	138.98	28	719	0.56	0.034	0.02	21.03	0.02	0.000
4.33	1.92	110.68	1.25	138.38	28	705	0.56	0.037	0.02	21.03	0.03	0.000
4.40	1.90	111.87	1.24	138.28	28	694	0.56	0.039	0.03	21.03	0.03	0.000
4.47	1.87	113.56	1.22	138.18	27	680	0.56	0.043	0.03	21.03	0.03	0.000
4.53	1.85	114.75	1.20	137.42	27	666	0.56	0.046	0.03	21.03	0.03	0.001
4.60	1.83	115.10	1.18	136.22	27	654	0.56	0.050	0.04	21.03	0.04	0.001
4.67	1.81	114.34	1.16	132.72	26	631	0.56	0.057	0.04	21.03	0.05	0.001
4.72	1.75	112.04	1.09	122.35	23	579	0.56	0.077	0.06	21.03	0.07	0.001
4.80	1.70	108.79	1.00	108.79	20	526	0.56	0.112	0.11	21.03	0.12	0.002
4.86	1.68	104.34	1.00	104.34	19	491	0.56	0.151	0.16	21.03	0.17	0.002
4.93	1.72	99.44	1.00	99.44	19	492	0.56	0.154	0.17	21.03	0.18	0.003
4.99	1.76	94.19	1.00	94.19	18	487	0.56	0.166	0.19	21.03	0.20	0.003
5.05	1.78	88.59	1.13	100.16	19	474	0.56	0.193	0.20	21.03	0.22	0.003
5.13	1.79	83.89	1.00	83.89	16	456	0.56	0.237	0.31	21.03	0.32	0.006
5.18	1.81	79.54	1.00	79.54	15	438	0.56	0.295	0.40	21.03	0.43	0.006
5.25	1.82	76.03	1.00	76.03	15	427	0.56	0.347	0.50	21.03	0.53	0.008
5.33	1.84	72.98	1.00	72.98	14	420	0.56	0.392	0.59	21.03	0.62	0.011
5.38	1.86	70.48	1.00	70.48	14	414	0.56	0.430	0.67	21.03	0.70	0.009
5.45	1.87	68.58	1.00	68.58	14	409	0.56	0.476	0.76	21.03	0.80	0.013
5.51	1.88	66.62	1.00	66.62	13	404	0.56	0.525	0.86	21.03	0.91	0.014
5.58	1.89	65.37	1.00	65.37	13	401	0.56	0.562	0.94	21.03	0.99	0.016
5.65	1.90	64.81	1.00	64.81	13	400	0.56	0.590	0.99	21.03	1.04	0.017
5.72	1.89	65.39	1.00	65.39	13	402	0.56	0.595	0.99	21.03	1.04	0.017
5.79	1.88	66.93	1.23	82.10	16	408	0.56	0.566	0.72	21.03	0.76	0.012
5.85	1.88	69.68	1.22	85.03	17	420	0.56	0.498	0.61	21.03	0.64	0.010
5.92	1.87	73.22	1.21	88.89	18	436	0.56	0.419	0.49	21.03	0.51	0.008
5.98	1.86	77.66	1.21	93.64	18	457	0.56	0.343	0.38	21.03	0.39	0.006
6.05	1.84	83.09	1.19	99.28	19	480	0.56	0.276	0.28	21.03	0.30	0.005
6.12	1.83	89.63	1.18	105.98	21	509	0.56	0.217	0.21	21.03	0.22	0.003
6.19	1.82	96.36	1.17	112.73	22	538	0.56	0.176	0.16	21.03	0.16	0.003
6.24	1.80	104.00	1.16	120.15	23	571	0.56	0.141	0.12	21.03	0.12	0.001
6.30	1.79	112.53	1.14	128.07	25	606	0.56	0.115	0.09	21.03	0.09	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.37	1.77	123.77	1.11	137.74	26	651	0.56	0.092	0.07	21.03	0.07	0.001
6.45	1.75	136.60	1.08	147.41	28	699	0.56	0.075	0.05	21.03	0.05	0.001
6.51	1.72	151.23	1.03	155.74	29	748	0.56	0.062	0.04	21.03	0.04	0.001
6.58	1.70	164.36	1.00	164.36	31	790	0.56	0.054	0.03	21.03	0.03	0.001
6.64	1.69	173.59	1.00	173.59	32	823	0.56	0.050	0.03	21.03	0.03	0.000
6.70	1.69	176.54	1.00	176.54	33	842	0.56	0.048	0.03	21.03	0.03	0.000
6.77	1.70	175.05	1.00	175.05	33	850	0.56	0.047	0.03	21.03	0.03	0.000
6.83	1.72	170.88	1.02	174.56	33	844	0.56	0.049	0.03	21.03	0.03	0.000
6.91	1.73	165.81	1.04	173.16	33	834	0.56	0.052	0.03	21.03	0.03	0.001
6.96	1.74	160.13	1.06	170.47	32	817	0.56	0.055	0.03	21.03	0.03	0.000
7.03	1.75	154.27	1.08	167.36	32	800	0.56	0.059	0.03	21.03	0.03	0.001
7.10	1.77	147.75	1.11	163.71	31	782	0.56	0.064	0.04	21.03	0.04	0.001
7.17	1.78	142.28	1.13	160.75	31	770	0.56	0.069	0.04	21.03	0.04	0.001
7.22	1.80	137.38	1.15	158.36	31	760	0.56	0.072	0.04	21.03	0.04	0.000
7.29	1.82	132.54	1.17	155.62	30	752	0.56	0.076	0.05	21.03	0.05	0.001
7.36	1.84	127.63	1.19	152.31	30	744	0.56	0.080	0.05	21.03	0.05	0.001
7.43	1.86	123.21	1.21	148.95	29	736	0.56	0.084	0.05	21.03	0.05	0.001
7.50	1.88	119.68	1.22	146.20	29	731	0.56	0.088	0.06	21.03	0.06	0.001
7.55	1.90	115.87	1.24	143.17	29	725	0.56	0.091	0.06	21.03	0.06	0.001
7.61	1.91	113.02	1.25	140.86	28	723	0.56	0.094	0.06	21.03	0.06	0.001
7.69	1.93	110.48	1.26	138.82	28	722	0.56	0.096	0.06	21.03	0.06	0.001
7.75	1.93	109.01	1.26	136.88	28	715	0.56	0.101	0.07	21.03	0.07	0.001
7.83	1.92	106.85	1.25	133.45	27	697	0.56	0.112	0.08	21.03	0.08	0.001
7.88	1.91	104.36	1.24	129.67	26	677	0.56	0.126	0.09	21.03	0.09	0.001
7.96	1.91	101.95	1.24	126.91	26	668	0.56	0.135	0.10	21.03	0.10	0.002
8.01	1.93	99.56	1.26	125.23	25	668	0.56	0.137	0.10	21.03	0.10	0.001
8.09	1.95	97.14	1.27	123.49	25	669	0.56	0.139	0.10	21.03	0.11	0.002
8.14	1.98	93.62	1.29	120.81	25	666	0.56	0.143	0.11	21.03	0.11	0.001
8.21	2.00	91.10	1.30	118.81	25	663	0.56	0.148	0.12	21.03	0.12	0.002
8.27	2.01	88.69	1.32	116.94	24	660	0.56	0.153	0.12	21.03	0.12	0.002
8.35	2.02	87.33	1.33	116.02	24	661	0.55	0.156	0.12	21.03	0.12	0.002
8.42	2.04	85.19	1.35	114.90	24	662	0.55	0.158	0.12	21.03	0.12	0.002
8.47	2.07	83.02	1.38	114.38	24	664	0.55	0.157	0.12	21.03	0.12	0.001
8.54	2.10	80.76	1.42	114.44	25	670	0.55	0.156	0.12	21.03	0.12	0.002
8.61	2.14	78.35	1.48	115.88	25	679	0.55	0.150	0.11	21.03	0.11	0.002
8.69	2.18	76.14	1.56	118.90	27	693	0.55	0.142	0.10	21.03	0.10	0.002
8.74	2.22	73.70	1.68	123.79	28	708	0.55	0.134	0.09	21.03	0.09	0.001
8.81	2.27	70.88	1.82	129.06	30	718	0.55	0.129	0.08	21.03	0.08	0.001
8.86	2.32	67.34	2.01	135.56	32	723	0.55	0.127	0.07	21.03	0.07	0.001
8.93	2.37	63.39	2.23	141.19	34	720	0.55	0.131	0.07	21.03	0.07	0.001
9.00	2.41	59.44	2.44	145.31	36	711	0.55	0.140	0.07	21.03	0.07	0.001
9.07	2.44	56.35	2.60	146.44	37	697	0.55	0.153	0.07	21.03	0.07	0.001
9.12	2.45	54.31	2.66	144.70	36	683	0.55	0.167	0.08	21.03	0.08	0.001
9.20	2.45	53.22	2.64	140.32	35	670	0.55	0.183	0.09	21.03	0.09	0.002
9.27	2.43	52.85	2.54	134.28	33	658	0.55	0.201	0.11	21.03	0.11	0.002
9.32	2.40	53.06	2.40	127.26	31	645	0.55	0.220	0.13	21.03	0.13	0.002
9.39	2.38	53.31	2.26	120.30	29	633	0.55	0.243	0.15	21.03	0.15	0.003
9.47	2.35	53.73	2.12	113.98	27	622	0.55	0.266	0.18	21.03	0.18	0.003

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.54	2.32	54.29	2.02	109.45	26	616	0.55	0.284	0.21	21.03	0.20	0.003
9.59	2.30	55.09	1.92	105.99	25	612	0.55	0.296	0.23	21.03	0.22	0.003
9.66	2.27	55.87	1.83	102.30	24	606	0.55	0.313	0.25	21.03	0.25	0.004
9.73	2.24	56.78	1.73	98.23	23	599	0.55	0.337	0.29	21.03	0.28	0.005
9.80	2.21	57.66	1.65	94.84	21	592	0.55	0.363	0.33	21.03	0.32	0.006
9.85	2.19	58.87	1.58	92.98	21	589	0.55	0.375	0.36	21.03	0.35	0.004
9.92	2.16	60.24	1.53	92.29	21	592	0.55	0.374	0.36	21.03	0.35	0.006
9.99	2.15	61.67	1.49	92.19	20	596	0.55	0.367	0.36	21.03	0.35	0.006
10.04	2.13	63.28	1.47	92.94	20	604	0.55	0.349	0.34	21.03	0.33	0.004
10.12	2.12	64.94	1.45	94.45	21	618	0.55	0.322	0.31	21.03	0.30	0.005
10.19	2.12	66.65	1.45	96.58	21	635	0.55	0.290	0.27	21.03	0.26	0.005
10.24	2.12	68.44	1.45	99.00	22	653	0.55	0.261	0.24	21.03	0.23	0.003
10.31	2.12	69.80	1.45	101.19	22	670	0.55	0.237	0.21	21.03	0.20	0.004
10.38	2.12	71.14	1.45	103.50	23	689	0.55	0.216	0.19	21.03	0.18	0.003
10.46	2.13	71.99	1.46	105.20	23	703	0.55	0.202	0.17	21.03	0.16	0.003
10.50	2.13	72.66	1.47	106.58	23	714	0.55	0.192	0.16	21.03	0.15	0.002
10.58	2.13	72.87	1.47	107.48	24	723	0.55	0.186	0.15	21.03	0.15	0.003
10.65	2.14	72.81	1.49	108.24	24	731	0.55	0.181	0.15	21.03	0.14	0.002
10.70	2.15	72.72	1.50	108.87	24	737	0.55	0.177	0.14	21.03	0.14	0.002
10.77	2.14	72.19	1.48	107.13	24	729	0.55	0.187	0.15	21.03	0.15	0.002
10.84	2.12	71.71	1.45	103.87	23	711	0.55	0.210	0.18	21.03	0.17	0.003
10.91	2.09	71.35	1.41	100.67	22	692	0.55	0.238	0.22	21.03	0.20	0.004
10.96	2.08	71.74	1.39	99.63	21	685	0.55	0.250	0.23	21.03	0.22	0.003
11.04	2.07	72.82	1.38	100.27	21	691	0.55	0.245	0.23	21.03	0.21	0.004
11.11	2.06	74.16	1.36	101.15	22	698	0.55	0.238	0.22	21.03	0.21	0.004
11.16	2.06	73.80	1.37	100.93	22	699	0.55	0.239	0.22	21.03	0.21	0.002
11.22	2.05	74.82	1.36	101.46	22	703	0.55	0.237	0.22	21.03	0.20	0.003
11.29	2.04	75.94	1.35	102.28	22	710	0.55	0.231	0.21	21.03	0.20	0.003
11.37	2.03	78.92	1.33	104.99	22	727	0.55	0.213	0.19	21.03	0.18	0.003
11.44	2.03	79.99	1.33	106.69	22	743	0.55	0.199	0.17	21.03	0.16	0.003
11.48	2.03	81.05	1.34	108.51	23	759	0.55	0.185	0.16	21.03	0.15	0.002
11.56	2.04	82.15	1.34	110.20	23	775	0.55	0.174	0.15	21.03	0.14	0.002
11.63	2.04	83.77	1.34	112.41	24	794	0.55	0.162	0.13	21.03	0.12	0.002
11.70	2.04	85.53	1.34	114.80	24	814	0.55	0.150	0.12	21.03	0.11	0.002
11.76	2.04	87.69	1.34	117.75	25	838	0.55	0.137	0.11	21.03	0.10	0.001
11.83	2.04	89.44	1.35	120.36	25	860	0.55	0.127	0.10	21.03	0.09	0.002
11.90	2.05	90.65	1.35	122.42	26	880	0.55	0.120	0.09	21.03	0.08	0.001
11.95	2.05	90.98	1.36	123.52	26	892	0.55	0.115	0.08	21.03	0.08	0.001
12.02	2.06	90.32	1.37	123.34	26	896	0.55	0.115	0.08	21.03	0.08	0.001
12.09	2.06	89.17	1.37	122.29	26	893	0.55	0.118	0.09	21.03	0.08	0.001
12.16	2.07	87.69	1.38	120.61	26	885	0.55	0.123	0.09	21.03	0.08	0.001
12.21	2.07	85.87	1.38	118.52	25	873	0.55	0.129	0.10	21.03	0.09	0.001
12.28	2.08	83.44	1.39	115.99	25	859	0.55	0.138	0.11	21.03	0.10	0.002
12.36	2.09	80.90	1.40	113.55	24	846	0.55	0.147	0.12	21.03	0.11	0.002
12.41	2.10	78.27	1.43	111.63	24	836	0.55	0.155	0.12	21.03	0.11	0.001
12.48	2.13	75.11	1.47	110.44	24	830	0.55	0.160	0.13	21.03	0.12	0.002
12.55	2.17	71.81	1.53	110.20	24	828	0.55	0.164	0.13	21.03	0.12	0.002
12.60	2.20	68.79	1.62	111.24	25	829	0.55	0.164	0.13	21.03	0.11	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.67	2.23	66.53	1.69	112.30	26	830	0.55	0.165	0.12	21.03	0.11	0.002
12.75	2.25	64.54	1.76	113.29	26	830	0.55	0.167	0.12	21.03	0.11	0.002
12.82	2.26	63.85	1.78	113.62	26	832	0.55	0.168	0.12	21.03	0.11	0.002
12.87	2.26	63.42	1.80	113.94	26	834	0.55	0.168	0.12	21.03	0.11	0.001
12.94	2.26	63.61	1.78	113.46	26	836	0.55	0.169	0.12	21.03	0.11	0.002
13.01	2.26	63.35	1.78	112.48	26	833	0.55	0.173	0.13	21.03	0.11	0.002
13.06	2.25	63.52	1.74	110.54	25	827	0.55	0.179	0.13	21.03	0.12	0.001
13.13	2.23	63.45	1.70	108.11	25	817	0.55	0.189	0.15	21.03	0.13	0.002
13.21	2.22	63.55	1.67	105.83	24	809	0.55	0.199	0.16	21.03	0.14	0.003
13.26	2.21	63.80	1.64	104.52	24	804	0.55	0.205	0.17	21.03	0.15	0.002
13.33	2.21	63.86	1.63	104.03	24	805	0.55	0.207	0.17	21.03	0.15	0.003
13.40	2.21	63.79	1.63	103.83	23	806	0.55	0.208	0.17	21.03	0.15	0.003
13.47	2.21	63.66	1.63	103.73	23	808	0.55	0.208	0.17	21.03	0.15	0.003
13.52	2.21	63.60	1.63	103.96	24	811	0.55	0.207	0.17	21.03	0.15	0.002
13.59	2.22	63.18	1.65	104.43	24	816	0.55	0.205	0.17	21.03	0.15	0.003
13.67	2.22	62.64	1.68	105.13	24	821	0.55	0.203	0.16	21.03	0.15	0.003
13.72	2.23	62.14	1.71	106.10	24	826	0.55	0.199	0.16	21.03	0.14	0.002
13.79	2.24	61.97	1.72	106.89	25	833	0.55	0.196	0.15	21.03	0.14	0.002
13.86	2.24	62.30	1.72	107.34	25	840	0.55	0.192	0.15	21.03	0.13	0.002
13.93	2.23	63.01	1.70	107.27	25	845	0.55	0.190	0.15	21.03	0.13	0.002
13.98	2.22	64.24	1.67	107.22	24	852	0.55	0.186	0.15	21.03	0.13	0.002
14.06	2.21	65.11	1.65	107.34	24	859	0.55	0.183	0.14	21.03	0.13	0.002
14.13	2.21	65.47	1.64	107.40	24	864	0.55	0.181	0.14	21.03	0.13	0.002
14.18	2.22	64.28	1.66	106.97	24	859	0.55	0.186	0.15	21.03	0.13	0.001
14.24	2.23	62.85	1.68	105.73	24	849	0.55	0.196	0.16	21.03	0.14	0.002
14.31	2.23	61.26	1.70	103.88	24	835	0.55	0.210	0.17	21.03	0.15	0.002
14.38	2.23	60.30	1.69	101.96	23	823	0.55	0.224	0.19	21.03	0.16	0.003
14.46	2.23	59.04	1.70	100.58	23	813	0.55	0.238	0.20	21.03	0.18	0.003
14.53	2.24	57.64	1.74	100.09	23	807	0.55	0.247	0.21	21.03	0.18	0.003
14.58	2.26	56.12	1.79	100.21	23	803	0.55	0.255	0.21	21.03	0.19	0.002
14.65	2.28	54.32	1.85	100.58	23	799	0.55	0.263	0.22	21.03	0.19	0.003
14.72	2.30	52.99	1.91	101.00	24	796	0.55	0.269	0.22	21.03	0.19	0.003
14.77	2.31	52.30	1.95	102.23	24	800	0.55	0.266	0.21	21.03	0.19	0.002
14.84	2.32	52.15	2.01	104.84	25	814	0.55	0.251	0.19	21.03	0.17	0.003
14.92	2.33	52.73	2.05	108.28	26	837	0.55	0.229	0.17	21.03	0.15	0.003
14.96	2.34	54.44	2.07	112.52	27	869	0.55	0.200	0.14	21.03	0.12	0.001
15.03	2.32	57.72	2.00	115.47	27	907	0.55	0.174	0.12	21.03	0.10	0.002
15.11	2.28	63.61	1.84	116.80	27	951	0.55	0.150	0.10	21.03	0.09	0.002
15.18	2.21	71.13	1.65	117.21	27	990	0.55	0.133	0.09	21.03	0.08	0.001
15.23	2.12	82.24	1.46	119.86	26	1029	0.55	0.119	0.09	21.03	0.07	0.001
15.30	2.04	93.54	1.34	125.72	27	1060	0.55	0.110	0.08	21.03	0.07	0.001
15.37	1.97	103.74	1.28	132.86	27	1077	0.55	0.106	0.07	21.03	0.06	0.001
15.43	1.91	110.67	1.24	137.48	28	1074	0.55	0.107	0.07	21.03	0.06	0.001
15.50	1.87	114.79	1.22	139.53	28	1066	0.55	0.111	0.08	21.03	0.06	0.001
15.56	1.84	118.10	1.20	141.19	28	1065	0.55	0.112	0.08	21.03	0.06	0.001
15.62	1.84	120.55	1.19	143.41	28	1081	0.55	0.108	0.07	21.03	0.06	0.001
15.68	1.84	123.58	1.19	147.00	29	1110	0.55	0.101	0.07	21.03	0.06	0.001
15.76	1.84	126.82	1.19	151.17	30	1147	0.55	0.093	0.06	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.82	1.84	130.70	1.19	155.90	31	1186	0.55	0.086	0.05	21.03	0.04	0.001
15.89	1.84	134.38	1.19	160.31	31	1223	0.55	0.080	0.05	21.03	0.04	0.001
15.96	1.84	138.31	1.19	164.70	32	1258	0.55	0.075	0.04	21.03	0.04	0.001
16.03	1.84	141.65	1.19	168.44	33	1289	0.55	0.072	0.04	21.03	0.03	0.001
16.08	1.84	143.29	1.19	171.05	34	1315	0.55	0.069	0.04	21.03	0.03	0.000
16.15	1.85	144.26	1.20	172.98	34	1338	0.55	0.066	0.04	21.03	0.03	0.001
16.21	1.86	144.45	1.21	174.34	34	1359	0.55	0.064	0.03	21.03	0.03	0.000
16.27	1.86	145.22	1.21	175.87	35	1379	0.55	0.063	0.03	21.03	0.03	0.000
16.34	1.87	145.34	1.22	176.78	35	1395	0.55	0.062	0.03	21.03	0.03	0.000
16.41	1.88	145.10	1.22	177.17	35	1408	0.55	0.061	0.03	21.03	0.03	0.000
16.48	1.88	144.08	1.23	176.63	35	1414	0.55	0.061	0.03	21.03	0.03	0.000
16.54	1.89	141.97	1.23	174.91	35	1412	0.55	0.061	0.03	21.03	0.03	0.000
16.61	1.90	139.38	1.24	172.44	35	1403	0.54	0.063	0.03	21.03	0.03	0.000
16.68	1.91	136.09	1.24	169.14	34	1388	0.54	0.064	0.03	21.03	0.03	0.000
16.75	1.92	132.52	1.25	165.48	33	1370	0.54	0.067	0.04	21.03	0.03	0.000
16.81	1.92	128.53	1.25	160.96	33	1342	0.54	0.071	0.04	21.03	0.03	0.001
16.88	1.92	124.85	1.25	156.12	32	1302	0.54	0.076	0.04	21.03	0.04	0.001
16.95	1.92	121.38	1.25	151.44	31	1262	0.54	0.083	0.05	21.03	0.04	0.001
17.00	1.92	117.91	1.25	147.24	30	1231	0.54	0.089	0.06	21.03	0.05	0.001
17.06	1.93	113.42	1.26	142.71	29	1208	0.54	0.094	0.06	21.03	0.05	0.001
17.13	1.96	107.21	1.27	136.60	28	1179	0.54	0.101	0.07	21.03	0.06	0.001
17.20	2.02	95.40	1.32	125.97	26	1133	0.54	0.113	0.08	21.03	0.07	0.001
17.27	2.08	84.81	1.39	117.55	25	1090	0.54	0.128	0.10	21.03	0.08	0.001
17.33	2.15	74.25	1.50	111.67	25	1050	0.54	0.144	0.11	21.03	0.09	0.001
17.40	2.21	67.50	1.64	110.45	25	1030	0.54	0.154	0.12	21.03	0.10	0.001
17.47	2.30	59.04	1.91	112.96	27	1009	0.54	0.166	0.12	21.03	0.10	0.002
17.52	2.40	50.66	2.36	119.35	29	984	0.54	0.182	0.12	21.03	0.09	0.001
17.59	2.48	43.80	2.87	125.61	32	952	0.54	0.206	0.12	21.03	0.10	0.002
17.67	2.55	38.69	3.37	130.21	34	921	0.54	0.234	0.12	21.03	0.10	0.002
17.73	2.57	36.92	3.54	130.76	35	906	0.54	0.250	0.13	21.03	0.10	0.002
17.78	2.60	35.44	3.71	131.64	36	895	0.54	0.264	0.13	21.03	0.11	0.001
17.86	2.58	35.86	3.61	129.42	35	894	0.54	0.267	0.14	21.03	0.11	0.002
17.93	2.54	37.84	3.29	124.51	33	900	0.54	0.263	0.15	21.03	0.12	0.002
17.98	2.45	43.75	2.63	114.94	29	921	0.54	0.242	0.16	21.03	0.13	0.002
18.05	2.37	48.59	2.23	108.48	26	935	0.54	0.231	0.17	21.03	0.13	0.002
18.13	2.34	50.91	2.07	105.54	25	940	0.54	0.229	0.17	21.03	0.14	0.003
18.18	2.35	49.79	2.13	106.27	26	938	0.54	0.232	0.17	21.03	0.14	0.002
18.25	2.40	46.41	2.36	109.72	27	931	0.54	0.241	0.17	21.03	0.14	0.002
18.33	2.46	42.08	2.73	115.03	29	919	0.54	0.255	0.16	21.03	0.13	0.002
18.38	2.54	37.00	3.29	121.84	32	898	0.55	0.280	0.16	21.03	0.13	0.001
18.45	2.61	32.68	3.88	126.68	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.52	2.68	29.00	4.46	129.38	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.57	2.72	26.18	4.92	128.81	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.65	2.75	23.97	5.25	125.83	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.72	2.78	22.01	5.55	122.12	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.77	2.79	20.46	5.77	117.94	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.84	2.82	18.86	6.07	114.38	0	0	0.55	0.000	0.00	0.00	0.00	0.000
18.91	2.84	17.55	6.31	110.77	0	0	0.55	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.98	2.83	17.27	6.24	107.78	0	0	0.55	0.000	0.00	0.00	0.00	0.000
19.04	2.75	19.66	5.22	102.69	0	0	0.55	0.000	0.00	0.00	0.00	0.000
19.11	2.60	25.14	3.74	93.97	25	674	0.55	1.141	0.86	21.03	0.67	0.011
19.18	2.46	31.54	2.75	86.67	22	715	0.55	0.851	0.76	21.03	0.60	0.010
19.24	2.38	35.98	2.29	82.24	20	735	0.55	0.744	0.74	21.03	0.58	0.009
19.29	2.35	37.67	2.12	79.99	19	738	0.55	0.736	0.77	21.03	0.60	0.007
19.36	2.34	37.80	2.09	78.94	19	735	0.55	0.759	0.81	21.03	0.64	0.011
19.44	2.35	37.28	2.12	79.20	19	734	0.55	0.769	0.82	21.03	0.64	0.011
19.50	2.37	36.36	2.24	81.61	20	742	0.55	0.735	0.74	21.03	0.58	0.010
19.55	2.41	35.07	2.43	85.37	21	752	0.55	0.693	0.65	21.03	0.51	0.006
19.62	2.47	33.16	2.76	91.49	23	766	0.55	0.641	0.54	21.03	0.42	0.007
19.69	2.51	31.74	3.07	97.48	25	781	0.55	0.592	0.45	21.03	0.35	0.006
19.75	2.56	30.12	3.42	102.96	27	788	0.55	0.570	0.39	21.03	0.30	0.004
19.82	2.60	28.42	3.77	107.19	0	0	0.55	0.000	0.00	0.00	0.00	0.000
19.89	2.66	25.66	4.28	109.87	0	0	0.55	0.000	0.00	0.00	0.00	0.000
19.96	2.70	23.09	4.71	108.73	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.04	2.72	21.23	4.93	104.69	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.09	2.74	19.67	5.11	100.48	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.16	2.73	19.19	5.06	97.19	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.23	2.76	18.02	5.42	97.67	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.30	2.76	18.37	5.40	99.10	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.35	2.69	21.52	4.62	99.45	0	0	0.55	0.000	0.00	0.00	0.00	0.000
20.42	2.54	29.04	3.27	95.00	25	761	0.55	0.730	0.56	21.03	0.43	0.008
20.49	2.42	37.32	2.46	91.93	23	834	0.55	0.482	0.41	21.03	0.31	0.005
20.54	2.33	44.43	2.05	90.87	22	888	0.55	0.370	0.34	21.03	0.26	0.003
20.61	2.26	50.60	1.79	90.54	21	927	0.55	0.315	0.30	21.03	0.23	0.004
20.69	2.19	56.89	1.60	91.11	21	958	0.55	0.280	0.27	21.03	0.21	0.004
20.74	2.13	63.86	1.46	93.15	20	983	0.55	0.256	0.25	21.03	0.19	0.002
20.81	2.06	70.48	1.37	96.70	21	1005	0.56	0.238	0.23	21.03	0.17	0.003
20.88	2.01	76.77	1.32	101.17	21	1024	0.56	0.224	0.21	21.03	0.16	0.003
20.95	1.98	81.23	1.29	104.74	22	1037	0.56	0.216	0.20	21.03	0.15	0.003
21.00	1.95	84.96	1.27	107.94	22	1049	0.56	0.209	0.19	21.03	0.14	0.002
21.07	1.93	88.84	1.26	111.49	23	1066	0.56	0.199	0.17	21.03	0.13	0.002
21.14	1.91	93.38	1.24	115.84	23	1090	0.56	0.186	0.15	21.03	0.12	0.002
21.22	1.89	96.87	1.23	119.37	24	1115	0.56	0.174	0.14	21.03	0.10	0.002
21.27	1.89	98.15	1.23	121.03	24	1133	0.56	0.166	0.13	21.03	0.10	0.001
21.34	1.91	96.87	1.24	120.29	24	1140	0.56	0.164	0.13	21.03	0.10	0.002
21.41	1.92	94.55	1.25	118.47	24	1141	0.56	0.165	0.13	21.03	0.10	0.002
21.46	1.94	92.14	1.26	116.40	24	1136	0.56	0.168	0.14	21.03	0.10	0.001
21.53	1.94	91.29	1.27	115.62	24	1135	0.56	0.169	0.14	21.03	0.10	0.002
21.60	1.95	90.66	1.27	115.11	24	1137	0.56	0.169	0.14	21.03	0.10	0.002
21.67	1.95	91.16	1.27	115.68	24	1144	0.56	0.167	0.14	21.03	0.10	0.002
21.72	1.95	92.14	1.27	116.82	24	1155	0.56	0.163	0.13	21.03	0.10	0.001
21.80	1.93	94.74	1.26	119.36	24	1172	0.56	0.157	0.12	21.03	0.09	0.002
21.87	1.92	97.91	1.25	122.33	25	1188	0.56	0.151	0.12	21.03	0.09	0.001
21.94	1.91	100.32	1.24	124.50	25	1199	0.56	0.148	0.11	21.03	0.08	0.001
21.99	1.90	102.28	1.23	126.18	25	1206	0.56	0.146	0.11	21.03	0.08	0.001
22.06	1.88	103.97	1.23	127.52	25	1212	0.56	0.145	0.11	21.03	0.08	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
22.11	1.87	107.10	1.21	129.95	26	1220	0.56	0.143	0.11	21.03	0.08	0.001
22.18	1.84	111.65	1.19	133.20	26	1232	0.56	0.140	0.10	21.03	0.07	0.001
22.26	1.81	116.73	1.17	136.39	26	1246	0.56	0.136	0.10	21.03	0.07	0.001
22.33	1.80	120.59	1.15	138.53	27	1259	0.56	0.133	0.09	21.03	0.07	0.001
22.38	1.79	122.46	1.14	139.44	27	1265	0.56	0.131	0.09	21.03	0.07	0.001
22.44	1.78	123.00	1.13	139.27	27	1265	0.56	0.132	0.09	21.03	0.07	0.001
22.51	1.78	122.39	1.13	137.86	26	1253	0.56	0.137	0.10	21.03	0.07	0.001
22.58	1.78	120.35	1.12	135.29	26	1231	0.56	0.144	0.11	21.03	0.08	0.001
22.65	1.78	116.34	1.13	130.91	25	1194	0.56	0.159	0.12	21.03	0.09	0.001
22.73	1.78	111.70	1.13	126.14	24	1153	0.56	0.178	0.14	21.03	0.10	0.002
22.77	1.79	106.32	1.14	121.57	23	1115	0.56	0.199	0.16	21.03	0.12	0.001
22.85	1.81	100.84	1.16	117.39	23	1086	0.56	0.219	0.19	21.03	0.13	0.002
22.92	1.83	95.29	1.18	112.86	22	1057	0.56	0.242	0.22	21.03	0.15	0.003
22.97	1.85	89.82	1.20	107.51	21	1017	0.56	0.279	0.26	21.03	0.19	0.002
23.04	1.88	81.38	1.22	99.39	20	964	0.56	0.345	0.35	21.03	0.25	0.004
23.11	1.90	74.27	1.24	91.89	18	909	0.56	0.440	0.49	21.03	0.34	0.006
23.17	1.92	67.84	1.25	84.93	17	857	0.56	0.571	0.69	21.03	0.49	0.007
23.23	1.92	64.61	1.25	80.95	16	819	0.56	0.708	0.90	21.03	0.64	0.010
23.31	1.94	59.91	1.27	75.86	15	782	0.56	0.893	1.22	21.03	0.86	0.015
23.38	1.97	55.53	1.28	71.23	15	749	0.56	1.113	1.62	21.03	1.14	0.019
23.45	1.99	51.95	1.30	67.57	14	725	0.56	1.335	2.04	21.03	1.43	0.024
23.50	2.02	49.03	1.32	64.93	14	711	0.56	1.492	2.37	21.03	1.66	0.020
23.57	2.07	45.91	1.38	63.13	13	711	0.56	1.497	2.40	21.03	1.68	0.029
23.65	2.13	42.92	1.47	63.05	14	726	0.56	1.349	2.10	21.03	1.47	0.026
23.70	2.21	40.55	1.64	66.47	15	764	0.56	1.039	1.46	21.03	1.02	0.013
23.77	2.27	39.76	1.82	72.24	17	814	0.57	0.767	0.95	21.03	0.66	0.011
23.84	2.30	40.47	1.94	78.44	18	869	0.57	0.570	0.63	21.03	0.43	0.007
23.91	2.30	42.68	1.92	82.16	19	914	0.57	0.461	0.48	21.03	0.33	0.006
23.96	2.26	47.02	1.80	84.46	20	960	0.57	0.379	0.39	21.03	0.27	0.003
24.03	2.21	53.14	1.63	86.46	20	1005	0.57	0.320	0.33	21.03	0.23	0.004
24.10	2.14	60.38	1.48	89.49	20	1045	0.57	0.278	0.28	21.03	0.20	0.003
24.15	2.06	68.50	1.37	93.97	20	1074	0.57	0.253	0.25	21.03	0.17	0.002
24.22	2.00	76.70	1.30	99.97	21	1096	0.57	0.237	0.23	21.03	0.16	0.003
24.30	1.94	84.29	1.26	106.23	22	1113	0.57	0.226	0.21	21.03	0.14	0.003
24.34	1.89	91.27	1.23	112.49	22	1140	0.57	0.210	0.18	21.03	0.12	0.001
24.42	1.86	98.25	1.21	118.93	24	1179	0.57	0.189	0.16	21.03	0.11	0.002
24.49	1.84	106.54	1.19	126.90	25	1239	0.57	0.163	0.13	21.03	0.09	0.001
24.56	1.82	113.69	1.18	133.92	26	1299	0.57	0.143	0.10	21.03	0.07	0.001
24.61	1.82	119.24	1.17	139.76	27	1353	0.57	0.128	0.09	21.03	0.06	0.001
24.68	1.82	122.76	1.17	143.80	28	1394	0.57	0.119	0.08	21.03	0.05	0.001
24.75	1.82	125.81	1.17	147.24	29	1429	0.57	0.112	0.07	21.03	0.05	0.001
24.82	1.81	128.44	1.17	149.82	29	1453	0.57	0.108	0.07	21.03	0.05	0.001
24.87	1.80	131.42	1.16	152.07	29	1471	0.57	0.105	0.07	21.03	0.04	0.001
24.95	1.79	133.62	1.15	153.29	30	1481	0.57	0.104	0.06	21.03	0.04	0.001
25.00	1.78	137.64	1.13	154.88	30	1491	0.57	0.102	0.06	21.03	0.04	0.001
25.07	1.76	142.62	1.10	156.58	30	1507	0.57	0.100	0.06	21.03	0.04	0.001
25.15	1.74	148.10	1.07	157.96	30	1528	0.57	0.097	0.06	21.03	0.04	0.001
25.20	1.73	151.40	1.05	159.26	30	1547	0.57	0.095	0.06	21.03	0.04	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
25.27	1.73	152.81	1.05	159.83	30	1557	0.57	0.094	0.06	21.03	0.04	0.001
25.34	1.73	152.46	1.05	160.06	30	1560	0.57	0.094	0.06	21.03	0.04	0.001
25.40	1.74	150.81	1.06	160.01	30	1558	0.57	0.094	0.06	21.03	0.04	0.001
25.47	1.75	147.87	1.08	160.20	30	1558	0.57	0.095	0.06	21.03	0.04	0.001
25.54	1.76	145.23	1.11	160.76	31	1564	0.57	0.094	0.06	21.03	0.04	0.001
25.61	1.78	143.11	1.13	161.38	31	1576	0.57	0.093	0.06	21.03	0.04	0.001
25.66	1.79	141.22	1.15	161.91	31	1589	0.57	0.091	0.05	21.03	0.04	0.000
25.73	1.81	139.15	1.16	161.82	31	1601	0.57	0.090	0.05	21.03	0.03	0.001
25.80	1.82	137.17	1.18	161.29	31	1609	0.57	0.090	0.05	21.03	0.03	0.001
25.86	1.83	135.25	1.19	160.42	31	1613	0.57	0.089	0.05	21.03	0.03	0.001
25.93	1.84	134.62	1.19	160.09	31	1615	0.57	0.089	0.05	21.03	0.03	0.000
25.99	1.84	134.20	1.19	159.71	31	1615	0.57	0.090	0.05	21.03	0.03	0.001
26.06	1.83	134.54	1.19	159.80	31	1616	0.57	0.090	0.05	21.03	0.03	0.001
26.14	1.84	134.25	1.19	159.64	31	1618	0.57	0.090	0.05	21.03	0.03	0.001
26.19	1.84	134.20	1.19	159.79	31	1624	0.57	0.090	0.05	21.03	0.03	0.000
26.25	1.84	133.84	1.19	159.75	31	1630	0.57	0.089	0.05	21.03	0.03	0.001
26.32	1.84	134.16	1.19	160.32	31	1640	0.57	0.088	0.05	21.03	0.03	0.001
26.39	1.84	135.32	1.20	161.79	32	1658	0.57	0.087	0.05	21.03	0.03	0.000
26.46	1.85	135.44	1.20	162.64	32	1677	0.57	0.085	0.05	21.03	0.03	0.001
26.51	1.85	136.81	1.20	164.51	32	1701	0.57	0.082	0.05	21.03	0.03	0.000
26.58	1.85	138.56	1.20	166.59	33	1725	0.57	0.080	0.04	21.03	0.03	0.000
26.64	1.84	143.80	1.19	170.99	33	1754	0.57	0.078	0.04	21.03	0.03	0.000
26.71	1.82	149.39	1.17	175.12	34	1780	0.57	0.076	0.04	21.03	0.03	0.000
26.77	1.80	156.04	1.15	179.83	35	1814	0.57	0.073	0.04	21.03	0.02	0.000
26.85	1.79	161.59	1.14	184.56	36	1858	0.57	0.070	0.03	21.03	0.02	0.000
26.91	1.79	164.82	1.15	189.08	36	1909	0.57	0.066	0.03	21.03	0.02	0.000
26.98	1.79	169.16	1.15	194.00	37	1962	0.57	0.063	0.03	21.03	0.02	0.000
27.04	1.79	173.20	1.15	198.31	38	2007	0.57	0.061	0.03	21.03	0.02	0.000
27.11	1.79	176.80	1.14	201.41	39	2039	0.57	0.059	0.03	21.03	0.02	0.000
27.17	1.79	176.01	1.15	201.87	39	2050	0.57	0.059	0.03	21.03	0.02	0.000
27.23	1.80	173.71	1.16	200.81	39	2049	0.57	0.059	0.03	21.03	0.02	0.000
27.30	1.81	171.65	1.16	199.34	39	2042	0.57	0.059	0.03	21.03	0.02	0.000
27.36	1.81	170.49	1.16	198.04	38	2031	0.57	0.060	0.03	21.03	0.02	0.000
27.43	1.81	169.51	1.16	196.78	38	2021	0.57	0.061	0.03	21.03	0.02	0.000
27.50	1.81	168.59	1.16	195.44	38	2009	0.57	0.062	0.03	21.03	0.02	0.000
27.57	1.80	167.26	1.16	193.76	38	1994	0.57	0.063	0.03	21.03	0.02	0.000
27.63	1.80	166.03	1.16	191.96	37	1976	0.57	0.064	0.03	21.03	0.02	0.000
27.70	1.80	165.40	1.15	190.43	37	1960	0.57	0.066	0.03	21.03	0.02	0.000
27.76	1.79	165.71	1.14	189.07	36	1942	0.57	0.067	0.03	21.03	0.02	0.000
27.83	1.78	167.49	1.12	188.21	36	1929	0.58	0.068	0.03	21.03	0.02	0.000
27.90	1.77	169.74	1.11	188.33	36	1930	0.58	0.068	0.03	21.03	0.02	0.000
27.96	1.76	173.23	1.10	189.76	36	1947	0.58	0.067	0.03	21.03	0.02	0.000
28.02	1.74	178.21	1.07	191.40	36	1969	0.58	0.066	0.03	21.03	0.02	0.000
28.09	1.73	184.47	1.04	192.34	36	1992	0.58	0.065	0.03	21.03	0.02	0.000
28.16	1.72	185.74	1.04	192.98	36	2004	0.58	0.064	0.03	21.03	0.02	0.000
28.22	1.71	189.93	1.01	191.24	36	2008	0.58	0.064	0.03	21.03	0.02	0.000
28.28	1.69	194.65	1.00	194.65	36	1998	0.58	0.065	0.03	21.03	0.02	0.000
28.35	1.64	206.87	1.00	206.87	38	1982	0.58	0.066	0.03	21.03	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
28.41	1.61	210.42	1.00	210.42	38	1959	0.58	0.068	0.03	21.03	0.02	0.000
28.48	1.61	210.96	1.00	210.96	38	1947	0.58	0.069	0.03	21.03	0.02	0.000
28.55	1.62	206.70	1.00	206.70	37	1936	0.58	0.070	0.03	21.03	0.02	0.000
28.62	1.63	200.28	1.00	200.28	36	1909	0.58	0.072	0.04	21.03	0.02	0.000
28.68	1.65	185.93	1.00	185.93	34	1835	0.58	0.079	0.04	21.03	0.02	0.000
28.74	1.68	170.57	1.00	170.57	32	1737	0.58	0.089	0.05	21.03	0.03	0.000
28.81	1.69	156.14	1.00	156.14	29	1627	0.58	0.104	0.07	21.03	0.04	0.001
28.88	1.69	146.66	1.00	146.66	27	1524	0.58	0.122	0.08	21.03	0.05	0.001
28.94	1.70	136.90	1.00	136.90	26	1448	0.58	0.140	0.10	21.03	0.06	0.001
29.00	1.72	128.90	1.03	133.28	25	1409	0.58	0.151	0.12	21.03	0.07	0.001
29.07	1.74	123.98	1.07	133.03	25	1398	0.58	0.156	0.12	21.03	0.07	0.001
29.14	1.75	121.26	1.09	132.45	25	1391	0.58	0.158	0.12	21.03	0.07	0.001
29.20	1.76	120.89	1.10	132.52	25	1394	0.58	0.158	0.12	21.03	0.07	0.001
29.27	1.75	123.25	1.09	133.83	25	1410	0.58	0.153	0.12	21.03	0.07	0.001
29.34	1.74	127.80	1.06	136.11	26	1439	0.58	0.146	0.11	21.03	0.06	0.001
29.40	1.72	134.84	1.04	139.70	26	1487	0.58	0.134	0.10	21.03	0.06	0.001
29.47	1.71	141.65	1.02	144.20	27	1545	0.58	0.122	0.08	21.03	0.05	0.001
29.53	1.71	147.87	1.01	149.63	28	1608	0.58	0.110	0.07	21.03	0.04	0.001
29.60	1.71	153.22	1.01	154.55	29	1665	0.58	0.102	0.07	21.03	0.04	0.001
29.66	1.70	159.12	1.00	159.12	30	1718	0.58	0.095	0.06	21.03	0.03	0.001
29.73	1.69	166.13	1.00	166.13	31	1766	0.58	0.090	0.05	21.03	0.03	0.000
29.80	1.68	172.98	1.00	172.98	32	1806	0.58	0.086	0.05	21.03	0.03	0.000
29.86	1.66	179.78	1.00	179.78	33	1840	0.58	0.083	0.05	21.03	0.03	0.000
29.93	1.65	186.70	1.00	186.70	34	1872	0.58	0.080	0.04	21.03	0.02	0.000
29.99	1.64	193.22	1.00	193.22	35	1905	0.58	0.077	0.04	21.03	0.02	0.000
30.06	1.63	198.19	1.00	198.19	36	1935	0.58	0.075	0.04	21.03	0.02	0.000
30.12	1.62	201.65	1.00	201.65	37	1959	0.58	0.073	0.04	21.03	0.02	0.000
30.19	1.62	203.29	1.00	203.29	37	1975	0.58	0.072	0.03	21.03	0.02	0.000
30.25	1.63	203.14	1.00	203.14	37	1988	0.58	0.072	0.03	21.03	0.02	0.000
30.32	1.63	201.77	1.00	201.77	37	1997	0.58	0.071	0.03	21.03	0.02	0.000
30.39	1.64	200.94	1.00	200.94	37	2005	0.58	0.071	0.03	21.03	0.02	0.000
30.45	1.64	200.86	1.00	200.86	37	2009	0.58	0.071	0.03	21.03	0.02	0.000
30.52	1.64	201.66	1.00	201.66	37	2012	0.58	0.071	0.03	21.03	0.02	0.000
30.58	1.64	202.51	1.00	202.51	37	2018	0.58	0.071	0.03	21.03	0.02	0.000
30.65	1.63	203.04	1.00	203.04	37	2021	0.58	0.071	0.03	21.03	0.02	0.000
30.71	1.63	202.97	1.00	202.97	37	2012	0.58	0.071	0.03	21.03	0.02	0.000
30.78	1.62	202.39	1.00	202.39	37	1987	0.58	0.073	0.04	21.03	0.02	0.000
30.84	1.61	202.69	1.00	202.69	37	1961	0.58	0.076	0.04	21.03	0.02	0.000
30.91	1.60	203.64	1.00	203.64	37	1947	0.58	0.077	0.04	21.03	0.02	0.000
30.98	1.59	205.68	1.00	205.68	37	1952	0.58	0.077	0.04	21.03	0.02	0.000
31.04	1.60	207.12	1.00	207.12	37	1980	0.58	0.075	0.04	21.03	0.02	0.000
31.11	1.61	208.62	1.00	208.62	38	2017	0.58	0.072	0.03	21.03	0.02	0.000
31.17	1.61	210.05	1.00	210.05	38	2054	0.58	0.070	0.03	21.03	0.02	0.000
31.24	1.61	213.03	1.00	213.03	39	2077	0.58	0.069	0.03	21.03	0.02	0.000
31.30	1.60	215.81	1.00	215.81	39	2090	0.58	0.068	0.03	21.03	0.02	0.000
31.37	1.60	217.50	1.00	217.50	39	2097	0.58	0.068	0.03	21.03	0.02	0.000
31.43	1.60	217.66	1.00	217.66	39	2100	0.58	0.068	0.03	21.03	0.02	0.000
31.50	1.60	217.15	1.00	217.15	39	2092	0.58	0.068	0.03	21.03	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
31.56	1.59	217.10	1.00	217.10	39	2079	0.58	0.069	0.03	21.03	0.02	0.000
31.63	1.59	216.42	1.00	216.42	39	2075	0.58	0.070	0.03	21.03	0.02	0.000
31.70	1.60	214.78	1.00	214.78	39	2081	0.58	0.070	0.03	21.03	0.02	0.000
31.76	1.61	212.24	1.00	212.24	38	2090	0.58	0.069	0.03	21.03	0.02	0.000
31.83	1.62	209.50	1.00	209.50	38	2082	0.58	0.070	0.03	21.03	0.02	0.000
31.90	1.62	207.73	1.00	207.73	38	2068	0.58	0.071	0.03	21.03	0.02	0.000
31.96	1.62	205.28	1.00	205.28	37	2046	0.58	0.073	0.03	21.03	0.02	0.000
32.03	1.62	203.85	1.00	203.85	37	2033	0.58	0.074	0.04	21.03	0.02	0.000
32.10	1.62	202.73	1.00	202.73	37	2028	0.58	0.074	0.04	21.03	0.02	0.000
32.16	1.62	202.86	1.00	202.86	37	2034	0.58	0.074	0.04	21.03	0.02	0.000
32.23	1.62	202.89	1.00	202.89	37	2042	0.58	0.074	0.04	21.03	0.02	0.000
32.29	1.63	201.74	1.00	201.74	37	2044	0.58	0.074	0.04	21.03	0.02	0.000
32.35	1.63	201.77	1.00	201.77	37	2044	0.58	0.074	0.04	21.03	0.02	0.000
32.41	1.63	199.90	1.00	199.90	36	2038	0.58	0.075	0.04	21.03	0.02	0.000
32.48	1.63	200.94	1.00	200.94	37	2042	0.58	0.075	0.04	21.03	0.02	0.000
32.55	1.62	203.19	1.00	203.19	37	2042	0.58	0.075	0.04	21.03	0.02	0.000
32.61	1.58	210.33	1.00	210.33	38	2029	0.58	0.076	0.04	21.03	0.02	0.000
32.68	1.55	215.64	1.00	215.64	38	1984	0.58	0.080	0.04	21.03	0.02	0.000
32.75	1.51	218.82	1.00	218.82	38	1931	0.58	0.084	0.04	21.03	0.02	0.000
32.81	1.50	217.38	1.00	217.38	38	1887	0.58	0.089	0.04	21.03	0.02	0.000
32.88	1.49	213.73	1.00	213.73	37	1845	0.58	0.093	0.04	21.03	0.02	0.000
32.94	1.49	209.07	1.00	209.07	36	1802	0.58	0.099	0.05	21.03	0.02	0.000
33.02	1.49	205.63	1.00	205.63	36	1771	0.58	0.103	0.05	21.03	0.03	0.000
33.07	1.49	204.61	1.00	204.61	36	1765	0.58	0.104	0.05	21.03	0.03	0.000
33.14	1.50	203.93	1.00	203.93	36	1786	0.58	0.101	0.05	21.03	0.03	0.000
33.21	1.53	204.00	1.00	204.00	36	1847	0.58	0.094	0.05	21.03	0.02	0.000
33.27	1.56	202.95	1.00	202.95	36	1929	0.58	0.086	0.04	21.03	0.02	0.000
33.34	1.59	204.83	1.00	204.83	37	2010	0.58	0.079	0.04	21.03	0.02	0.000
33.40	1.59	208.53	1.00	208.53	37	2051	0.58	0.076	0.04	21.03	0.02	0.000
33.47	1.57	214.68	1.00	214.68	38	2070	0.58	0.075	0.03	21.03	0.02	0.000
33.53	1.57	215.07	1.00	215.07	38	2058	0.58	0.076	0.03	21.03	0.02	0.000
33.60	1.57	212.89	1.00	212.89	38	2039	0.58	0.078	0.04	21.03	0.02	0.000
33.67	1.56	209.75	1.00	209.75	37	2006	0.58	0.081	0.04	21.03	0.02	0.000
33.73	1.55	210.03	1.00	210.03	37	1969	0.58	0.084	0.04	21.03	0.02	0.000
33.79	1.53	210.67	1.00	210.67	37	1924	0.58	0.088	0.04	21.03	0.02	0.000
33.86	1.51	210.62	1.00	210.62	37	1895	0.58	0.091	0.04	21.03	0.02	0.000
33.93	1.51	209.32	1.00	209.32	37	1886	0.58	0.092	0.04	21.03	0.02	0.000
34.00	1.52	209.01	1.00	209.01	37	1898	0.58	0.091	0.04	21.03	0.02	0.000
34.06	1.53	207.85	1.00	207.85	37	1909	0.58	0.091	0.04	21.03	0.02	0.000
34.13	1.52	208.70	1.00	208.70	37	1914	0.58	0.090	0.04	21.03	0.02	0.000
34.19	1.52	209.51	1.00	209.51	37	1907	0.58	0.091	0.04	21.03	0.02	0.000
34.26	1.51	211.31	1.00	211.31	37	1895	0.58	0.093	0.04	21.03	0.02	0.000
34.33	1.49	212.30	1.00	212.30	37	1877	0.58	0.095	0.05	21.03	0.02	0.000
34.39	1.49	211.46	1.00	211.46	37	1856	0.58	0.097	0.05	21.03	0.02	0.000
34.45	1.49	208.42	1.00	208.42	36	1833	0.58	0.100	0.05	21.03	0.02	0.000
34.52	1.49	204.37	1.00	204.37	36	1811	0.58	0.103	0.05	21.03	0.02	0.000
34.58	1.50	198.33	1.00	198.33	35	1784	0.58	0.107	0.06	21.03	0.03	0.000
34.65	1.52	191.63	1.00	191.63	34	1767	0.58	0.110	0.06	21.03	0.03	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
34.71	1.57	179.24	1.00	179.24	32	1757	0.58	0.111	0.06	21.03	0.03	0.000
34.78	1.62	166.77	1.00	166.77	30	1752	0.58	0.112	0.07	21.03	0.03	0.001
34.85	1.68	152.16	1.00	152.16	28	1738	0.58	0.115	0.08	21.03	0.04	0.001
34.92	1.73	140.84	1.04	147.13	28	1722	0.58	0.118	0.08	21.03	0.04	0.001
34.98	1.80	126.21	1.15	145.34	28	1716	0.58	0.119	0.08	21.03	0.04	0.001
35.05	1.89	110.06	1.23	135.73	27	1725	0.58	0.118	0.08	21.03	0.04	0.001
35.12	2.00	93.65	1.31	122.78	26	1729	0.58	0.117	0.09	21.03	0.04	0.001
35.18	2.11	79.72	1.43	114.09	25	1717	0.58	0.119	0.09	21.03	0.04	0.001
35.25	2.18	68.17	1.57	107.25	24	1642	0.58	0.134	0.11	21.03	0.05	0.001
35.31	2.26	56.52	1.77	100.22	23	1519	0.58	0.164	0.14	21.03	0.06	0.001
35.38	2.35	45.35	2.13	96.75	23	1403	0.58	0.206	0.17	21.03	0.08	0.001
35.45	2.48	35.74	2.83	101.28	26	1338	0.58	0.239	0.18	21.03	0.08	0.001
35.52	2.59	29.48	3.70	109.01	29	1311	0.58	0.256	0.16	21.03	0.07	0.001
35.58	2.66	25.96	4.28	111.03	0	0	0.58	0.000	0.00	0.00	0.00	0.000
35.64	2.68	24.11	4.55	109.61	0	0	0.58	0.000	0.00	0.00	0.00	0.000
35.70	2.69	23.30	4.58	106.81	0	0	0.58	0.000	0.00	0.00	0.00	0.000
35.76	2.67	23.28	4.45	103.56	0	0	0.58	0.000	0.00	0.00	0.00	0.000
35.84	2.68	22.78	4.48	102.01	0	0	0.58	0.000	0.00	0.00	0.00	0.000
35.91	2.70	21.64	4.73	102.32	0	0	0.58	0.000	0.00	0.00	0.00	0.000
35.98	2.74	20.06	5.18	103.95	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.03	2.79	18.41	5.74	105.77	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.10	2.82	17.57	6.06	106.47	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.17	2.82	17.32	6.14	106.43	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.22	2.81	17.54	6.03	105.73	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.30	2.81	17.67	5.94	104.93	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.37	2.81	17.38	5.92	102.88	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.44	2.78	17.47	5.66	98.95	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.49	2.74	18.49	5.10	94.26	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.57	2.66	21.23	4.27	90.72	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.64	2.59	24.56	3.63	89.20	24	1106	0.58	0.486	0.39	21.03	0.17	0.003
36.69	2.54	27.30	3.28	89.42	24	1151	0.58	0.417	0.34	21.03	0.15	0.002
36.76	2.56	26.80	3.45	92.35	25	1169	0.58	0.395	0.31	21.03	0.14	0.002
36.82	2.61	24.95	3.86	96.37	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.88	2.69	21.75	4.65	101.18	0	0	0.58	0.000	0.00	0.00	0.00	0.000
36.95	2.76	19.48	5.36	104.35	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.03	2.81	17.76	5.97	105.93	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.10	2.83	17.00	6.22	105.74	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.14	2.83	17.01	6.25	106.23	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.22	2.84	17.24	6.31	108.70	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.29	2.84	17.51	6.42	112.41	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.34	2.82	18.75	6.16	115.48	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.41	2.72	23.25	4.96	115.23	0	0	0.57	0.000	0.00	0.00	0.00	0.000
37.49	2.55	32.93	3.37	111.00	29	1438	0.57	0.204	0.13	21.03	0.05	0.001
37.56	2.41	44.61	2.41	107.59	27	1567	0.57	0.161	0.11	21.03	0.05	0.001
37.60	2.33	53.49	2.04	109.02	26	1672	0.57	0.136	0.10	21.03	0.04	0.000
37.67	2.33	55.11	2.04	112.26	27	1725	0.57	0.127	0.09	21.03	0.04	0.001
37.75	2.37	51.57	2.25	115.89	28	1733	0.57	0.125	0.08	21.03	0.03	0.001
37.82	2.44	46.27	2.57	118.87	30	1705	0.57	0.131	0.08	21.03	0.03	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
37.87	2.46	42.64	2.74	116.68	30	1639	0.57	0.144	0.09	21.03	0.04	0.000
37.94	2.44	42.33	2.57	108.88	27	1565	0.57	0.163	0.11	21.03	0.05	0.001
38.01	2.38	44.32	2.27	100.70	25	1509	0.57	0.181	0.14	21.03	0.06	0.001
38.06	2.30	49.85	1.94	96.70	23	1516	0.57	0.179	0.15	21.03	0.06	0.001
38.14	2.23	57.47	1.70	97.63	22	1570	0.57	0.163	0.14	21.03	0.06	0.001
38.21	2.16	66.32	1.52	100.91	22	1626	0.57	0.149	0.13	21.03	0.05	0.001
38.26	2.08	76.95	1.39	106.89	23	1674	0.57	0.138	0.12	21.03	0.05	0.001
38.33	1.99	88.60	1.30	115.37	24	1699	0.57	0.134	0.11	21.03	0.04	0.001
38.39	1.90	103.32	1.24	127.65	26	1717	0.57	0.130	0.10	21.03	0.04	0.001
38.46	1.83	115.69	1.18	136.97	27	1739	0.57	0.127	0.09	21.03	0.04	0.001
38.52	1.79	126.20	1.14	144.44	28	1794	0.57	0.118	0.08	21.03	0.03	0.000
38.59	1.78	134.20	1.13	151.54	29	1875	0.57	0.107	0.07	21.03	0.03	0.000
38.66	1.78	142.14	1.12	159.51	31	1972	0.57	0.096	0.06	21.03	0.02	0.000
38.71	1.77	150.49	1.11	167.01	32	2062	0.57	0.088	0.05	21.03	0.02	0.000
38.78	1.76	157.87	1.09	172.72	33	2131	0.57	0.082	0.05	21.03	0.02	0.000
38.85	1.74	166.03	1.07	178.27	34	2202	0.57	0.077	0.04	21.03	0.02	0.000
38.92	1.75	172.18	1.08	186.33	35	2303	0.57	0.071	0.04	21.03	0.01	0.000
38.98	1.77	174.47	1.11	194.42	37	2411	0.57	0.065	0.03	21.03	0.01	0.000
39.05	1.80	173.43	1.15	199.28	38	2499	0.57	0.062	0.03	21.03	0.01	0.000
39.12	1.80	174.74	1.15	200.67	39	2519	0.57	0.061	0.03	21.03	0.01	0.000
39.18	1.77	175.24	1.12	196.50	38	2448	0.57	0.064	0.03	21.03	0.01	0.000
39.24	1.74	178.12	1.07	190.75	36	2371	0.57	0.068	0.03	21.03	0.01	0.000
39.31	1.72	180.05	1.03	184.88	35	2316	0.57	0.071	0.04	21.03	0.01	0.000
39.38	1.69	187.56	1.00	187.56	35	2301	0.57	0.072	0.04	21.03	0.01	0.000
39.44	1.63	196.88	1.00	196.88	36	2214	0.57	0.077	0.04	21.03	0.01	0.000
39.51	1.56	204.99	1.00	204.99	37	2128	0.57	0.084	0.04	21.03	0.02	0.000
39.57	1.52	214.06	1.00	214.06	38	2097	0.57	0.086	0.04	21.03	0.02	0.000
39.64	1.51	219.74	1.00	219.74	39	2147	0.57	0.082	0.04	21.03	0.01	0.000
39.70	1.52	225.33	1.00	225.33	40	2215	0.57	0.078	0.03	21.03	0.01	0.000
39.77	1.54	225.00	1.00	225.00	40	2268	0.57	0.074	0.03	21.03	0.01	0.000
39.83	1.56	224.85	1.00	224.85	40	2324	0.57	0.071	0.03	21.03	0.01	0.000
39.90	1.56	226.04	1.00	226.04	40	2363	0.57	0.069	0.03	21.03	0.01	0.000
39.97	1.55	230.70	1.00	230.70	41	2360	0.57	0.069	0.03	21.03	0.01	0.000
40.03	1.49	241.92	1.00	241.92	42	2293	0.57	0.073	0.03	21.03	0.01	0.000
40.09	1.42	254.15	1.00	254.15	43	2223	0.57	0.078	0.03	21.03	0.01	0.000
40.16	1.36	271.49	1.00	271.49	45	2189	0.57	0.080	0.03	21.03	0.01	0.000
40.23	1.30	290.85	1.00	290.85	48	2190	0.57	0.080	0.03	21.03	0.01	0.000
40.29	1.27	309.89	1.00	309.89	50	2251	0.57	0.076	0.03	21.03	0.01	0.000
40.36	1.25	331.44	1.00	331.44	54	2341	0.57	0.071	0.02	21.03	0.01	0.000
40.42	1.25	346.37	1.00	346.37	56	2456	0.57	0.065	0.02	21.03	0.01	0.000
40.49	1.26	356.03	1.00	356.03	58	2550	0.57	0.061	0.02	21.03	0.01	0.000
40.56	1.29	357.14	1.00	357.14	58	2666	0.57	0.057	0.02	21.03	0.01	0.000
40.62	1.31	362.13	1.00	362.13	60	2766	0.57	0.054	0.01	21.03	0.01	0.000
40.69	1.32	364.15	1.00	364.15	60	2814	0.57	0.052	0.01	21.03	0.01	0.000
40.75	1.32	369.26	1.00	369.26	61	2874	0.57	0.051	0.01	21.03	0.00	0.000
40.82	1.35	366.08	1.00	366.08	61	2944	0.57	0.049	0.01	21.03	0.00	0.000
40.88	1.36	368.14	1.00	368.14	62	3031	0.57	0.047	0.01	21.03	0.00	0.000
40.95	1.38	362.94	1.00	362.94	61	3032	0.56	0.047	0.01	21.03	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
41.02	1.36	368.84	1.00	368.84	62	3025	0.56	0.047	0.01	21.03	0.00	0.000
41.08	1.34	373.88	1.00	373.88	62	2974	0.56	0.048	0.01	21.03	0.00	0.000
41.15	1.29	385.10	1.00	385.10	63	2899	0.56	0.050	0.01	21.03	0.00	0.000
41.22	1.26	390.91	1.00	390.91	63	2825	0.56	0.052	0.01	21.03	0.00	0.000
41.27	1.24	400.81	1.00	400.81	65	2823	0.56	0.053	0.01	21.03	0.00	0.000
41.35	1.25	406.98	1.00	406.98	66	2919	0.56	0.050	0.01	21.03	0.00	0.000
41.41	1.27	411.50	1.00	411.50	67	3041	0.56	0.047	0.01	21.03	0.00	0.000
41.48	1.29	406.16	1.00	406.16	66	3076	0.56	0.046	0.01	21.03	0.00	0.000
41.54	1.29	400.36	1.00	400.36	66	3036	0.56	0.047	0.01	21.03	0.00	0.000
41.61	1.29	390.10	1.00	390.10	64	2935	0.56	0.050	0.01	21.03	0.00	0.000
41.67	1.28	380.24	1.00	380.24	62	2854	0.56	0.052	0.01	21.03	0.00	0.000
41.74	1.29	366.07	1.00	366.07	60	2770	0.56	0.055	0.01	21.03	0.00	0.000
41.80	1.31	352.17	1.00	352.17	58	2732	0.56	0.056	0.02	21.03	0.01	0.000
41.87	1.36	341.35	1.00	341.35	57	2821	0.56	0.053	0.02	21.03	0.01	0.000
41.94	1.40	334.07	1.00	334.07	57	2928	0.56	0.050	0.01	21.03	0.00	0.000
42.00	1.44	323.97	1.00	323.97	55	2977	0.56	0.049	0.01	21.03	0.00	0.000
42.07	1.45	311.51	1.00	311.51	53	2890	0.56	0.051	0.02	21.03	0.01	0.000
42.13	1.44	301.15	1.00	301.15	52	2775	0.56	0.055	0.02	21.03	0.01	0.000
42.20	1.41	303.53	1.00	303.53	52	2708	0.56	0.057	0.02	21.03	0.01	0.000
42.27	1.39	312.61	1.00	312.61	53	2692	0.56	0.058	0.02	21.03	0.01	0.000
42.33	1.36	323.34	1.00	323.34	54	2696	0.56	0.058	0.02	21.03	0.01	0.000
42.39	1.34	327.66	1.00	327.66	54	2683	0.56	0.058	0.02	21.03	0.01	0.000
42.45	1.35	328.41	1.00	328.41	55	2709	0.56	0.057	0.02	21.03	0.01	0.000
42.52	1.36	330.39	1.00	330.39	55	2771	0.56	0.055	0.02	21.03	0.01	0.000
42.59	1.38	329.33	1.00	329.33	55	2829	0.56	0.054	0.02	21.03	0.01	0.000
42.66	1.38	331.38	1.00	331.38	56	2851	0.56	0.053	0.02	21.03	0.00	0.000
42.72	1.38	330.21	1.00	330.21	56	2851	0.56	0.053	0.02	21.03	0.00	0.000
42.79	1.40	323.72	1.00	323.72	55	2850	0.56	0.053	0.02	21.03	0.01	0.000
42.85	1.42	314.85	1.00	314.85	54	2854	0.56	0.053	0.02	21.03	0.01	0.000
42.91	1.44	304.23	1.00	304.23	52	2831	0.56	0.054	0.02	21.03	0.01	0.000
42.98	1.44	299.18	1.00	299.18	51	2773	0.56	0.056	0.02	21.03	0.01	0.000
43.05	1.44	291.45	1.00	291.45	50	2698	0.56	0.058	0.02	21.03	0.01	0.000
43.11	1.43	286.87	1.00	286.87	49	2654	0.56	0.060	0.02	21.03	0.01	0.000
43.18	1.44	285.65	1.00	285.65	49	2656	0.56	0.060	0.02	21.03	0.01	0.000
43.25	1.43	289.96	1.00	289.96	49	2673	0.56	0.059	0.02	21.03	0.01	0.000
43.31	1.41	298.76	1.00	298.76	51	2698	0.56	0.059	0.02	21.03	0.01	0.000
43.38	1.39	312.06	1.00	312.06	53	2731	0.56	0.057	0.02	21.03	0.01	0.000
43.44	1.36	328.27	1.00	328.27	55	2766	0.56	0.056	0.02	21.03	0.01	0.000
43.51	1.33	343.41	1.00	343.41	57	2795	0.56	0.055	0.02	21.03	0.00	0.000
43.57	1.30	359.16	1.00	359.16	59	2827	0.56	0.054	0.01	21.03	0.00	0.000
43.64	1.28	374.52	1.00	374.52	61	2880	0.56	0.053	0.01	21.03	0.00	0.000
43.71	1.27	389.41	1.00	389.41	63	2965	0.56	0.051	0.01	21.03	0.00	0.000
43.77	1.28	396.02	1.00	396.02	65	3043	0.56	0.049	0.01	21.03	0.00	0.000
43.84	1.29	398.27	1.00	398.27	65	3112	0.55	0.047	0.01	21.03	0.00	0.000
43.90	1.31	397.10	1.00	397.10	65	3162	0.55	0.046	0.01	21.03	0.00	0.000
43.97	1.30	399.66	1.00	399.66	66	3166	0.55	0.046	0.01	21.03	0.00	0.000
44.04	1.28	400.05	1.00	400.05	65	3086	0.55	0.048	0.01	21.03	0.00	0.000
44.10	1.25	404.98	1.00	404.98	65	2990	0.55	0.050	0.01	21.03	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
44.16	1.23	404.05	1.00	404.05	65	2912	0.55	0.052	0.01	21.03	0.00	0.000
44.23	1.22	403.41	1.00	403.41	65	2875	0.55	0.054	0.01	21.03	0.00	0.000
44.29	1.21	396.69	1.00	396.69	63	2819	0.55	0.055	0.01	21.03	0.00	0.000
44.36	1.21	395.39	1.00	395.39	63	2795	0.55	0.056	0.01	21.03	0.00	0.000
44.43	1.21	393.84	1.00	393.84	63	2794	0.55	0.056	0.01	21.03	0.00	0.000
44.49	1.21	398.27	1.00	398.27	64	2831	0.55	0.055	0.01	21.03	0.00	0.000
44.56	1.22	401.39	1.00	401.39	64	2882	0.55	0.054	0.01	21.03	0.00	0.000
44.63	1.22	407.90	1.00	407.90	65	2925	0.55	0.052	0.01	21.03	0.00	0.000
44.69	1.22	410.53	1.00	410.53	66	2943	0.55	0.052	0.01	21.03	0.00	0.000
44.75	1.09	411.74	1.00	411.74	64	2526	0.55	0.067	0.02	21.03	0.00	0.000
44.82	0.94	408.85	1.00	408.85	60	2068	0.55	0.098	0.03	21.03	0.01	0.000
44.88	-1.00	-1.00	1.00	-1.00	0	0	0.55	0.000	0.00	0.00	0.00	0.000
44.95	-1.00	-1.00	1.00	-1.00	0	0	0.55	0.000	0.00	0.00	0.00	0.000
45.02	-1.00	-1.00	1.00	-1.00	0	0	0.55	0.000	0.00	0.00	0.00	0.000
45.08	-1.00	-1.00	1.00	-1.00	0	0	0.55	0.000	0.00	0.00	0.00	0.000
45.15	-1.00	-1.00	1.00	-1.00	0	0	0.55	0.000	0.00	0.00	0.00	0.000

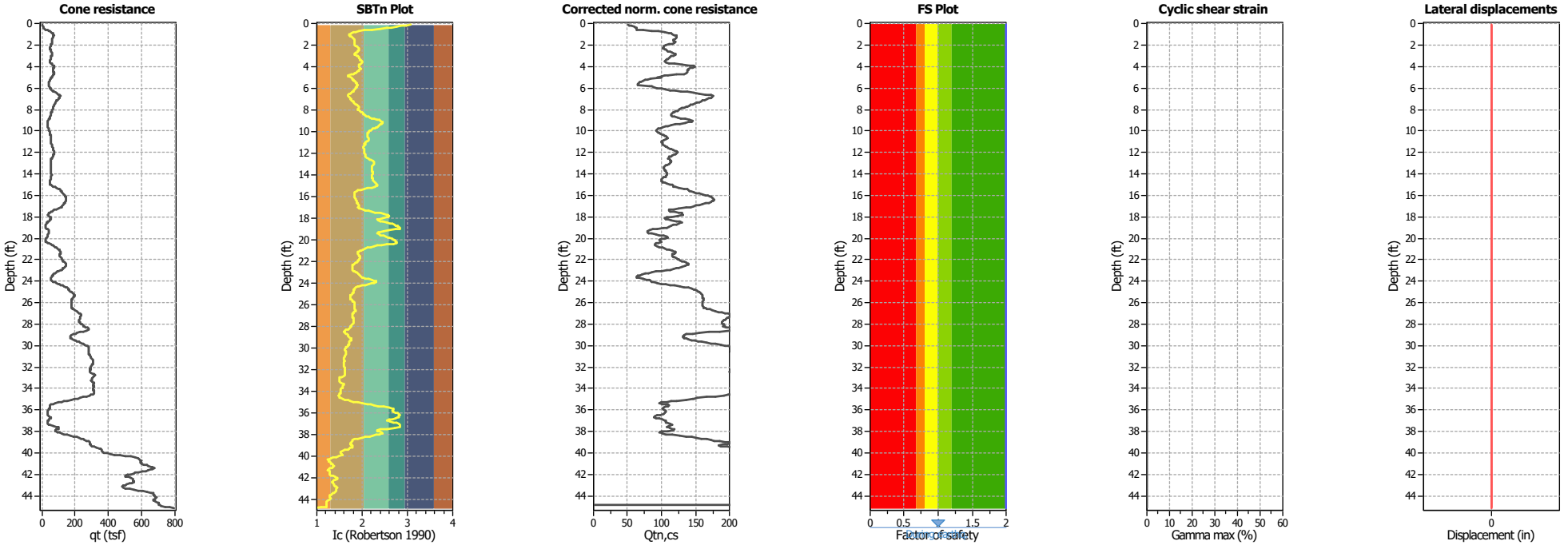
Total estimated settlement: 1.04

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

Estimation of post-earthquake lateral Displacements

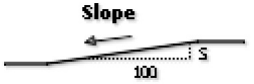
Geometric parameters: Gently sloping ground without free face (Slope 1.00 %)



Abbreviations

q_t: Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c: Soil Behaviour Type Index
$Q_{tn,cs}$: Equivalent clean sand normalized CPT total cone resistance
F.S.: Factor of safety
γ_{max}: Maximum cyclic shear strain
LDI: Lateral displacement index

Surface condition



:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.07	3.20	5.14	9.88	50.75	3.06	12.37	71.71
0.13	3.92	6.28	8.34	52.39	2.97	0.06	0.63
0.20	5.19	8.33	6.73	56.06	2.87	0.08	0.64
0.27	7.00	11.22	5.31	59.56	2.75	0.11	0.66
0.34	9.45	15.16	4.05	61.41	2.63	0.13	0.66
0.40	12.10	19.40	3.25	63.12	2.54	0.15	0.67
0.46	16.51	26.48	2.38	63.11	2.40	0.15	0.67
0.53	24.06	38.61	1.66	64.08	2.22	0.16	0.67
0.60	33.82	54.29	1.35	73.14	2.04	0.33	0.69
0.66	42.62	68.41	1.26	85.89	1.93	0.72	0.72
0.73	49.08	78.80	1.21	95.61	1.87	0.74	0.74
0.79	55.52	89.13	1.17	104.17	1.81	0.76	0.76
0.86	61.95	99.46	1.11	110.60	1.77	0.77	0.77
0.93	67.77	108.80	1.05	114.15	1.73	0.77	0.77
0.99	70.72	113.54	1.03	116.61	1.72	0.78	0.78
1.06	71.59	114.94	1.04	119.34	1.72	0.78	0.78
1.13	70.75	113.58	1.07	121.61	1.74	0.79	0.79
1.18	69.23	111.13	1.11	122.80	1.76	0.79	0.79
1.25	67.58	108.47	1.13	122.94	1.78	0.79	0.79
1.32	65.93	105.81	1.16	122.32	1.80	0.79	0.79
1.38	64.34	103.26	1.17	121.05	1.82	0.78	0.78
1.45	62.76	100.71	1.18	119.23	1.83	0.78	0.78
1.51	61.70	99.01	1.19	117.81	1.84	0.78	0.78
1.58	61.52	98.70	1.19	117.58	1.84	0.78	0.78
1.64	62.48	100.24	1.18	118.75	1.83	0.78	0.78
1.71	63.48	101.84	1.18	119.89	1.82	0.78	0.78
1.77	63.20	101.38	1.18	119.46	1.82	0.78	0.78
1.84	61.02	97.88	1.19	116.02	1.83	0.78	0.78
1.91	58.19	93.32	1.19	110.65	1.83	0.77	0.77
1.97	55.67	89.26	1.19	106.00	1.83	0.76	0.76
2.04	54.05	86.66	1.20	103.81	1.85	0.76	0.76
2.10	52.65	84.41	1.22	103.17	1.88	0.75	0.75
2.18	51.69	82.85	1.24	102.66	1.90	0.75	0.75
2.24	50.94	81.65	1.25	102.15	1.92	0.75	0.75
2.30	51.13	81.95	1.25	102.74	1.93	0.75	0.75
2.37	51.82	83.04	1.25	104.07	1.92	0.76	0.76
2.43	53.06	85.04	1.25	106.18	1.92	0.76	0.76
2.50	54.22	86.88	1.24	107.99	1.91	0.76	0.76
2.56	55.77	89.38	1.23	110.17	1.89	0.77	0.77
2.63	57.86	92.72	1.22	112.98	1.87	0.77	0.77
2.69	60.40	96.80	1.20	116.45	1.85	0.78	0.78
2.76	62.54	100.23	1.19	119.54	1.84	0.78	0.78
2.83	63.16	101.22	1.20	120.99	1.84	0.78	0.78
2.89	62.01	99.36	1.21	120.21	1.86	0.78	0.78
2.96	59.77	95.76	1.23	117.63	1.89	0.78	0.78
3.02	57.56	92.22	1.24	114.70	1.91	0.77	0.77
3.10	56.17	89.97	1.25	112.72	1.92	0.77	0.77
3.15	55.43	88.77	1.26	111.60	1.93	0.77	0.77

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.22	54.93	87.96	1.26	110.92	1.94	0.77	0.77
3.29	54.12	86.65	1.27	109.86	1.95	0.77	0.77
3.35	52.96	84.79	1.28	108.40	1.96	0.76	0.76
3.42	51.57	82.55	1.29	106.55	1.98	0.76	0.76
3.48	50.39	80.64	1.30	104.95	1.99	0.76	0.76
3.55	49.92	79.89	1.31	104.47	2.00	0.76	0.76
3.62	50.82	81.32	1.31	106.20	2.00	0.76	0.76
3.68	53.64	85.86	1.30	111.27	1.99	0.77	0.77
3.75	58.49	93.64	1.28	119.80	1.96	0.78	0.78
3.81	64.65	103.53	1.26	130.76	1.94	0.80	0.80
3.87	70.32	112.63	1.25	141.12	1.92	0.81	0.81
3.94	73.65	117.97	1.25	147.84	1.92	0.82	0.82
4.01	73.80	118.21	1.26	149.25	1.94	0.83	0.83
4.08	71.72	114.85	1.28	146.48	1.96	0.82	0.82
4.15	69.72	111.65	1.28	142.98	1.97	0.82	0.82
4.20	68.73	110.05	1.27	140.26	1.96	0.81	0.81
4.27	68.73	110.04	1.26	138.98	1.94	0.81	0.81
4.33	69.13	110.68	1.25	138.38	1.92	0.81	0.81
4.40	69.88	111.87	1.24	138.28	1.90	0.81	0.81
4.47	70.94	113.56	1.22	138.18	1.87	0.81	0.81
4.53	71.68	114.75	1.20	137.42	1.85	0.81	0.81
4.60	71.90	115.10	1.18	136.22	1.83	0.81	0.81
4.67	71.43	114.34	1.16	132.72	1.81	0.80	0.80
4.72	70.00	112.04	1.09	122.35	1.75	0.79	0.79
4.80	67.98	108.79	1.00	108.79	1.70	0.76	0.76
4.86	65.22	104.34	1.00	104.34	1.68	0.76	0.76
4.93	62.17	99.44	1.00	99.44	1.72	0.75	0.75
4.99	58.91	94.19	1.00	94.19	1.76	0.74	0.74
5.05	55.43	88.59	1.13	100.16	1.78	0.75	0.75
5.13	52.51	83.89	1.00	83.89	1.79	0.72	0.72
5.18	49.80	79.54	1.00	79.54	1.81	0.56	0.71
5.25	47.62	76.03	1.00	76.03	1.82	0.42	0.70
5.33	45.73	72.98	1.00	72.98	1.84	0.33	0.69
5.38	44.17	70.48	1.00	70.48	1.86	0.27	0.68
5.45	42.99	68.58	1.00	68.58	1.87	0.23	0.68
5.51	41.78	66.62	1.00	66.62	1.88	0.19	0.67
5.58	41.00	65.37	1.00	65.37	1.89	0.17	0.67
5.65	40.65	64.81	1.00	64.81	1.90	0.17	0.67
5.72	41.02	65.39	1.00	65.39	1.89	0.17	0.67
5.79	41.99	66.93	1.23	82.10	1.88	0.70	0.71
5.85	43.70	69.68	1.22	85.03	1.88	0.72	0.72
5.92	45.90	73.22	1.21	88.89	1.87	0.73	0.73
5.98	48.67	77.66	1.21	93.64	1.86	0.74	0.74
6.05	52.06	83.09	1.19	99.28	1.84	0.75	0.75
6.12	56.13	89.63	1.18	105.98	1.83	0.76	0.76
6.19	60.33	96.36	1.17	112.73	1.82	0.77	0.77
6.24	65.08	104.00	1.16	120.15	1.80	0.78	0.78
6.30	70.40	112.53	1.14	128.07	1.79	0.80	0.80

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.37	77.39	123.77	1.11	137.74	1.77	0.81	0.81
6.45	85.38	136.60	1.08	147.41	1.75	0.82	0.82
6.51	94.49	151.23	1.03	155.74	1.72	0.83	0.83
6.58	102.67	164.36	1.00	164.36	1.70	0.85	0.85
6.64	108.42	173.59	1.00	173.59	1.69	0.86	0.86
6.70	110.41	176.54	1.00	176.54	1.69	0.86	0.86
6.77	109.69	175.05	1.00	175.05	1.70	0.86	0.86
6.83	107.11	170.88	1.02	174.56	1.72	0.86	0.86
6.91	104.31	165.81	1.04	173.16	1.73	0.86	0.86
6.96	100.80	160.13	1.06	170.47	1.74	0.85	0.85
7.03	97.35	154.27	1.08	167.36	1.75	0.85	0.85
7.10	93.40	147.75	1.11	163.71	1.77	0.84	0.84
7.17	90.08	142.28	1.13	160.75	1.78	0.84	0.84
7.22	86.85	137.38	1.15	158.36	1.80	0.84	0.84
7.29	83.80	132.54	1.17	155.62	1.82	0.83	0.83
7.36	80.69	127.63	1.19	152.31	1.84	0.83	0.83
7.43	77.95	123.21	1.21	148.95	1.86	0.83	0.83
7.50	75.80	119.68	1.22	146.20	1.88	0.82	0.82
7.55	73.28	115.87	1.24	143.17	1.90	0.82	0.82
7.61	71.54	113.02	1.25	140.86	1.91	0.81	0.81
7.69	70.08	110.48	1.26	138.82	1.93	0.81	0.81
7.75	69.52	109.01	1.26	136.88	1.93	0.81	0.81
7.83	68.72	106.85	1.25	133.45	1.92	0.80	0.80
7.88	67.60	104.36	1.24	129.67	1.91	0.80	0.80
7.96	66.36	101.95	1.24	126.91	1.91	0.79	0.79
8.01	64.77	99.56	1.26	125.23	1.93	0.79	0.79
8.09	63.25	97.14	1.27	123.49	1.95	0.79	0.79
8.14	60.82	93.62	1.29	120.81	1.98	0.78	0.78
8.21	59.27	91.10	1.30	118.81	2.00	0.78	0.78
8.27	57.74	88.69	1.32	116.94	2.01	0.78	0.78
8.35	57.03	87.33	1.33	116.02	2.02	0.78	0.78
8.42	55.69	85.19	1.35	114.90	2.04	0.77	0.77
8.47	54.17	83.02	1.38	114.38	2.07	0.77	0.77
8.54	52.65	80.76	1.42	114.44	2.10	0.77	0.77
8.61	50.93	78.35	1.48	115.88	2.14	0.78	0.78
8.69	49.35	76.14	1.56	118.90	2.18	0.78	0.78
8.74	47.48	73.70	1.68	123.79	2.22	0.79	0.79
8.81	45.49	70.88	1.82	129.06	2.27	0.80	0.80
8.86	42.94	67.34	2.01	135.56	2.32	0.81	0.81
8.93	40.26	63.39	2.23	141.19	2.37	0.81	0.81
9.00	37.69	59.44	2.44	145.31	2.41	0.82	0.82
9.07	35.76	56.35	2.60	146.44	2.44	0.82	0.82
9.12	34.55	54.31	2.66	144.70	2.45	0.82	0.82
9.20	34.11	53.22	2.64	140.32	2.45	0.81	0.81
9.27	34.19	52.85	2.54	134.28	2.43	0.80	0.80
9.32	34.65	53.06	2.40	127.26	2.40	0.79	0.79
9.39	35.21	53.31	2.26	120.30	2.38	0.78	0.78
9.47	35.89	53.73	2.12	113.98	2.35	0.77	0.77

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.54	36.64	54.29	2.02	109.45	2.32	0.77	0.77
9.59	37.48	55.09	1.92	105.99	2.30	0.76	0.76
9.66	38.39	55.87	1.83	102.30	2.27	0.75	0.75
9.73	39.45	56.78	1.73	98.23	2.24	0.74	0.74
9.80	40.48	57.66	1.65	94.84	2.21	0.74	0.74
9.85	41.67	58.87	1.58	92.98	2.19	0.73	0.73
9.92	43.01	60.24	1.53	92.29	2.16	0.73	0.73
9.99	44.38	61.67	1.49	92.19	2.15	0.73	0.73
10.04	45.78	63.28	1.47	92.94	2.13	0.73	0.73
10.12	47.27	64.94	1.45	94.45	2.12	0.74	0.74
10.19	48.76	66.65	1.45	96.58	2.12	0.74	0.74
10.24	50.22	68.44	1.45	99.00	2.12	0.75	0.75
10.31	51.43	69.80	1.45	101.19	2.12	0.75	0.75
10.38	52.61	71.14	1.45	103.50	2.12	0.75	0.75
10.46	53.46	71.99	1.46	105.20	2.13	0.76	0.76
10.50	54.08	72.66	1.47	106.58	2.13	0.76	0.76
10.58	54.45	72.87	1.47	107.48	2.13	0.76	0.76
10.65	54.59	72.81	1.49	108.24	2.14	0.76	0.76
10.70	54.65	72.72	1.50	108.87	2.15	0.76	0.76
10.77	54.56	72.19	1.48	107.13	2.14	0.76	0.76
10.84	54.62	71.71	1.45	103.87	2.12	0.76	0.76
10.91	54.80	71.35	1.41	100.67	2.09	0.75	0.75
10.96	55.39	71.74	1.39	99.63	2.08	0.75	0.75
11.04	56.55	72.82	1.38	100.27	2.07	0.75	0.75
11.11	57.92	74.16	1.36	101.15	2.06	0.75	0.75
11.16	57.77	73.80	1.37	100.93	2.06	0.75	0.75
11.22	58.86	74.82	1.36	101.46	2.05	0.75	0.75
11.29	60.05	75.94	1.35	102.28	2.04	0.75	0.75
11.37	62.78	78.92	1.33	104.99	2.03	0.76	0.76
11.44	63.84	79.99	1.33	106.69	2.03	0.76	0.76
11.48	64.81	81.05	1.34	108.51	2.03	0.76	0.76
11.56	65.93	82.15	1.34	110.20	2.04	0.77	0.77
11.63	67.48	83.77	1.34	112.41	2.04	0.77	0.77
11.70	69.16	85.53	1.34	114.80	2.04	0.77	0.77
11.76	71.08	87.69	1.34	117.75	2.04	0.78	0.78
11.83	72.76	89.44	1.35	120.36	2.04	0.78	0.78
11.90	73.97	90.65	1.35	122.42	2.05	0.79	0.79
11.95	74.38	90.98	1.36	123.52	2.05	0.79	0.79
12.02	74.07	90.32	1.37	123.34	2.06	0.79	0.79
12.09	73.38	89.17	1.37	122.29	2.06	0.79	0.79
12.16	72.42	87.69	1.38	120.61	2.07	0.78	0.78
12.21	71.08	85.87	1.38	118.52	2.07	0.78	0.78
12.28	69.31	83.44	1.39	115.99	2.08	0.78	0.78
12.36	67.41	80.90	1.40	113.55	2.09	0.77	0.77
12.41	65.30	78.27	1.43	111.63	2.10	0.77	0.77
12.48	62.75	75.11	1.47	110.44	2.13	0.77	0.77
12.55	60.04	71.81	1.53	110.20	2.17	0.77	0.77
12.60	57.46	68.79	1.62	111.24	2.20	0.77	0.77

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.67	55.66	66.53	1.69	112.30	2.23	0.77	0.77
12.75	54.11	64.54	1.76	113.29	2.25	0.77	0.77
12.82	53.72	63.85	1.78	113.62	2.26	0.77	0.77
12.87	53.46	63.42	1.80	113.94	2.26	0.77	0.77
12.94	53.87	63.61	1.78	113.46	2.26	0.77	0.77
13.01	53.88	63.35	1.78	112.48	2.26	0.77	0.77
13.06	54.23	63.52	1.74	110.54	2.25	0.77	0.77
13.13	54.44	63.45	1.70	108.11	2.23	0.76	0.76
13.21	54.82	63.55	1.67	105.83	2.22	0.76	0.76
13.26	55.22	63.80	1.64	104.52	2.21	0.76	0.76
13.33	55.51	63.86	1.63	104.03	2.21	0.76	0.76
13.40	55.66	63.79	1.63	103.83	2.21	0.76	0.76
13.47	55.75	63.66	1.63	103.73	2.21	0.75	0.75
13.52	55.82	63.60	1.63	103.96	2.21	0.76	0.76
13.59	55.63	63.18	1.65	104.43	2.22	0.76	0.76
13.67	55.33	62.64	1.68	105.13	2.22	0.76	0.76
13.72	54.98	62.14	1.71	106.10	2.23	0.76	0.76
13.79	55.01	61.97	1.72	106.89	2.24	0.76	0.76
13.86	55.51	62.30	1.72	107.34	2.24	0.76	0.76
13.93	56.38	63.01	1.70	107.27	2.23	0.76	0.76
13.98	57.65	64.24	1.67	107.22	2.22	0.76	0.76
14.06	58.68	65.11	1.65	107.34	2.21	0.76	0.76
14.13	59.23	65.47	1.64	107.40	2.21	0.76	0.76
14.18	58.27	64.28	1.66	106.97	2.22	0.76	0.76
14.24	57.15	62.85	1.68	105.73	2.23	0.76	0.76
14.31	55.88	61.26	1.70	103.88	2.23	0.76	0.76
14.38	55.22	60.30	1.69	101.96	2.23	0.75	0.75
14.46	54.26	59.04	1.70	100.58	2.23	0.75	0.75
14.53	53.14	57.64	1.74	100.09	2.24	0.75	0.75
14.58	51.83	56.12	1.79	100.21	2.26	0.75	0.75
14.65	50.31	54.32	1.85	100.58	2.28	0.75	0.75
14.72	49.23	52.99	1.91	101.00	2.30	0.75	0.75
14.77	48.67	52.30	1.95	102.23	2.31	0.75	0.75
14.84	48.67	52.15	2.01	104.84	2.32	0.76	0.76
14.92	49.35	52.73	2.05	108.28	2.33	0.76	0.76
14.96	51.03	54.44	2.07	112.52	2.34	0.77	0.77
15.03	54.29	57.72	2.00	115.47	2.32	0.78	0.78
15.11	60.10	63.61	1.84	116.80	2.28	0.78	0.78
15.18	67.57	71.13	1.65	117.21	2.21	0.78	0.78
15.23	78.51	82.24	1.46	119.86	2.12	0.78	0.78
15.30	89.86	93.54	1.34	125.72	2.04	0.79	0.79
15.37	100.23	103.74	1.28	132.86	1.97	0.80	0.80
15.43	107.42	110.67	1.24	137.48	1.91	0.81	0.81
15.50	111.92	114.79	1.22	139.53	1.87	0.81	0.81
15.56	115.53	118.10	1.20	141.19	1.84	0.81	0.81
15.62	118.21	120.55	1.19	143.41	1.84	0.82	0.82
15.68	121.44	123.58	1.19	147.00	1.84	0.82	0.82
15.76	124.95	126.82	1.19	151.17	1.84	0.83	0.83

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.82	129.03	130.70	1.19	155.90	1.84	0.83	0.83
15.89	132.97	134.38	1.19	160.31	1.84	0.84	0.84
15.96	137.23	138.31	1.19	164.70	1.84	0.85	0.85
16.03	140.90	141.65	1.19	168.44	1.84	0.85	0.85
16.08	142.76	143.29	1.19	171.05	1.84	0.85	0.85
16.15	144.10	144.26	1.20	172.98	1.85	0.86	0.86
16.21	144.53	144.45	1.21	174.34	1.86	0.86	0.86
16.27	145.65	145.22	1.21	175.87	1.86	0.86	0.86
16.34	146.12	145.34	1.22	176.78	1.87	0.86	0.86
16.41	146.21	145.10	1.22	177.17	1.88	0.86	0.86
16.48	145.56	144.08	1.23	176.63	1.88	0.86	0.86
16.54	143.76	141.97	1.23	174.91	1.89	0.86	0.86
16.61	141.49	139.38	1.24	172.44	1.90	0.86	0.86
16.68	138.50	136.09	1.24	169.14	1.91	0.85	0.85
16.75	135.21	132.52	1.25	165.48	1.92	0.85	0.85
16.81	131.48	128.53	1.25	160.96	1.92	0.84	0.84
16.88	128.06	124.85	1.25	156.12	1.92	0.84	0.84
16.95	124.86	121.38	1.25	151.44	1.92	0.83	0.83
17.00	121.53	117.91	1.25	147.24	1.92	0.82	0.82
17.06	117.21	113.42	1.26	142.71	1.93	0.82	0.82
17.13	111.08	107.21	1.27	136.60	1.96	0.81	0.81
17.20	99.11	95.40	1.32	125.97	2.02	0.79	0.79
17.27	88.39	84.81	1.39	117.55	2.08	0.78	0.78
17.33	77.64	74.25	1.50	111.67	2.15	0.77	0.77
17.40	70.80	67.50	1.64	110.45	2.21	0.77	0.77
17.47	62.19	59.04	1.91	112.96	2.30	0.77	0.77
17.52	53.58	50.66	2.36	119.35	2.40	0.78	0.78
17.59	46.59	43.80	2.87	125.61	2.48	0.79	0.79
17.67	41.39	38.69	3.37	130.21	2.55	0.80	0.80
17.73	39.66	36.92	3.54	130.76	2.57	0.80	0.80
17.78	38.20	35.44	3.71	131.64	2.60	0.80	0.80
17.86	38.76	35.86	3.61	129.42	2.58	0.80	0.80
17.93	40.99	37.84	3.29	124.51	2.54	0.79	0.79
17.98	47.33	43.75	2.63	114.94	2.45	0.77	0.77
18.05	52.61	48.59	2.23	108.48	2.37	0.76	0.76
18.13	55.25	50.91	2.07	105.54	2.34	0.76	0.76
18.18	54.16	49.79	2.13	106.27	2.35	0.76	0.76
18.25	50.71	46.41	2.36	109.72	2.40	0.77	0.77
18.33	46.24	42.08	2.73	115.03	2.46	0.77	0.77
18.38	40.90	37.00	3.29	121.84	2.54	0.79	0.79
18.45	36.39	32.68	3.88	126.68	2.61	0.79	0.79
18.52	32.53	29.00	4.46	129.38	2.68	0.80	0.80
18.57	29.55	26.18	4.92	128.81	2.72	0.80	0.80
18.65	27.25	23.97	5.25	125.83	2.75	0.79	0.79
18.72	25.20	22.01	5.55	122.12	2.78	0.79	0.79
18.77	23.55	20.46	5.77	117.94	2.79	0.78	0.78
18.84	21.88	18.86	6.07	114.38	2.82	0.77	0.77
18.91	20.51	17.55	6.31	110.77	2.84	0.77	0.77

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.98	20.26	17.27	6.24	107.78	2.83	0.76	0.76
19.04	22.93	19.66	5.22	102.69	2.75	0.75	0.75
19.11	29.02	25.14	3.74	93.97	2.60	0.74	0.74
19.18	36.14	31.54	2.75	86.67	2.46	0.72	0.72
19.24	41.11	35.98	2.29	82.24	2.38	0.70	0.71
19.29	43.04	37.67	2.12	79.99	2.35	0.58	0.71
19.36	43.28	37.80	2.09	78.94	2.34	0.53	0.70
19.44	42.82	37.28	2.12	79.20	2.35	0.55	0.71
19.50	41.92	36.36	2.24	81.61	2.37	0.67	0.71
19.55	40.58	35.07	2.43	85.37	2.41	0.72	0.72
19.62	38.59	33.16	2.76	91.49	2.47	0.73	0.73
19.69	37.13	31.74	3.07	97.48	2.51	0.74	0.74
19.75	35.42	30.12	3.42	102.96	2.56	0.75	0.75
19.82	33.62	28.42	3.77	107.19	2.60	0.76	0.76
19.89	30.60	25.66	4.28	109.87	2.66	0.77	0.77
19.96	27.77	23.09	4.71	108.73	2.70	0.76	0.76
20.04	25.72	21.23	4.93	104.69	2.72	0.76	0.76
20.09	23.98	19.67	5.11	100.48	2.74	0.75	0.75
20.16	23.49	19.19	5.06	97.19	2.73	0.74	0.74
20.23	22.21	18.02	5.42	97.67	2.76	0.74	0.74
20.30	22.68	18.37	5.40	99.10	2.76	0.75	0.75
20.35	26.35	21.52	4.62	99.45	2.69	0.75	0.75
20.42	35.06	29.04	3.27	95.00	2.54	0.74	0.74
20.49	44.62	37.32	2.46	91.93	2.42	0.73	0.73
20.54	52.82	44.43	2.05	90.87	2.33	0.73	0.73
20.61	59.97	50.60	1.79	90.54	2.26	0.73	0.73
20.69	67.27	56.89	1.60	91.11	2.19	0.73	0.73
20.74	75.27	63.86	1.46	93.15	2.13	0.73	0.73
20.81	82.91	70.48	1.37	96.70	2.06	0.74	0.74
20.88	90.19	76.77	1.32	101.17	2.01	0.75	0.75
20.95	95.41	81.23	1.29	104.74	1.98	0.76	0.76
21.00	99.77	84.96	1.27	107.94	1.95	0.76	0.76
21.07	104.37	88.84	1.26	111.49	1.93	0.77	0.77
21.14	109.75	93.38	1.24	115.84	1.91	0.78	0.78
21.22	113.97	96.87	1.23	119.37	1.89	0.78	0.78
21.27	115.65	98.15	1.23	121.03	1.89	0.78	0.78
21.34	114.47	96.87	1.24	120.29	1.91	0.78	0.78
21.41	112.07	94.55	1.25	118.47	1.92	0.78	0.78
21.46	109.49	92.14	1.26	116.40	1.94	0.78	0.78
21.53	108.75	91.29	1.27	115.62	1.94	0.78	0.78
21.60	108.25	90.66	1.27	115.11	1.95	0.77	0.77
21.67	109.06	91.16	1.27	115.68	1.95	0.78	0.78
21.72	110.37	92.14	1.27	116.82	1.95	0.78	0.78
21.80	113.60	94.74	1.26	119.36	1.93	0.78	0.78
21.87	117.48	97.91	1.25	122.33	1.92	0.79	0.79
21.94	120.50	100.32	1.24	124.50	1.91	0.79	0.79
21.99	122.93	102.28	1.23	126.18	1.90	0.79	0.79
22.06	125.10	103.97	1.23	127.52	1.88	0.79	0.79

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.11	128.86	107.10	1.21	129.95	1.87	0.80	0.80
22.18	134.33	111.65	1.19	133.20	1.84	0.80	0.80
22.26	140.42	116.73	1.17	136.39	1.81	0.81	0.81
22.33	145.12	120.59	1.15	138.53	1.80	0.81	0.81
22.38	147.45	122.46	1.14	139.44	1.79	0.81	0.81
22.44	148.29	123.00	1.13	139.27	1.78	0.81	0.81
22.51	147.77	122.39	1.13	137.86	1.78	0.81	0.81
22.58	145.56	120.35	1.12	135.29	1.78	0.81	0.81
22.65	141.02	116.34	1.13	130.91	1.78	0.80	0.80
22.73	135.73	111.70	1.13	126.14	1.78	0.79	0.79
22.77	129.51	106.32	1.14	121.57	1.79	0.79	0.79
22.85	123.30	100.84	1.16	117.39	1.81	0.78	0.78
22.92	116.96	95.29	1.18	112.86	1.83	0.77	0.77
22.97	110.58	89.82	1.20	107.51	1.85	0.76	0.76
23.04	100.73	81.38	1.22	99.39	1.88	0.75	0.75
23.11	92.37	74.27	1.24	91.89	1.90	0.73	0.73
23.17	84.75	67.84	1.25	84.93	1.92	0.72	0.72
23.23	80.93	64.61	1.25	80.95	1.92	0.63	0.71
23.31	75.39	59.91	1.27	75.86	1.94	0.41	0.70
23.38	70.23	55.53	1.28	71.23	1.97	0.28	0.69
23.45	66.04	51.95	1.30	67.57	1.99	0.21	0.68
23.50	62.62	49.03	1.32	64.93	2.02	0.17	0.67
23.57	59.05	45.91	1.38	63.13	2.07	0.15	0.67
23.65	55.69	42.92	1.47	63.05	2.13	0.14	0.67
23.70	53.11	40.55	1.64	66.47	2.21	0.19	0.67
23.77	52.46	39.76	1.82	72.24	2.27	0.31	0.69
23.84	53.64	40.47	1.94	78.44	2.30	0.51	0.70
23.91	56.59	42.68	1.92	82.16	2.30	0.70	0.71
23.96	62.09	47.02	1.80	84.46	2.26	0.72	0.72
24.03	69.80	53.14	1.63	86.46	2.21	0.72	0.72
24.10	78.82	60.38	1.48	89.49	2.14	0.73	0.73
24.15	88.76	68.50	1.37	93.97	2.06	0.74	0.74
24.22	98.80	76.70	1.30	99.97	2.00	0.75	0.75
24.30	108.07	84.29	1.26	106.23	1.94	0.76	0.76
24.34	116.59	91.27	1.23	112.49	1.89	0.77	0.77
24.42	125.26	98.25	1.21	118.93	1.86	0.78	0.78
24.49	135.64	106.54	1.19	126.90	1.84	0.79	0.79
24.56	144.72	113.69	1.18	133.92	1.82	0.80	0.80
24.61	151.81	119.24	1.17	139.76	1.82	0.81	0.81
24.68	156.50	122.76	1.17	143.80	1.82	0.82	0.82
24.75	160.60	125.81	1.17	147.24	1.82	0.82	0.82
24.82	164.14	128.44	1.17	149.82	1.81	0.83	0.83
24.87	167.97	131.42	1.16	152.07	1.80	0.83	0.83
24.95	170.92	133.62	1.15	153.29	1.79	0.83	0.83
25.00	175.93	137.64	1.13	154.88	1.78	0.83	0.83
25.07	182.18	142.62	1.10	156.58	1.76	0.84	0.84
25.15	189.11	148.10	1.07	157.96	1.74	0.84	0.84
25.20	193.36	151.40	1.05	159.26	1.73	0.84	0.84

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.27	195.38	152.81	1.05	159.83	1.73	0.84	0.84
25.34	195.29	152.46	1.05	160.06	1.73	0.84	0.84
25.40	193.58	150.81	1.06	160.01	1.74	0.84	0.84
25.47	190.41	147.87	1.08	160.20	1.75	0.84	0.84
25.54	187.61	145.23	1.11	160.76	1.76	0.84	0.84
25.61	185.47	143.11	1.13	161.38	1.78	0.84	0.84
25.66	183.54	141.22	1.15	161.91	1.79	0.84	0.84
25.73	181.46	139.15	1.16	161.82	1.81	0.84	0.84
25.80	179.47	137.17	1.18	161.29	1.82	0.84	0.84
25.86	177.45	135.25	1.19	160.42	1.83	0.84	0.84
25.93	176.95	134.62	1.19	160.09	1.84	0.84	0.84
25.99	176.70	134.20	1.19	159.71	1.84	0.84	0.84
26.06	177.38	134.54	1.19	159.80	1.83	0.84	0.84
26.14	177.32	134.25	1.19	159.64	1.84	0.84	0.84
26.19	177.51	134.20	1.19	159.79	1.84	0.84	0.84
26.25	177.39	133.84	1.19	159.75	1.84	0.84	0.84
26.32	178.13	134.16	1.19	160.32	1.84	0.84	0.84
26.39	179.94	135.32	1.20	161.79	1.84	0.84	0.84
26.46	180.53	135.44	1.20	162.64	1.85	0.84	0.84
26.51	182.61	136.81	1.20	164.51	1.85	0.85	0.85
26.58	185.22	138.56	1.20	166.59	1.85	0.85	0.85
26.64	192.06	143.80	1.19	170.99	1.84	0.85	0.85
26.71	199.34	149.39	1.17	175.12	1.82	0.86	0.86
26.77	207.98	156.04	1.15	179.83	1.80	0.86	0.86
26.85	215.44	161.59	1.14	184.56	1.79	0.87	0.87
26.91	220.13	164.82	1.15	189.08	1.79	0.87	0.87
26.98	226.22	169.16	1.15	194.00	1.79	0.88	0.88
27.04	231.85	173.20	1.15	198.31	1.79	0.89	0.89
27.11	236.88	176.80	1.14	201.41	1.79	0.89	0.89
27.17	236.32	176.01	1.15	201.87	1.79	0.89	0.89
27.23	233.84	173.71	1.16	200.81	1.80	0.89	0.89
27.30	231.57	171.65	1.16	199.34	1.81	0.89	0.89
27.36	230.35	170.49	1.16	198.04	1.81	0.88	0.88
27.43	229.36	169.51	1.16	196.78	1.81	0.88	0.88
27.50	228.46	168.59	1.16	195.44	1.81	0.88	0.88
27.57	226.97	167.26	1.16	193.76	1.80	0.88	0.88
27.63	225.57	166.03	1.16	191.96	1.80	0.88	0.88
27.70	224.92	165.40	1.15	190.43	1.80	0.88	0.88
27.76	225.38	165.71	1.14	189.07	1.79	0.87	0.87
27.83	227.69	167.49	1.12	188.21	1.78	0.87	0.87
27.90	230.76	169.74	1.11	188.33	1.77	0.87	0.87
27.96	235.48	173.23	1.10	189.76	1.76	0.88	0.88
28.02	242.07	178.21	1.07	191.40	1.74	0.88	0.88
28.09	250.28	184.47	1.04	192.34	1.73	0.88	0.88
28.16	252.30	185.74	1.04	192.98	1.72	0.88	0.88
28.22	257.74	189.93	1.01	191.24	1.71	0.88	0.88
28.28	263.65	194.65	1.00	194.65	1.69	0.88	0.88
28.35	278.57	206.87	1.00	206.87	1.64	0.89	0.89

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.41	283.67	210.42	1.00	210.42	1.61	0.90	0.90
28.48	284.75	210.96	1.00	210.96	1.61	0.90	0.90
28.55	279.41	206.70	1.00	206.70	1.62	0.89	0.89
28.62	271.17	200.28	1.00	200.28	1.63	0.89	0.89
28.68	252.69	185.93	1.00	185.93	1.65	0.87	0.87
28.74	232.92	170.57	1.00	170.57	1.68	0.85	0.85
28.81	214.11	156.14	1.00	156.14	1.69	0.84	0.84
28.88	201.39	146.66	1.00	146.66	1.69	0.82	0.82
28.94	188.67	136.90	1.00	136.90	1.70	0.81	0.81
29.00	178.53	128.90	1.03	133.28	1.72	0.80	0.80
29.07	172.54	123.98	1.07	133.03	1.74	0.80	0.80
29.14	169.31	121.26	1.09	132.45	1.75	0.80	0.80
29.20	169.06	120.89	1.10	132.52	1.76	0.80	0.80
29.27	172.38	123.25	1.09	133.83	1.75	0.80	0.80
29.34	178.60	127.80	1.06	136.11	1.74	0.81	0.81
29.40	188.11	134.84	1.04	139.70	1.72	0.81	0.81
29.47	197.53	141.65	1.02	144.20	1.71	0.82	0.82
29.53	206.26	147.87	1.01	149.63	1.71	0.83	0.83
29.60	213.87	153.22	1.01	154.55	1.71	0.83	0.83
29.66	222.14	159.12	1.00	159.12	1.70	0.84	0.84
29.73	231.71	166.13	1.00	166.13	1.69	0.85	0.85
29.80	241.01	172.98	1.00	172.98	1.68	0.86	0.86
29.86	250.12	179.78	1.00	179.78	1.66	0.86	0.86
29.93	259.35	186.70	1.00	186.70	1.65	0.87	0.87
29.99	268.24	193.22	1.00	193.22	1.64	0.88	0.88
30.06	275.46	198.19	1.00	198.19	1.63	0.88	0.88
30.12	280.55	201.65	1.00	201.65	1.62	0.89	0.89
30.19	283.16	203.29	1.00	203.29	1.62	0.89	0.89
30.25	283.29	203.14	1.00	203.14	1.63	0.89	0.89
30.32	281.73	201.77	1.00	201.77	1.63	0.89	0.89
30.39	280.96	200.94	1.00	200.94	1.64	0.89	0.89
30.45	281.21	200.86	1.00	200.86	1.64	0.89	0.89
30.52	282.57	201.66	1.00	201.66	1.64	0.89	0.89
30.58	284.10	202.51	1.00	202.51	1.64	0.89	0.89
30.65	285.18	203.04	1.00	203.04	1.63	0.89	0.89
30.71	285.39	202.97	1.00	202.97	1.63	0.89	0.89
30.78	284.92	202.39	1.00	202.39	1.62	0.89	0.89
30.84	285.67	202.69	1.00	202.69	1.61	0.89	0.89
30.91	287.33	203.64	1.00	203.64	1.60	0.89	0.89
30.98	290.53	205.68	1.00	205.68	1.59	0.89	0.89
31.04	292.86	207.12	1.00	207.12	1.60	0.89	0.89
31.11	295.35	208.62	1.00	208.62	1.61	0.90	0.90
31.17	297.68	210.05	1.00	210.05	1.61	0.90	0.90
31.24	302.25	213.03	1.00	213.03	1.61	0.90	0.90
31.30	306.51	215.81	1.00	215.81	1.60	0.90	0.90
31.37	309.26	217.50	1.00	217.50	1.60	0.91	0.91
31.43	309.80	217.66	1.00	217.66	1.60	0.91	0.91
31.50	309.46	217.15	1.00	217.15	1.60	0.90	0.90

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.56	309.73	217.10	1.00	217.10	1.59	0.90	0.90
31.63	309.09	216.42	1.00	216.42	1.59	0.90	0.90
31.70	307.13	214.78	1.00	214.78	1.60	0.90	0.90
31.76	303.87	212.24	1.00	212.24	1.61	0.90	0.90
31.83	300.32	209.50	1.00	209.50	1.62	0.90	0.90
31.90	298.15	207.73	1.00	207.73	1.62	0.90	0.90
31.96	294.98	205.28	1.00	205.28	1.62	0.89	0.89
32.03	293.27	203.85	1.00	203.85	1.62	0.89	0.89
32.10	291.99	202.73	1.00	202.73	1.62	0.89	0.89
32.16	292.49	202.86	1.00	202.86	1.62	0.89	0.89
32.23	292.86	202.89	1.00	202.89	1.62	0.89	0.89
32.29	291.52	201.74	1.00	201.74	1.63	0.89	0.89
32.35	291.90	201.77	1.00	201.77	1.63	0.89	0.89
32.41	289.50	199.90	1.00	199.90	1.63	0.89	0.89
32.48	291.34	200.94	1.00	200.94	1.63	0.89	0.89
32.55	294.88	203.19	1.00	203.19	1.62	0.89	0.89
32.61	305.51	210.33	1.00	210.33	1.58	0.90	0.90
32.68	313.53	215.64	1.00	215.64	1.55	0.90	0.90
32.75	318.48	218.82	1.00	218.82	1.51	0.91	0.91
32.81	316.74	217.38	1.00	217.38	1.50	0.90	0.90
32.88	311.76	213.73	1.00	213.73	1.49	0.90	0.90
32.94	305.33	209.07	1.00	209.07	1.49	0.90	0.90
33.02	300.70	205.63	1.00	205.63	1.49	0.89	0.89
33.07	299.50	204.61	1.00	204.61	1.49	0.89	0.89
33.14	298.81	203.93	1.00	203.93	1.50	0.89	0.89
33.21	299.25	204.00	1.00	204.00	1.53	0.89	0.89
33.27	298.02	202.95	1.00	202.95	1.56	0.89	0.89
33.34	301.10	204.83	1.00	204.83	1.59	0.89	0.89
33.40	306.82	208.53	1.00	208.53	1.59	0.90	0.90
33.47	316.17	214.68	1.00	214.68	1.57	0.90	0.90
33.53	317.04	215.07	1.00	215.07	1.57	0.90	0.90
33.60	314.21	212.89	1.00	212.89	1.57	0.90	0.90
33.67	309.92	209.75	1.00	209.75	1.56	0.90	0.90
33.73	310.65	210.03	1.00	210.03	1.55	0.90	0.90
33.79	311.90	210.67	1.00	210.67	1.53	0.90	0.90
33.86	312.18	210.62	1.00	210.62	1.51	0.90	0.90
33.93	310.58	209.32	1.00	209.32	1.51	0.90	0.90
34.00	310.47	209.01	1.00	209.01	1.52	0.90	0.90
34.06	309.07	207.85	1.00	207.85	1.53	0.90	0.90
34.13	310.65	208.70	1.00	208.70	1.52	0.90	0.90
34.19	312.16	209.51	1.00	209.51	1.52	0.90	0.90
34.26	315.15	211.31	1.00	211.31	1.51	0.90	0.90
34.33	316.95	212.30	1.00	212.30	1.49	0.90	0.90
34.39	316.02	211.46	1.00	211.46	1.49	0.90	0.90
34.45	311.79	208.42	1.00	208.42	1.49	0.90	0.90
34.52	306.07	204.37	1.00	204.37	1.49	0.89	0.89
34.58	297.40	198.33	1.00	198.33	1.50	0.89	0.89
34.65	287.70	191.63	1.00	191.63	1.52	0.88	0.88

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.71	269.52	179.24	1.00	179.24	1.57	0.86	0.86
34.78	251.14	166.77	1.00	166.77	1.62	0.85	0.85
34.85	231.59	152.16	1.00	152.16	1.68	0.83	0.83
34.92	216.80	140.84	1.04	147.13	1.73	0.82	0.82
34.98	197.55	126.21	1.15	145.34	1.80	0.82	0.82
35.05	176.20	110.06	1.23	135.73	1.89	0.81	0.81
35.12	153.88	93.65	1.31	122.78	2.00	0.79	0.79
35.18	134.33	79.72	1.43	114.09	2.11	0.77	0.77
35.25	117.10	68.17	1.57	107.25	2.18	0.76	0.76
35.31	99.08	56.52	1.77	100.22	2.26	0.75	0.75
35.38	81.61	45.35	2.13	96.75	2.35	0.74	0.74
35.45	66.59	35.74	2.83	101.28	2.48	0.75	0.75
35.52	56.71	29.48	3.70	109.01	2.59	0.76	0.76
35.58	50.93	25.96	4.28	111.03	2.66	0.77	0.77
35.64	47.77	24.11	4.55	109.61	2.68	0.77	0.77
35.70	46.34	23.30	4.58	106.81	2.69	0.76	0.76
35.76	46.25	23.28	4.45	103.56	2.67	0.75	0.75
35.84	45.39	22.78	4.48	102.01	2.68	0.75	0.75
35.91	43.53	21.64	4.73	102.32	2.70	0.75	0.75
35.98	40.92	20.06	5.18	103.95	2.74	0.76	0.76
36.03	38.15	18.41	5.74	105.77	2.79	0.76	0.76
36.10	36.75	17.57	6.06	106.47	2.82	0.76	0.76
36.17	36.38	17.32	6.14	106.43	2.82	0.76	0.76
36.22	36.79	17.54	6.03	105.73	2.81	0.76	0.76
36.30	37.05	17.67	5.94	104.93	2.81	0.76	0.76
36.37	36.53	17.38	5.92	102.88	2.81	0.75	0.75
36.44	36.62	17.47	5.66	98.95	2.78	0.75	0.75
36.49	38.28	18.49	5.10	94.26	2.74	0.74	0.74
36.57	42.98	21.23	4.27	90.72	2.66	0.73	0.73
36.64	48.70	24.56	3.63	89.20	2.59	0.73	0.73
36.69	53.43	27.30	3.28	89.42	2.54	0.73	0.73
36.76	52.82	26.80	3.45	92.35	2.56	0.73	0.73
36.82	49.91	24.95	3.86	96.37	2.61	0.74	0.74
36.88	44.63	21.75	4.65	101.18	2.69	0.75	0.75
36.95	40.82	19.48	5.36	104.35	2.76	0.76	0.76
37.03	37.87	17.76	5.97	105.93	2.81	0.76	0.76
37.10	36.58	17.00	6.22	105.74	2.83	0.76	0.76
37.14	36.64	17.01	6.25	106.23	2.83	0.76	0.76
37.22	37.20	17.24	6.31	108.70	2.84	0.76	0.76
37.29	37.91	17.51	6.42	112.41	2.84	0.77	0.77
37.34	40.28	18.75	6.16	115.48	2.82	0.78	0.78
37.41	48.43	23.25	4.96	115.23	2.72	0.77	0.77
37.49	65.24	32.93	3.37	111.00	2.55	0.77	0.77
37.56	84.89	44.61	2.41	107.59	2.41	0.76	0.76
37.60	99.65	53.49	2.04	109.02	2.33	0.76	0.76
37.67	102.74	55.11	2.04	112.26	2.33	0.77	0.77
37.75	97.45	51.57	2.25	115.89	2.37	0.78	0.78
37.82	89.00	46.27	2.57	118.87	2.44	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
37.87	82.79	42.64	2.74	116.68	2.46	0.78	0.78
37.94	81.83	42.33	2.57	108.88	2.44	0.76	0.76
38.01	84.62	44.32	2.27	100.70	2.38	0.75	0.75
38.06	93.35	49.85	1.94	96.70	2.30	0.74	0.74
38.14	105.64	57.47	1.70	97.63	2.23	0.74	0.74
38.21	119.70	66.32	1.52	100.91	2.16	0.75	0.75
38.26	136.06	76.95	1.39	106.89	2.08	0.76	0.76
38.33	153.46	88.60	1.30	115.37	1.99	0.78	0.78
38.39	174.79	103.32	1.24	127.65	1.90	0.79	0.79
38.46	192.60	115.69	1.18	136.97	1.83	0.81	0.81
38.52	208.21	126.20	1.14	144.44	1.79	0.82	0.82
38.59	220.86	134.20	1.13	151.54	1.78	0.83	0.83
38.66	233.74	142.14	1.12	159.51	1.78	0.84	0.84
38.71	247.01	150.49	1.11	167.01	1.77	0.85	0.85
38.78	258.64	157.87	1.09	172.72	1.76	0.86	0.86
38.85	271.35	166.03	1.07	178.27	1.74	0.86	0.86
38.92	281.95	172.18	1.08	186.33	1.75	0.87	0.87
38.98	287.39	174.47	1.11	194.42	1.77	0.88	0.88
39.05	287.82	173.43	1.15	199.28	1.80	0.89	0.89
39.12	290.25	174.74	1.15	200.67	1.80	0.89	0.89
39.18	289.84	175.24	1.12	196.50	1.77	0.88	0.88
39.24	292.55	178.12	1.07	190.75	1.74	0.88	0.88
39.31	294.35	180.05	1.03	184.88	1.72	0.87	0.87
39.38	304.42	187.56	1.00	187.56	1.69	0.87	0.87
39.44	316.05	196.88	1.00	196.88	1.63	0.88	0.88
39.51	329.29	204.99	1.00	204.99	1.56	0.89	0.89
39.57	344.03	214.06	1.00	214.06	1.52	0.90	0.90
39.64	353.41	219.74	1.00	219.74	1.51	0.91	0.91
39.70	362.68	225.33	1.00	225.33	1.52	0.91	0.91
39.77	362.46	225.00	1.00	225.00	1.54	0.91	0.91
39.83	362.52	224.85	1.00	224.85	1.56	0.91	0.91
39.90	364.79	226.04	1.00	226.04	1.56	0.91	0.91
39.97	372.60	230.70	1.00	230.70	1.55	0.92	0.92
40.03	390.94	241.92	1.00	241.92	1.49	0.93	0.93
40.09	410.92	254.15	1.00	254.15	1.42	0.94	0.94
40.16	439.21	271.49	1.00	271.49	1.36	0.95	0.95
40.23	470.76	290.85	1.00	290.85	1.30	0.97	0.97
40.29	501.85	309.89	1.00	309.89	1.27	0.99	0.99
40.36	537.04	331.44	1.00	331.44	1.25	1.00	1.00
40.42	561.59	346.37	1.00	346.37	1.25	1.01	1.01
40.49	577.71	356.03	1.00	356.03	1.26	1.02	1.02
40.56	580.07	357.14	1.00	357.14	1.29	1.02	1.02
40.62	588.65	362.13	1.00	362.13	1.31	1.02	1.02
40.69	592.46	364.15	1.00	364.15	1.32	1.02	1.02
40.75	601.23	369.26	1.00	369.26	1.32	1.03	1.03
40.82	596.63	366.08	1.00	366.08	1.35	1.03	1.03
40.88	600.51	368.14	1.00	368.14	1.36	1.03	1.03
40.95	592.61	362.94	1.00	362.94	1.38	1.02	1.02

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
41.02	602.75	368.84	1.00	368.84	1.36	1.03	1.03
41.08	611.48	373.88	1.00	373.88	1.34	1.03	1.03
41.15	630.29	385.10	1.00	385.10	1.29	1.04	1.04
41.22	640.36	390.91	1.00	390.91	1.26	1.04	1.04
41.27	657.02	400.81	1.00	400.81	1.24	1.05	1.05
41.35	667.75	406.98	1.00	406.98	1.25	1.05	1.05
41.41	675.71	411.50	1.00	411.50	1.27	1.05	1.05
41.48	667.59	406.16	1.00	406.16	1.29	1.05	1.05
41.54	658.64	400.36	1.00	400.36	1.29	1.05	1.05
41.61	642.41	390.10	1.00	390.10	1.29	1.04	1.04
41.67	626.78	380.24	1.00	380.24	1.28	1.04	1.04
41.74	604.06	366.07	1.00	366.07	1.29	1.03	1.03
41.80	581.71	352.17	1.00	352.17	1.31	1.02	1.02
41.87	564.36	341.35	1.00	341.35	1.36	1.01	1.01
41.94	552.89	334.07	1.00	334.07	1.40	1.00	1.00
42.00	536.73	323.97	1.00	323.97	1.44	1.00	1.00
42.07	516.61	311.51	1.00	311.51	1.45	0.99	0.99
42.13	499.95	301.15	1.00	301.15	1.44	0.98	0.98
42.20	504.30	303.53	1.00	303.53	1.41	0.98	0.98
42.27	519.78	312.61	1.00	312.61	1.39	0.99	0.99
42.33	537.97	323.34	1.00	323.34	1.36	1.00	1.00
42.39	545.55	327.66	1.00	327.66	1.34	1.00	1.00
42.45	547.26	328.41	1.00	328.41	1.35	1.00	1.00
42.52	551.02	330.39	1.00	330.39	1.36	1.00	1.00
42.59	549.75	329.33	1.00	329.33	1.38	1.00	1.00
42.66	553.63	331.38	1.00	331.38	1.38	1.00	1.00
42.72	552.17	330.21	1.00	330.21	1.38	1.00	1.00
42.79	541.82	323.72	1.00	323.72	1.40	1.00	1.00
42.85	527.49	314.85	1.00	314.85	1.42	0.99	0.99
42.91	510.18	304.23	1.00	304.23	1.44	0.98	0.98
42.98	502.19	299.18	1.00	299.18	1.44	0.98	0.98
43.05	489.69	291.45	1.00	291.45	1.44	0.97	0.97
43.11	482.45	286.87	1.00	286.87	1.43	0.97	0.97
43.18	480.80	285.65	1.00	285.65	1.44	0.97	0.97
43.25	488.45	289.96	1.00	289.96	1.43	0.97	0.97
43.31	503.55	298.76	1.00	298.76	1.41	0.98	0.98
43.38	526.31	312.06	1.00	312.06	1.39	0.99	0.99
43.44	554.00	328.27	1.00	328.27	1.36	1.00	1.00
43.51	579.90	343.41	1.00	343.41	1.33	1.01	1.01
43.57	606.85	359.16	1.00	359.16	1.30	1.02	1.02
43.64	633.21	374.52	1.00	374.52	1.28	1.03	1.03
43.71	658.85	389.41	1.00	389.41	1.27	1.04	1.04
43.77	670.54	396.02	1.00	396.02	1.28	1.05	1.05
43.84	674.90	398.27	1.00	398.27	1.29	1.05	1.05
43.90	673.50	397.10	1.00	397.10	1.31	1.05	1.05
43.97	678.35	399.66	1.00	399.66	1.30	1.05	1.05
44.04	679.62	400.05	1.00	400.05	1.28	1.05	1.05
44.10	688.48	404.98	1.00	404.98	1.25	1.05	1.05

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
44.16	687.48	404.05	1.00	404.05	1.23	1.05	1.05
44.23	686.96	403.41	1.00	403.41	1.22	1.05	1.05
44.29	676.08	396.69	1.00	396.69	1.21	1.05	1.05
44.36	674.46	395.39	1.00	395.39	1.21	1.04	1.04
44.43	672.38	393.84	1.00	393.84	1.21	1.04	1.04
44.49	680.43	398.27	1.00	398.27	1.21	1.05	1.05
44.56	686.27	401.39	1.00	401.39	1.22	1.05	1.05
44.63	697.96	407.90	1.00	407.90	1.22	1.05	1.05
44.69	702.96	410.53	1.00	410.53	1.22	1.05	1.05
44.75	705.58	411.74	1.00	411.74	1.09	1.06	1.06
44.82	701.23	408.85	1.00	408.85	0.94	1.05	1.05
44.88	708.87	-1.00	1.00	-1.00	-1.00	0.00	0.00
44.95	716.89	-1.00	1.00	-1.00	-1.00	0.00	0.00
45.02	745.71	-1.00	1.00	-1.00	-1.00	0.00	0.00
45.08	769.70	-1.00	1.00	-1.00	-1.00	0.00	0.00
45.15	795.13	-1.00	1.00	-1.00	-1.00	0.00	0.00

Abbreviations

q_t: Total cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Adjusted and corrected cone resistance due to fines
I_c: Soil behavior type index
$S_{u(liq)}/\sigma'_v$: Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$: Calculated peak undrained strength ratio

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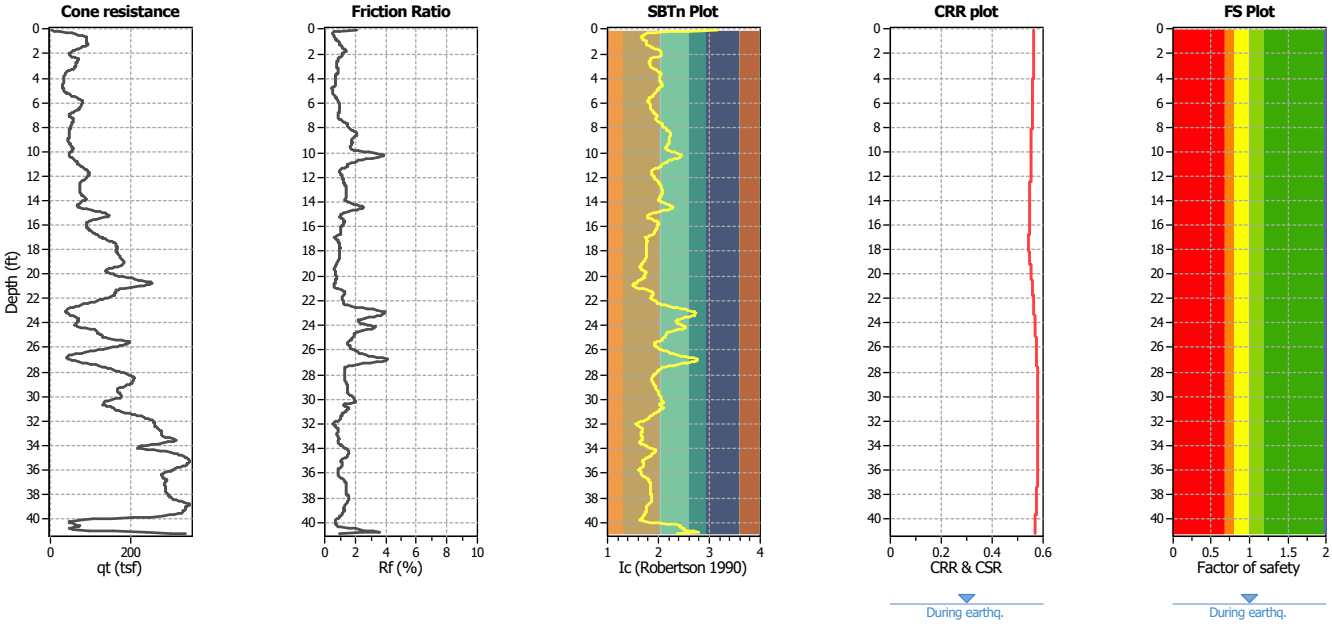
LIQUEFACTION ANALYSIS REPORT

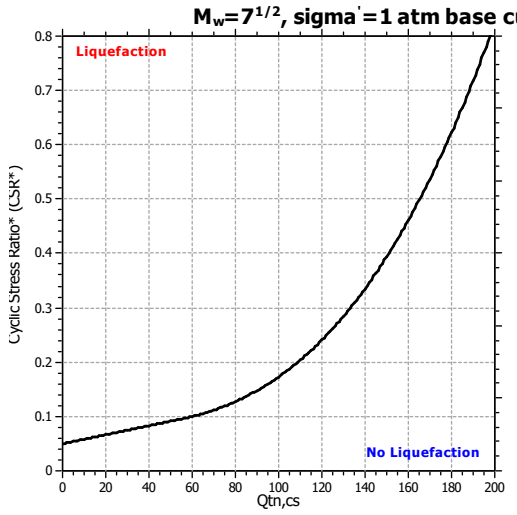
Project title : **Location :**

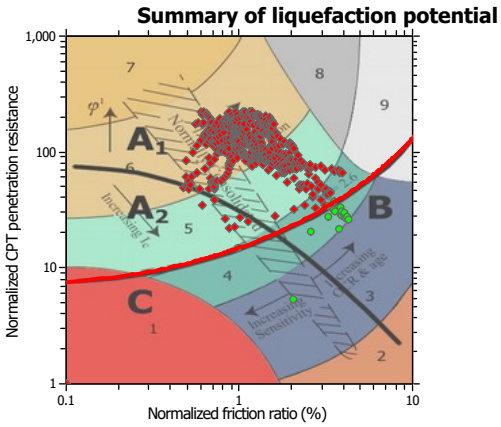
CPT file : CPT-2

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	47.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	47.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	8.07	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.72	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

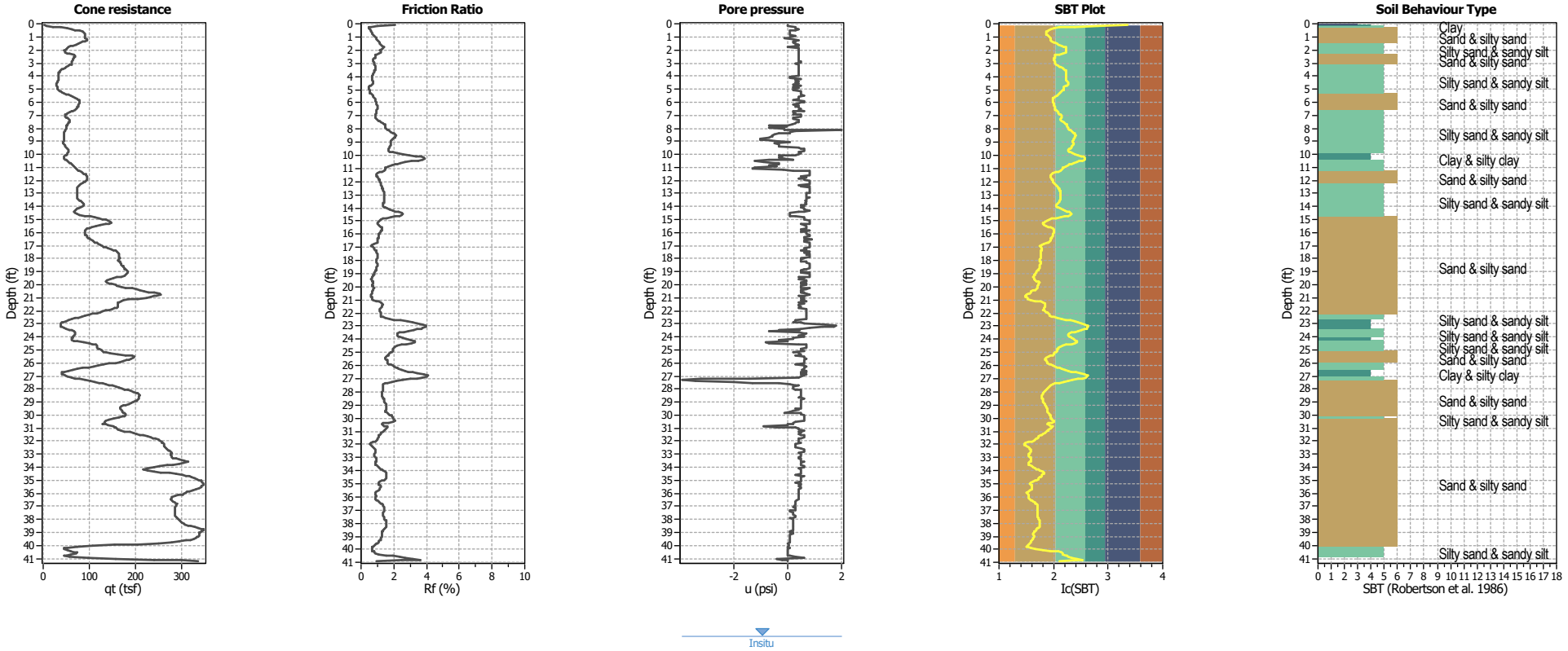






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



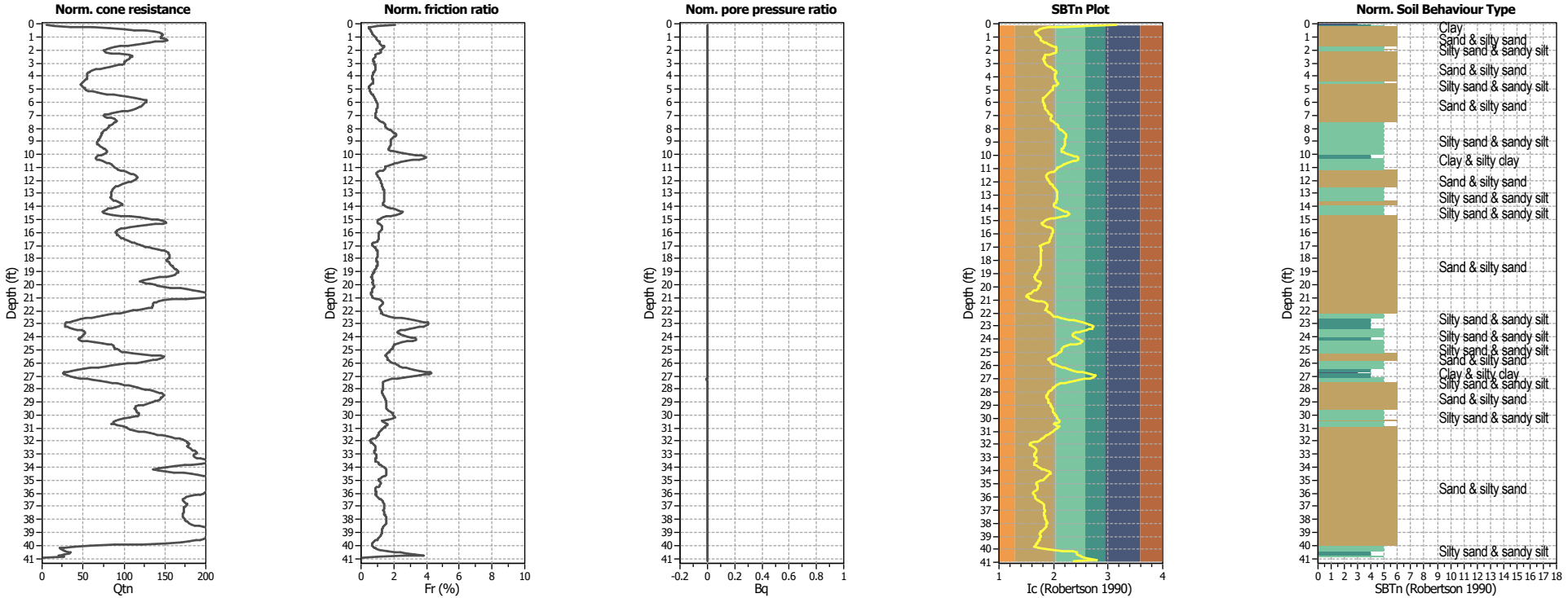
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



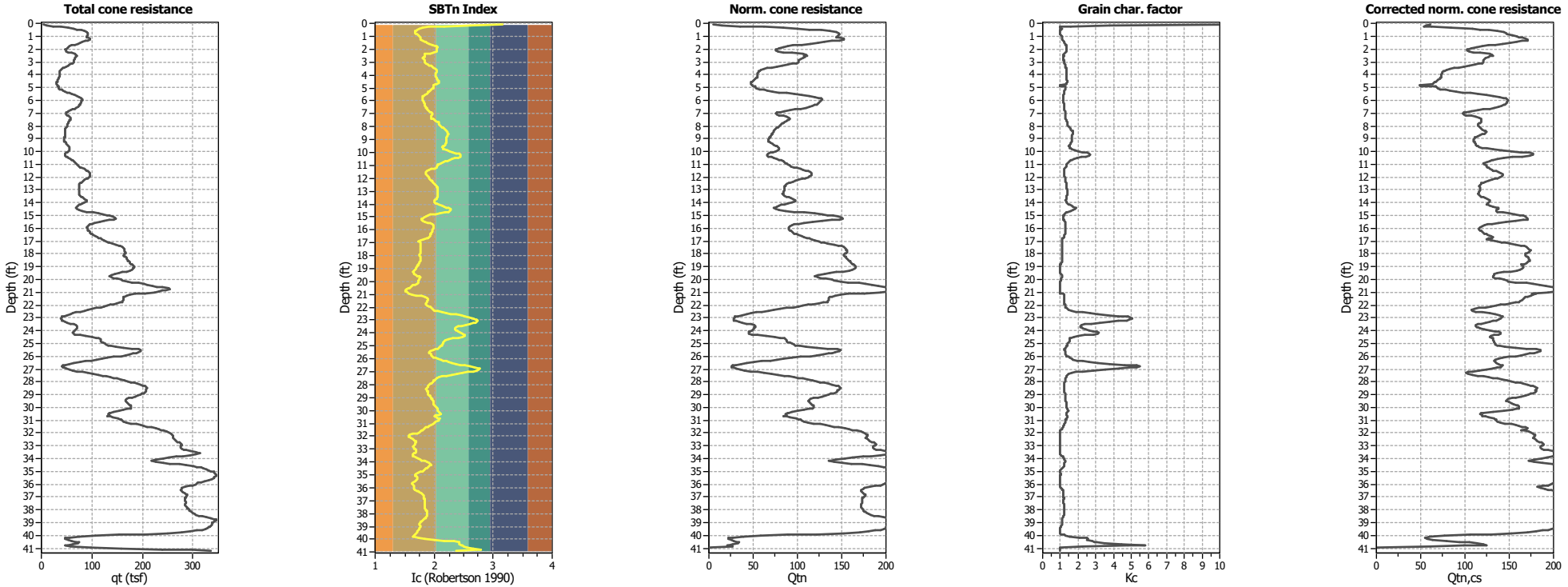
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

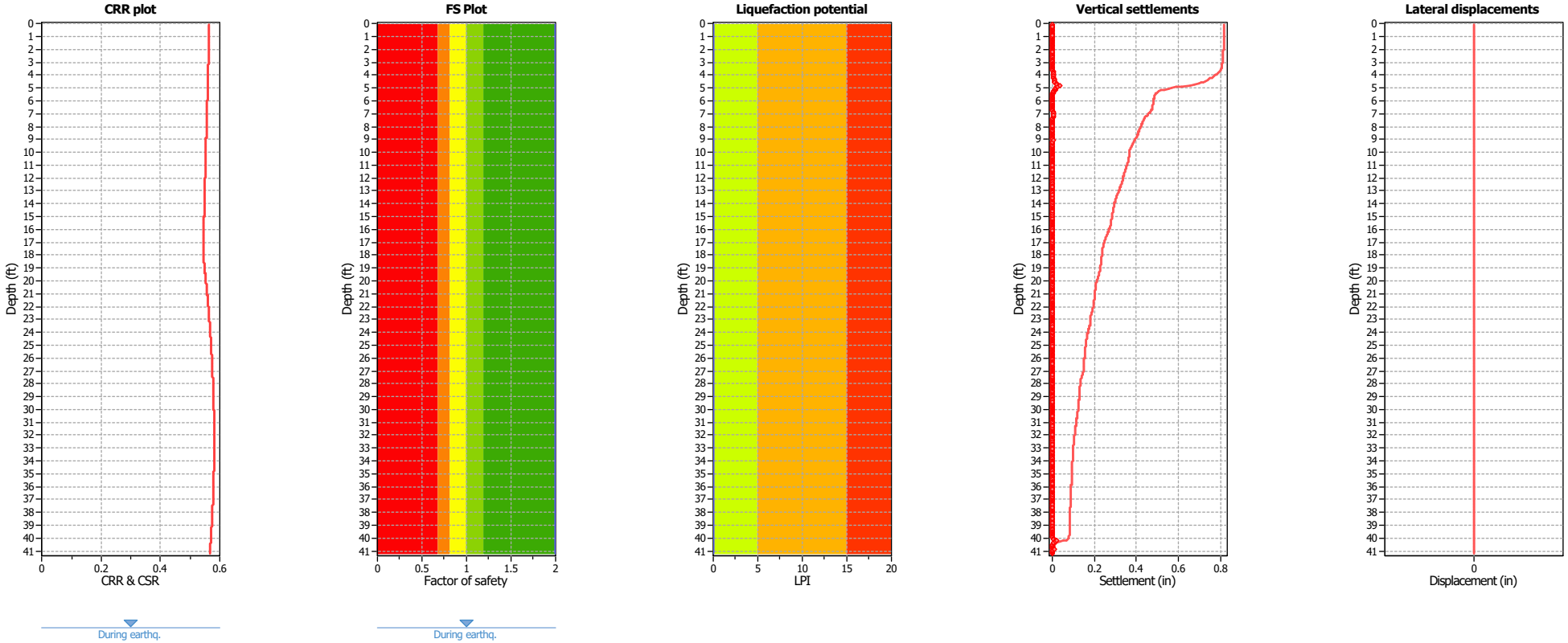
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

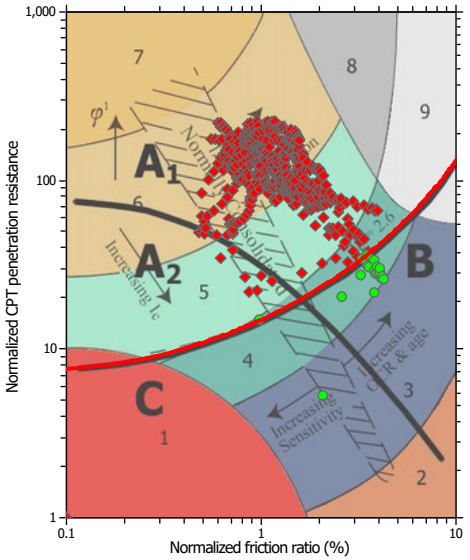
F.S. color scheme

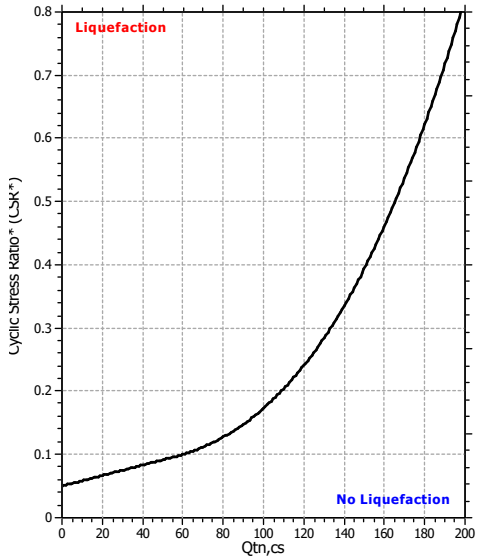
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

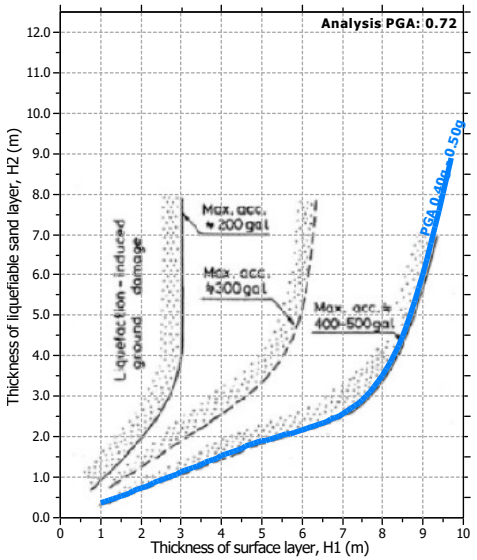
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



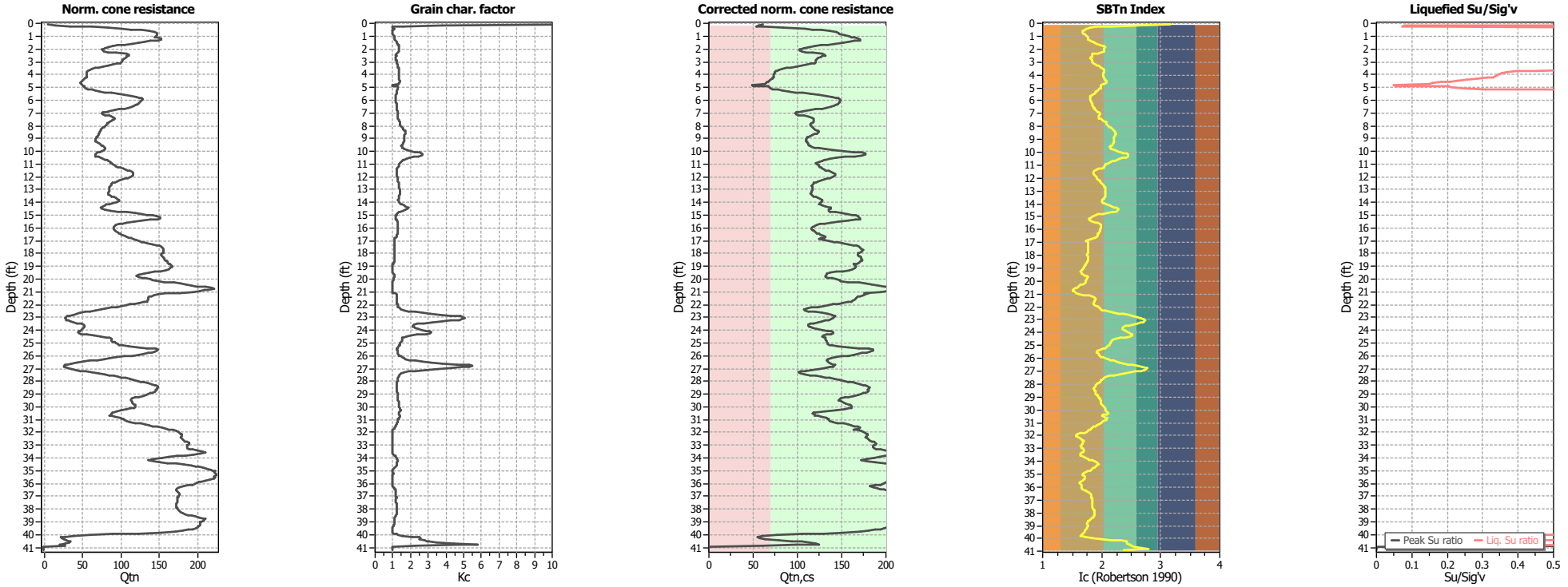




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.07	2.52	0.06	0.00	69.17	93.46
2	0.14	4.77	0.08	0.00	35.50	98.08
3	0.20	20.19	0.13	0.30	18.20	103.02
4	0.26	40.09	0.19	0.30	5.00	107.02
5	0.33	55.33	0.25	0.30	5.00	110.02
6	0.40	61.03	0.34	0.40	7.05	112.34
7	0.47	71.03	0.42	0.30	6.52	114.03
8	0.53	79.44	0.46	0.10	5.94	115.39
9	0.60	86.17	0.53	0.10	5.63	116.42
10	0.66	90.00	0.59	0.10	5.56	117.25
11	0.72	92.24	0.62	0.10	5.68	117.80
12	0.79	91.50	0.66	0.10	5.87	118.17
13	0.85	91.40	0.68	0.10	6.23	118.63
14	0.93	91.68	0.75	0.30	6.64	119.17
15	0.99	91.08	0.81	0.10	7.18	119.64
16	1.05	88.04	0.84	0.10	7.50	119.97
17	1.12	90.75	0.87	-0.10	7.56	120.33
18	1.18	95.61	0.93	0.20	7.37	120.72
19	1.25	97.76	0.95	0.40	7.59	121.02
20	1.32	91.50	0.98	0.20	8.11	121.08
21	1.38	86.64	0.98	0.30	8.89	120.88
22	1.45	81.31	0.93	0.20	9.48	120.48
23	1.51	76.73	0.88	0.30	10.02	120.00
24	1.58	72.34	0.85	0.40	10.90	119.56
25	1.64	64.58	0.84	0.30	12.08	119.21
26	1.71	59.25	0.83	0.40	13.42	118.82
27	1.78	55.05	0.80	0.00	14.28	118.24
28	1.84	51.59	0.71	0.40	14.44	117.31
29	1.91	49.72	0.59	0.40	14.31	116.28
30	1.98	47.48	0.55	0.40	14.14	115.49
31	2.04	46.64	0.54	0.40	14.39	115.34
32	2.11	46.82	0.57	0.40	14.33	115.45
33	2.17	48.69	0.57	0.40	14.09	115.62
34	2.24	49.72	0.57	0.40	12.74	115.82
35	2.31	58.97	0.57	0.40	10.98	116.08
36	2.37	67.10	0.57	0.40	9.23	116.49
37	2.44	73.46	0.60	0.40	8.90	116.70
38	2.50	65.42	0.60	0.40	8.85	116.73
39	2.56	68.04	0.57	0.40	8.97	116.33
40	2.63	67.66	0.52	0.40	8.48	115.81
41	2.69	66.45	0.48	0.40	8.39	115.32
42	2.76	64.11	0.48	0.40	8.59	115.11
43	2.83	62.99	0.49	0.40	8.85	115.09
44	2.89	62.90	0.49	0.50	8.98	115.17
45	2.96	63.46	0.50	0.50	9.02	115.26
46	3.02	63.27	0.51	0.30	9.21	115.37
47	3.09	61.78	0.51	0.40	9.61	115.40
48	3.15	59.16	0.51	0.40	10.23	115.26

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.22	55.23	0.50	0.40	10.90	114.90
50	3.28	51.68	0.47	0.40	11.55	114.28
51	3.35	48.13	0.43	0.40	12.16	113.49
52	3.42	44.11	0.39	0.40	12.78	112.66
53	3.48	41.31	0.36	0.40	13.37	111.79
54	3.55	38.50	0.32	0.40	13.79	110.99
55	3.61	36.82	0.30	0.40	14.04	110.20
56	3.68	35.51	0.27	0.40	14.11	109.60
57	3.74	34.95	0.26	0.40	14.06	109.13
58	3.81	34.77	0.25	0.40	13.95	108.83
59	3.88	34.67	0.24	0.40	13.82	108.63
60	3.94	34.67	0.24	0.40	13.73	108.50
61	4.00	34.67	0.24	0.40	13.69	108.43
62	4.08	34.58	0.24	0.10	13.68	108.40
63	4.14	34.58	0.24	0.10	13.77	108.40
64	4.21	34.21	0.24	0.50	13.89	108.40
65	4.26	33.93	0.24	0.30	14.12	108.34
66	4.33	33.08	0.24	0.30	14.40	108.18
67	4.41	32.06	0.23	0.40	14.73	107.93
68	4.46	31.12	0.22	0.30	15.03	107.63
69	4.54	30.37	0.21	0.40	15.26	107.35
70	4.60	29.81	0.21	0.40	15.07	106.76
71	4.67	29.63	0.18	0.20	14.32	105.77
72	4.73	29.91	0.14	0.50	13.40	104.84
73	4.80	30.75	0.14	0.20	5.00	104.54
74	4.86	31.68	0.15	0.20	5.00	105.05
75	4.93	32.80	0.17	0.40	12.43	105.51
76	4.99	33.65	0.17	0.20	12.55	105.77
77	5.05	32.06	0.17	0.20	12.14	106.02
78	5.12	36.26	0.18	0.50	11.67	106.51
79	5.19	38.69	0.20	0.50	10.99	107.51
80	5.25	41.40	0.23	0.50	10.77	108.82
81	5.32	44.86	0.28	0.50	10.52	110.37
82	5.39	50.00	0.34	0.50	10.13	111.77
83	5.45	54.21	0.38	0.50	9.66	113.16
84	5.52	60.00	0.45	0.60	9.15	114.34
85	5.59	65.70	0.50	0.40	8.68	115.54
86	5.66	71.40	0.57	0.40	8.35	116.53
87	5.73	75.05	0.63	0.40	8.19	117.40
88	5.79	78.04	0.68	0.20	8.15	118.03
89	5.86	79.72	0.72	0.30	8.16	118.44
90	5.93	80.19	0.73	0.60	8.24	118.66
91	5.99	79.72	0.75	0.60	8.39	118.78
92	6.04	78.97	0.75	0.50	8.58	118.86
93	6.11	78.22	0.76	0.40	8.76	118.90
94	6.17	77.57	0.76	0.20	8.89	118.88
95	6.24	76.82	0.76	0.40	8.98	118.81
96	6.30	75.98	0.75	0.30	9.07	118.69

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.38	74.86	0.74	0.40	9.15	118.53
98	6.44	73.65	0.72	0.40	9.26	118.29
99	6.51	71.59	0.69	0.50	9.43	117.96
100	6.58	68.60	0.66	0.40	9.69	117.53
101	6.64	65.42	0.62	0.60	10.02	116.96
102	6.71	61.59	0.57	0.20	10.37	116.24
103	6.78	57.29	0.52	0.20	10.76	115.36
104	6.84	53.27	0.47	0.30	11.21	114.48
105	6.91	49.72	0.43	0.20	11.69	113.76
106	6.98	47.38	0.41	0.50	12.02	113.33
107	7.02	47.38	0.41	0.50	12.18	113.18
108	7.09	47.38	0.41	0.50	12.01	113.34
109	7.16	49.91	0.43	0.20	11.78	113.84
110	7.23	52.99	0.48	0.20	11.54	114.63
111	7.29	55.70	0.54	0.20	11.58	115.54
112	7.36	57.20	0.60	0.40	11.87	116.35
113	7.43	57.48	0.65	0.40	12.40	117.02
114	7.50	56.92	0.70	0.40	13.08	117.52
115	7.56	55.79	0.74	0.35	13.76	117.86
116	7.61	54.86	0.77	0.30	14.46	118.12
117	7.68	53.55	0.80	0.17	15.04	118.26
118	7.75	52.52	0.80	0.00	15.28	118.12
119	7.81	51.78	0.74	-0.70	15.39	117.92
120	7.88	51.12	0.75	-0.05	15.53	117.80
121	7.95	50.47	0.77	-0.70	16.02	117.98
122	8.02	49.81	0.80	-0.10	16.59	118.21
123	8.09	49.25	0.84	-0.10	17.21	118.41
124	8.14	47.99	0.85	2.00	17.86	118.55
125	8.20	46.82	0.87	0.30	18.41	118.66
126	8.28	46.73	0.89	0.10	18.96	118.85
127	8.35	46.36	0.93	0.10	19.45	119.09
128	8.42	45.89	0.97	-0.30	19.92	119.29
129	8.46	45.70	0.97	-0.50	20.18	119.36
130	8.54	45.51	0.97	-0.55	20.21	119.29
131	8.61	45.51	0.94	-0.55	20.12	119.15
132	8.66	45.51	0.92	-0.60	19.86	118.92
133	8.73	45.51	0.88	-0.70	19.58	118.67
134	8.80	45.61	0.85	-1.00	19.29	118.38
135	8.88	45.42	0.82	-1.00	19.12	118.14
136	8.93	45.05	0.80	-0.80	19.13	117.97
137	9.00	44.49	0.80	-0.50	19.19	117.91
138	9.07	44.95	0.80	0.10	19.35	117.89
139	9.13	44.30	0.80	-0.50	19.38	117.93
140	9.20	44.86	0.81	-0.30	19.38	118.01
141	9.27	45.89	0.82	-0.30	19.13	118.19
142	9.34	47.48	0.84	-0.30	18.80	118.39
143	9.39	48.79	0.85	-0.30	18.36	118.60
144	9.46	50.65	0.86	0.40	17.87	118.75

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.53	52.43	0.87	0.50	17.43	118.87
146	9.58	53.36	0.87	0.60	17.13	119.04
147	9.65	54.58	0.90	0.60	17.20	119.40
148	9.73	55.51	0.98	0.60	17.54	119.92
149	9.78	55.98	1.06	0.60	18.32	120.66
150	9.85	55.98	1.21	0.40	19.59	121.50
151	9.92	54.67	1.38	0.50	21.43	122.37
152	9.99	52.06	1.55	0.40	23.46	123.04
153	10.04	49.91	1.66	0.30	25.60	123.52
154	10.12	47.20	1.78	-0.30	27.29	123.80
155	10.19	46.08	1.82	-0.20	28.22	123.96
156	10.24	47.10	1.81	-0.30	28.61	123.90
157	10.31	45.05	1.76	-0.10	28.13	123.70
158	10.38	47.01	1.66	0.20	26.93	123.37
159	10.46	50.47	1.54	-0.70	24.90	123.05
160	10.51	53.27	1.46	-1.20	22.75	122.69
161	10.58	56.54	1.35	-0.90	20.98	122.36
162	10.65	59.35	1.28	-0.50	19.58	122.11
163	10.70	61.12	1.26	-0.30	18.66	122.06
164	10.77	63.46	1.27	-0.30	17.62	121.79
165	10.84	65.51	1.10	-0.70	16.38	121.28
166	10.91	67.01	0.98	-0.40	15.32	120.71
167	10.96	67.66	1.00	-0.50	14.87	120.60
168	11.04	69.07	1.04	-1.20	14.71	120.84
169	11.11	71.78	1.06	-1.30	14.29	121.03
170	11.16	74.86	1.05	-0.17	13.89	121.01
171	11.22	73.65	1.01	0.20	12.95	120.79
172	11.29	80.47	0.92	0.80	11.85	120.36
173	11.36	84.02	0.84	0.80	10.57	119.95
174	11.43	87.10	0.81	0.80	9.85	119.74
175	11.49	89.35	0.82	0.80	9.50	119.90
176	11.56	92.52	0.87	0.80	9.42	120.30
177	11.63	94.86	0.93	0.80	9.48	120.77
178	11.68	95.89	0.97	0.50	9.65	121.22
179	11.76	96.73	1.03	0.70	9.91	121.58
180	11.83	96.54	1.07	0.40	10.19	121.88
181	11.88	96.08	1.09	0.60	10.44	122.04
182	11.95	95.23	1.10	0.60	10.66	122.06
183	12.03	93.65	1.09	0.80	10.90	121.98
184	12.10	91.31	1.08	0.80	11.17	121.84
185	12.14	89.07	1.07	0.80	11.54	121.65
186	12.22	85.51	1.04	0.80	11.96	121.43
187	12.29	82.34	1.02	0.80	12.38	121.18
188	12.34	80.09	1.00	0.40	12.76	120.96
189	12.41	77.66	0.98	0.80	13.16	120.80
190	12.49	75.70	0.98	0.50	13.52	120.70
191	12.54	74.86	0.98	0.80	13.79	120.65
192	12.61	74.11	0.98	0.80	14.02	120.66

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.68	73.46	0.99	0.80	14.23	120.70
194	12.73	73.37	1.00	0.80	14.43	120.79
195	12.80	73.37	1.02	0.80	14.58	120.89
196	12.87	73.37	1.03	0.80	14.71	120.98
197	12.95	73.37	1.04	0.80	14.77	121.04
198	12.99	73.74	1.05	0.70	14.80	121.08
199	13.07	73.83	1.05	0.70	14.83	121.10
200	13.14	73.65	1.05	0.70	14.86	121.08
201	13.19	73.65	1.04	0.70	14.88	121.04
202	13.26	73.27	1.03	0.70	14.91	121.00
203	13.34	73.27	1.03	0.80	14.91	121.00
204	13.39	73.93	1.04	0.70	14.79	121.06
205	13.46	75.61	1.05	0.70	14.54	121.23
206	13.54	78.60	1.08	0.70	14.26	121.45
207	13.59	80.37	1.10	0.65	13.99	121.76
208	13.66	83.18	1.15	0.70	13.69	122.02
209	13.73	86.36	1.16	0.65	13.34	122.23
210	13.78	88.32	1.17	0.70	13.05	122.40
211	13.86	89.91	1.20	0.60	13.10	122.57
212	13.93	88.51	1.24	0.50	13.45	122.72
213	13.98	86.26	1.26	0.60	14.20	122.85
214	14.05	82.06	1.31	0.50	15.38	122.97
215	14.11	76.08	1.36	0.60	16.75	123.15
216	14.18	73.83	1.42	0.60	18.06	123.36
217	14.25	71.87	1.49	0.60	19.23	123.71
218	14.32	69.81	1.61	0.80	20.44	124.04
219	14.37	67.76	1.68	0.60	21.59	124.34
220	14.44	66.17	1.73	0.40	21.96	124.47
221	14.51	68.88	1.71	0.10	21.45	124.57
222	14.59	73.37	1.70	0.10	20.19	124.66
223	14.64	78.41	1.70	0.10	18.33	124.81
224	14.71	88.97	1.67	0.10	15.88	124.91
225	14.78	103.18	1.58	0.30	13.40	124.89
226	14.83	113.37	1.49	0.60	11.34	124.80
227	14.91	123.09	1.45	0.60	10.09	124.79
228	14.97	128.97	1.46	0.60	9.25	124.88
229	15.03	135.14	1.47	0.60	8.63	125.00
230	15.10	141.78	1.45	0.80	8.06	125.10
231	15.17	147.10	1.45	0.80	7.70	125.22
232	15.23	149.25	1.50	0.80	7.72	125.39
233	15.30	145.70	1.53	0.80	8.17	125.46
234	15.37	136.26	1.53	0.50	9.03	125.35
235	15.44	124.11	1.52	0.60	10.11	125.04
236	15.51	113.27	1.46	0.70	11.18	124.54
237	15.57	104.49	1.36	0.70	11.96	123.89
238	15.64	98.23	1.26	0.70	12.43	123.27
239	15.68	95.33	1.21	0.70	12.65	122.72
240	15.75	92.34	1.13	0.50	12.74	122.28

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.82	90.37	1.08	0.80	12.70	121.86
242	15.89	89.91	1.03	0.50	12.55	121.52
243	15.96	90.00	1.00	0.70	12.31	121.27
244	16.01	90.47	0.98	0.70	12.13	121.12
245	16.09	90.65	0.97	0.70	12.03	121.10
246	16.16	91.59	0.98	0.80	11.95	121.14
247	16.21	92.71	0.99	0.80	11.79	121.23
248	16.28	94.58	0.99	0.80	11.57	121.31
249	16.35	96.54	1.00	0.60	11.35	121.45
250	16.42	98.69	1.02	0.60	11.23	121.62
251	16.47	99.72	1.04	0.60	11.08	121.81
252	16.54	102.34	1.06	0.90	10.86	122.03
253	16.62	106.54	1.09	0.60	10.49	122.31
254	16.69	111.78	1.13	0.60	9.97	122.30
255	16.74	112.43	1.02	0.80	8.71	121.34
256	16.81	116.08	0.67	0.80	7.63	120.40
257	16.88	120.37	0.77	0.80	6.90	119.95
258	16.93	122.99	0.85	0.80	7.12	120.93
259	17.01	128.88	0.96	0.80	7.27	121.80
260	17.08	133.83	1.06	0.80	7.54	122.52
261	17.13	131.12	1.12	0.80	7.59	123.16
262	17.20	141.31	1.22	0.60	7.62	123.82
263	17.27	148.23	1.34	0.70	7.51	124.61
264	17.34	153.83	1.47	0.50	7.52	125.23
265	17.39	156.92	1.52	0.50	7.52	125.66
266	17.46	159.91	1.57	0.80	7.48	125.90
267	17.52	162.15	1.60	0.60	7.45	126.09
268	17.60	163.55	1.62	0.80	7.47	126.26
269	17.67	164.49	1.66	0.70	7.51	126.39
270	17.72	164.95	1.68	0.80	7.53	126.46
271	17.79	165.33	1.66	0.80	7.47	126.40
272	17.86	165.33	1.62	0.80	7.32	126.25
273	17.93	166.17	1.57	0.50	7.20	126.11
274	17.98	165.98	1.56	0.60	7.24	126.01
275	18.05	161.50	1.57	0.50	7.30	125.96
276	18.11	163.27	1.55	0.50	7.38	126.01
277	18.19	164.95	1.60	0.50	7.34	126.12
278	18.26	166.54	1.62	0.70	7.36	126.28
279	18.33	167.85	1.65	0.70	7.35	126.40
280	18.38	168.79	1.66	0.80	7.34	126.49
281	18.45	170.28	1.67	0.80	7.27	126.55
282	18.52	172.24	1.67	0.80	7.17	126.57
283	18.57	173.27	1.66	0.80	7.03	126.53
284	18.64	174.49	1.64	0.80	6.89	126.46
285	18.71	176.26	1.61	0.80	6.70	126.35
286	18.79	177.57	1.57	0.70	6.50	126.23
287	18.84	178.69	1.54	0.60	6.23	126.06
288	18.91	182.06	1.49	0.50	6.03	125.95

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.98	182.71	1.49	0.50	5.88	125.90
290	19.05	183.74	1.49	0.80	5.81	125.82
291	19.10	183.18	1.44	0.50	5.56	125.39
292	19.18	180.75	1.25	0.80	5.31	124.90
293	19.25	180.28	1.23	0.80	5.10	124.42
294	19.30	178.41	1.20	0.80	5.13	124.04
295	19.37	168.69	1.08	0.80	5.29	123.44
296	19.44	157.95	1.00	0.40	5.45	122.77
297	19.51	155.33	0.96	0.60	5.87	122.40
298	19.56	144.86	0.98	0.40	6.41	122.27
299	19.63	137.01	0.99	0.70	7.03	122.15
300	19.70	134.21	0.97	0.70	7.31	122.03
301	19.75	134.77	0.96	0.70	7.19	121.97
302	19.83	139.25	0.96	0.50	6.98	122.07
303	19.90	143.09	0.99	0.70	6.80	122.45
304	19.95	148.79	1.08	0.50	6.78	123.10
305	20.02	155.14	1.20	0.70	6.56	123.81
306	20.10	167.76	1.25	0.50	6.65	124.30
307	20.15	158.79	1.30	0.50	6.23	124.76
308	20.23	183.09	1.37	0.50	5.82	125.09
309	20.29	193.74	1.37	0.80	5.14	125.49
310	20.34	200.47	1.42	0.70	4.68	125.68
311	20.41	212.24	1.42	0.50	4.45	126.06
312	20.49	218.88	1.53	0.50	4.17	126.35
313	20.56	227.01	1.53	0.60	3.84	126.52
314	20.61	238.51	1.46	0.50	3.26	126.45
315	20.68	254.30	1.41	0.70	2.93	126.72
316	20.75	261.87	1.62	0.80	3.02	127.11
317	20.81	249.25	1.69	0.60	3.35	126.99
318	20.87	226.17	1.40	0.40	3.49	126.79
319	20.94	244.49	1.53	0.60	3.72	126.71
320	21.01	231.59	1.67	0.50	4.64	127.41
321	21.07	198.69	1.93	0.60	6.18	127.83
322	21.14	183.74	2.00	0.60	7.98	128.20
323	21.21	172.71	2.17	0.50	9.06	128.37
324	21.28	168.13	2.20	0.70	9.79	128.50
325	21.33	165.70	2.19	0.40	10.10	128.42
326	21.40	161.50	2.14	0.40	10.22	128.30
327	21.47	162.06	2.12	0.60	10.19	128.13
328	21.55	162.06	2.05	0.40	10.00	127.89
329	21.60	160.47	1.95	0.40	9.70	127.56
330	21.67	161.59	1.86	0.50	9.42	127.21
331	21.74	160.84	1.78	0.40	9.24	126.91
332	21.79	157.85	1.73	0.40	9.44	126.66
333	21.86	149.16	1.72	0.70	9.95	126.40
334	21.93	141.22	1.67	0.70	10.56	126.12
335	21.98	135.98	1.62	0.70	11.06	125.79
336	22.06	130.28	1.58	0.70	11.61	125.54

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.13	124.02	1.58	0.70	12.12	125.08
338	22.20	116.36	1.41	0.70	12.59	124.49
339	22.25	110.09	1.30	0.70	13.36	123.85
340	22.32	99.35	1.32	0.70	14.79	123.59
341	22.39	90.84	1.38	0.70	16.79	123.64
342	22.45	85.05	1.44	0.70	19.10	123.87
343	22.52	77.29	1.57	0.70	22.06	124.11
344	22.58	66.73	1.67	0.70	25.40	124.33
345	22.64	62.24	1.76	0.70	28.76	124.39
346	22.71	56.73	1.79	0.30	31.61	124.25
347	22.77	50.19	1.74	0.30	34.85	123.83
348	22.85	43.93	1.66	0.20	38.20	123.26
349	22.92	39.63	1.59	0.50	40.91	122.74
350	22.97	37.94	1.55	0.60	41.56	122.39
351	23.04	39.81	1.49	1.40	42.15	122.11
352	23.11	36.36	1.46	1.80	41.20	122.00
353	23.18	40.00	1.45	1.70	40.63	121.96
354	23.23	41.40	1.45	1.30	38.21	122.15
355	23.30	45.23	1.46	0.80	35.69	122.43
356	23.38	51.03	1.50	0.50	32.30	122.81
357	23.45	58.50	1.51	-0.30	29.25	123.15
358	23.50	63.37	1.51	0.45	26.58	123.40
359	23.57	69.16	1.50	-0.70	25.07	123.58
360	23.65	70.65	1.53	0.40	24.44	123.73
361	23.69	69.72	1.55	0.60	24.63	123.84
362	23.77	69.16	1.57	0.70	25.09	123.97
363	23.84	69.16	1.63	0.60	25.66	124.17
364	23.89	68.13	1.69	0.40	26.81	124.51
365	23.96	65.51	1.84	0.60	28.32	124.92
366	24.03	64.21	1.96	0.20	29.89	125.28
367	24.11	62.80	2.02	0.20	31.00	125.45
368	24.15	61.31	2.03	0.20	31.75	125.49
369	24.23	60.65	2.04	-0.30	31.46	125.58
370	24.30	65.51	2.06	-0.30	29.85	125.81
371	24.35	73.27	2.09	0.00	26.62	126.25
372	24.42	87.76	2.15	-0.80	23.17	126.80
373	24.50	101.96	2.23	-0.70	20.54	127.31
374	24.54	108.79	2.27	0.40	18.88	127.67
375	24.62	114.67	2.29	0.70	18.00	127.84
376	24.69	117.29	2.28	0.70	17.52	127.92
377	24.74	117.66	2.28	0.70	17.39	127.96
378	24.81	117.66	2.31	0.70	17.35	128.00
379	24.88	119.07	2.30	0.50	17.08	128.04
380	24.95	122.62	2.28	0.50	16.60	128.05
381	25.00	125.80	2.27	0.50	16.03	128.06
382	25.08	128.60	2.25	0.60	15.56	128.06
383	25.15	131.12	2.24	0.20	15.11	128.11
384	25.20	135.23	2.27	0.40	14.47	128.29

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.27	144.67	2.32	0.40	13.59	128.70
386	25.34	159.44	2.48	0.50	12.39	129.39
387	25.41	181.40	2.71	0.40	11.37	130.14
388	25.46	194.58	2.86	0.30	10.77	130.81
389	25.54	199.53	3.04	0.60	10.77	131.22
390	25.61	196.45	3.13	0.60	11.15	131.46
391	25.67	191.22	3.18	0.70	11.52	131.39
392	25.74	186.54	3.02	0.60	11.70	131.16
393	25.79	183.27	2.90	0.60	12.02	130.94
394	25.86	175.05	3.00	0.60	12.71	130.86
395	25.94	165.98	3.05	0.60	13.71	130.86
396	25.99	158.60	3.04	0.60	14.76	130.69
397	26.06	146.73	2.97	0.60	16.22	130.28
398	26.13	125.98	2.81	0.30	17.66	129.70
399	26.19	119.63	2.62	0.60	19.12	129.02
400	26.25	110.28	2.48	0.70	20.43	128.50
401	26.33	98.41	2.46	0.60	22.50	128.02
402	26.39	87.48	2.39	0.60	25.31	127.39
403	26.47	73.55	2.18	0.60	28.15	126.59
404	26.51	65.51	2.03	0.55	31.62	125.60
405	26.59	54.11	1.87	0.70	35.54	124.70
406	26.66	45.33	1.77	0.50	40.03	123.91
407	26.71	41.40	1.72	0.70	43.27	123.37
408	26.78	39.81	1.67	0.50	44.15	123.12
409	26.84	41.22	1.65	0.70	43.54	123.04
410	26.91	42.71	1.65	0.50	41.46	123.12
411	26.98	46.82	1.64	0.60	38.49	123.29
412	27.04	52.62	1.62	0.50	34.19	123.51
413	27.11	61.87	1.59	0.40	29.77	123.67
414	27.17	70.47	1.53	-1.40	25.71	123.77
415	27.24	79.25	1.48	-3.19	22.18	123.87
416	27.31	90.84	1.46	-3.89	19.24	124.04
417	27.36	101.40	1.45	-3.39	16.80	124.35
418	27.44	113.09	1.50	-2.00	15.15	124.81
419	27.51	122.15	1.59	-1.30	14.15	125.37
420	27.56	128.60	1.69	-0.30	13.63	126.02
421	27.64	135.80	1.83	0.10	13.24	126.65
422	27.71	143.74	1.95	0.30	12.86	127.19
423	27.76	149.44	2.01	0.40	12.38	127.63
424	27.83	157.38	2.10	0.20	11.94	127.99
425	27.89	163.65	2.16	0.20	11.49	128.37
426	27.96	171.40	2.25	0.20	11.11	128.73
427	28.03	177.85	2.32	0.30	10.78	129.05
428	28.09	182.99	2.37	0.50	10.48	129.33
429	28.16	189.44	2.45	0.50	10.18	129.62
430	28.23	196.73	2.53	0.50	9.92	129.90
431	28.28	200.94	2.57	0.50	9.70	130.16
432	28.36	206.17	2.65	0.50	9.65	130.42

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.43	208.41	2.76	0.50	9.71	130.70
434	28.48	209.44	2.85	0.50	9.87	130.96
435	28.55	210.28	2.93	0.50	10.15	131.11
436	28.62	204.77	2.95	0.40	10.30	131.19
437	28.68	207.76	2.95	0.50	10.40	131.21
438	28.74	207.85	2.96	0.60	10.45	131.27
439	28.81	205.61	3.02	0.50	10.72	131.34
440	28.88	201.78	3.07	0.50	11.03	131.39
441	28.94	199.72	3.07	0.50	11.31	131.34
442	29.01	195.42	3.01	0.50	11.47	131.19
443	29.07	191.78	2.93	0.50	11.66	130.94
444	29.14	185.89	2.84	0.50	11.90	130.64
445	29.21	178.79	2.73	0.50	12.20	130.28
446	29.28	172.34	2.63	0.50	12.49	129.94
447	29.33	168.23	2.56	0.50	12.72	129.64
448	29.42	164.21	2.49	0.50	12.72	129.49
449	29.48	168.32	2.49	0.50	12.78	129.44
450	29.53	165.61	2.52	0.30	12.83	129.61
451	29.60	168.41	2.64	0.40	13.16	129.96
452	29.66	170.66	2.84	0.20	13.53	130.48
453	29.74	172.52	3.08	0.10	13.95	131.02
454	29.80	174.77	3.26	-0.10	14.28	131.47
455	29.87	177.10	3.38	0.50	14.44	131.77
456	29.94	178.41	3.45	0.50	14.54	131.93
457	30.01	177.85	3.47	0.60	14.62	131.99
458	30.06	177.48	3.46	0.60	14.79	131.97
459	30.13	173.83	3.44	0.60	15.24	131.86
460	30.19	164.30	3.40	0.60	16.00	131.55
461	30.26	151.87	3.21	0.60	16.12	130.51
462	30.33	142.43	2.30	0.60	15.18	128.74
463	30.40	137.29	1.63	0.60	13.87	126.79
464	30.45	131.22	1.63	0.60	13.31	126.03
465	30.52	136.64	1.78	0.30	14.15	126.42
466	30.59	130.09	1.93	0.20	14.62	127.02
467	30.65	135.98	2.07	0.20	15.86	127.40
468	30.71	123.55	2.16	0.02	15.46	127.85
469	30.79	147.48	2.23	0.02	14.98	128.15
470	30.84	151.87	2.24	-0.90	13.72	128.42
471	30.92	155.98	2.24	-0.40	13.33	128.47
472	30.98	157.57	2.23	0.30	12.92	128.39
473	31.04	159.25	2.13	0.40	12.44	128.15
474	31.11	161.12	2.01	0.40	11.69	127.82
475	31.17	167.01	1.91	0.60	10.95	127.82
476	31.25	178.97	2.05	0.50	10.26	127.99
477	31.31	185.61	2.05	0.40	9.60	128.30
478	31.37	196.92	2.06	0.50	9.00	128.48
479	31.45	204.67	2.11	0.40	8.65	128.72
480	31.51	206.73	2.19	0.50	8.36	129.00

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.57	218.13	2.23	0.60	7.98	129.21
482	31.63	227.11	2.22	0.60	7.41	129.28
483	31.70	233.65	2.16	0.60	6.96	129.23
484	31.77	236.45	2.13	0.50	6.28	128.78
485	31.83	242.25	1.79	0.40	5.19	127.72
486	31.89	248.88	1.31	0.40	4.23	126.72
487	31.96	255.33	1.42	0.40	3.74	126.19
488	32.02	254.49	1.45	0.40	3.89	126.70
489	32.09	259.82	1.59	0.40	4.16	127.25
490	32.16	259.72	1.77	0.50	4.56	128.00
491	32.22	259.44	1.95	0.30	4.96	128.71
492	32.30	264.68	2.11	0.30	5.37	129.24
493	32.36	259.16	2.21	0.30	5.65	129.63
494	32.42	261.03	2.29	0.30	5.89	129.90
495	32.49	263.46	2.36	0.30	5.91	130.08
496	32.55	267.11	2.36	0.50	5.79	130.08
497	32.62	268.41	2.27	0.60	5.60	129.98
498	32.69	269.44	2.24	0.60	5.43	129.88
499	32.75	273.37	2.25	0.60	5.27	129.88
500	32.82	278.60	2.25	0.60	5.16	129.94
501	32.88	279.07	2.27	0.40	5.22	130.11
502	32.95	278.23	2.39	0.50	5.46	130.36
503	33.01	276.17	2.50	0.50	5.73	130.64
504	33.09	276.54	2.55	0.50	5.90	130.82
505	33.16	277.39	2.58	0.50	6.00	130.97
506	33.22	277.85	2.66	0.40	5.94	130.98
507	33.28	281.03	2.54	0.50	5.80	130.98
508	33.34	285.98	2.55	0.40	5.46	130.92
509	33.41	296.36	2.55	0.50	5.15	130.98
510	33.47	304.77	2.54	0.50	4.99	131.32
511	33.53	315.14	2.83	0.50	5.08	131.81
512	33.60	316.83	3.04	0.60	5.49	132.41
513	33.67	309.91	3.23	0.50	6.09	132.67
514	33.73	290.00	3.24	0.50	6.67	132.72
515	33.80	284.49	3.22	0.50	7.38	132.62
516	33.86	265.70	3.26	0.50	7.95	132.48
517	33.93	254.30	3.19	0.60	8.89	132.42
518	34.00	238.04	3.34	0.60	9.68	132.37
519	34.06	230.38	3.35	0.40	10.87	132.37
520	34.13	210.00	3.41	0.50	11.37	132.28
521	34.20	217.29	3.31	0.50	11.60	132.33
522	34.26	225.05	3.45	0.50	11.14	132.63
523	34.33	238.04	3.69	0.50	10.68	133.23
524	34.40	259.44	3.97	0.50	10.29	133.85
525	34.46	269.35	4.20	0.50	9.75	134.45
526	34.52	291.03	4.42	0.50	9.37	134.94
527	34.58	302.71	4.60	0.30	8.97	135.29
528	34.65	309.35	4.65	0.50	8.63	135.40

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.72	316.36	4.51	0.60	8.08	135.21
530	34.78	322.53	4.15	0.50	7.35	134.76
531	34.84	326.73	3.78	0.50	6.58	134.21
532	34.91	332.53	3.54	0.50	5.93	133.77
533	34.98	339.82	3.42	0.50	5.71	133.70
534	35.04	338.79	3.63	0.50	5.80	134.04
535	35.11	347.57	3.99	0.50	6.16	134.45
536	35.18	340.47	4.05	0.30	6.35	134.74
537	35.24	344.40	4.09	0.50	6.32	134.80
538	35.30	353.93	4.06	0.40	6.29	134.80
539	35.37	342.99	4.04	0.50	6.24	134.70
540	35.44	341.78	3.95	0.40	6.17	134.43
541	35.50	341.92	3.66	0.50	5.73	133.90
542	35.57	341.92	3.23	0.45	5.10	133.14
543	35.63	342.06	2.89	0.50	4.69	132.41
544	35.70	331.50	2.75	0.40	4.64	131.98
545	35.77	321.31	2.78	0.40	4.89	131.88
546	35.83	315.98	2.84	0.40	5.22	131.93
547	35.90	310.84	2.87	0.40	5.42	131.93
548	35.96	308.04	2.82	0.40	5.48	131.79
549	36.03	305.14	2.72	0.40	5.42	131.57
550	36.09	302.43	2.64	0.40	5.46	131.36
551	36.16	295.14	2.64	0.40	5.74	131.26
552	36.22	282.06	2.67	0.40	6.20	131.31
553	36.29	277.85	2.77	0.40	6.73	131.53
554	36.36	276.26	2.94	0.40	7.16	131.91
555	36.43	277.90	3.14	0.40	7.65	132.37
556	36.49	274.86	3.35	0.40	8.06	132.81
557	36.55	277.95	3.53	0.35	8.39	133.26
558	36.63	283.65	3.74	0.30	8.61	133.62
559	36.68	282.53	3.86	0.30	8.73	133.94
560	36.76	288.69	3.98	0.30	8.82	134.13
561	36.81	289.63	4.01	0.30	8.82	134.24
562	36.88	288.88	4.02	0.30	8.85	134.25
563	36.95	288.13	3.99	0.25	8.88	134.21
564	37.01	285.98	3.96	0.30	8.91	134.15
565	37.08	284.96	3.94	0.20	8.93	134.10
566	37.14	285.00	3.93	0.30	8.92	134.06
567	37.21	284.68	3.90	0.30	8.87	134.01
568	37.27	285.05	3.86	0.30	8.84	133.98
569	37.34	285.42	3.89	0.10	8.83	133.99
570	37.41	286.26	3.90	0.10	8.87	134.04
571	37.47	286.17	3.94	0.20	8.90	134.06
572	37.54	285.24	3.92	0.20	8.96	134.09
573	37.61	285.24	3.96	0.20	9.09	134.20
574	37.66	285.70	4.11	0.20	9.32	134.42
575	37.74	285.98	4.28	0.30	9.57	134.69
576	37.81	287.85	4.42	0.30	9.72	134.92

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	37.86	290.94	4.48	0.22	9.80	135.08
578	37.93	291.03	4.55	0.10	9.85	135.18
579	38.00	291.12	4.58	0.20	9.83	135.25
580	38.06	296.08	4.59	0.20	9.79	135.29
581	38.13	295.42	4.60	0.20	9.71	135.34
582	38.19	298.88	4.65	0.20	9.66	135.37
583	38.26	300.19	4.62	0.20	9.53	135.37
584	38.32	302.43	4.56	0.20	9.30	135.31
585	38.39	307.11	4.48	0.20	8.97	135.21
586	38.45	312.34	4.38	0.20	8.58	135.14
587	38.52	319.72	4.36	0.20	8.23	135.14
588	38.59	327.01	4.38	0.20	7.89	135.19
589	38.65	335.98	4.37	0.20	7.60	135.28
590	38.72	343.09	4.41	0.20	7.32	135.33
591	38.79	348.51	4.39	0.20	7.18	135.36
592	38.86	347.39	4.37	0.20	7.17	135.35
593	38.91	342.90	4.38	0.10	7.29	135.30
594	38.98	338.60	4.36	0.20	7.34	135.22
595	39.04	339.02	4.26	0.10	7.31	135.07
596	39.11	336.55	4.16	0.20	7.16	134.93
597	39.18	339.44	4.11	0.10	7.03	134.77
598	39.24	337.95	3.99	0.10	6.87	134.56
599	39.31	334.68	3.82	0.10	6.71	134.25
600	39.38	330.56	3.64	0.10	6.53	133.91
601	39.44	330.00	3.50	0.10	6.29	133.52
602	39.51	327.85	3.28	0.10	6.08	133.09
603	39.57	320.00	3.08	0.10	5.95	132.57
604	39.63	309.16	2.89	0.10	5.71	131.72
605	39.70	296.92	2.35	0.10	5.42	130.60
606	39.77	281.12	2.00	0.10	5.12	129.16
607	39.83	259.63	1.71	0.00	5.49	127.64
608	39.90	210.94	1.39	0.05	6.76	125.55
609	39.97	147.01	0.99	0.05	9.20	122.71
610	40.03	103.93	0.68	0.05	12.91	119.20
611	40.09	71.31	0.47	0.00	17.92	116.00
612	40.16	48.88	0.41	0.00	24.08	113.83
613	40.23	42.52	0.41	0.10	27.42	112.53
614	40.30	47.01	0.32	0.00	27.89	113.36
615	40.36	51.78	0.54	0.00	27.51	115.86
616	40.43	60.47	0.85	0.00	29.41	119.70
617	40.49	67.48	1.38	0.00	30.22	122.73
618	40.56	76.08	1.79	0.00	31.04	124.65
619	40.63	76.64	1.93	0.00	33.60	125.35
620	40.69	60.47	1.96	0.00	38.99	125.06
621	40.76	46.26	1.85	0.00	45.78	124.18
622	40.81	43.46	1.63	0.10	41.06	120.75
623	40.89	50.75	0.00	0.30	25.30	115.68
624	40.95	76.17	0.00	0.60	N/A	87.36

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
625	41.01	164.11	0.00	-0.40	N/A	87.36
626	41.08	231.22	0.00	-0.20	N/A	87.36
627	41.15	324.49	0.00	0.00	N/A	87.36
628	41.21	341.03	0.00	0.00	N/A	87.36

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.07	0.00	0.00	0.00	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
2	0.14	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
3	0.20	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
4	0.26	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
5	0.33	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
6	0.40	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
7	0.47	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
8	0.53	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
9	0.60	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
10	0.66	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
11	0.72	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
12	0.79	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
13	0.85	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
14	0.93	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
15	0.99	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
16	1.05	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
17	1.12	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
18	1.18	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
19	1.25	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
20	1.32	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
21	1.38	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
22	1.45	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
23	1.51	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
24	1.58	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
25	1.64	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
26	1.71	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
27	1.78	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
28	1.84	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
29	1.91	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
30	1.98	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
31	2.04	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
32	2.11	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
33	2.17	0.13	0.00	0.13	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
34	2.24	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
35	2.31	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
36	2.37	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
37	2.44	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
38	2.50	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
39	2.56	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
40	2.63	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
41	2.69	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
42	2.76	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
43	2.83	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
44	2.89	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
45	2.96	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
46	3.02	0.17	0.00	0.17	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
47	3.09	0.18	0.00	0.18	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
48	3.15	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.22	0.19	0.00	0.19	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
50	3.28	0.19	0.00	0.19	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
51	3.35	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
52	3.42	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
53	3.48	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
54	3.55	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
55	3.61	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
56	3.68	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
57	3.74	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
58	3.81	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
59	3.88	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
60	3.94	0.23	0.00	0.23	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
61	4.00	0.23	0.00	0.23	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
62	4.08	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
63	4.14	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
64	4.21	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
65	4.26	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
66	4.33	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
67	4.41	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
68	4.46	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
69	4.54	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
70	4.60	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
71	4.67	0.27	0.00	0.27	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
72	4.73	0.27	0.00	0.27	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
73	4.80	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
74	4.86	0.28	0.00	0.28	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
75	4.93	0.28	0.00	0.28	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
76	4.99	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
77	5.05	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
78	5.12	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
79	5.19	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
80	5.25	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
81	5.32	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
82	5.39	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
83	5.45	0.31	0.00	0.31	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
84	5.52	0.31	0.00	0.31	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
85	5.59	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
86	5.66	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
87	5.73	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
88	5.79	0.33	0.00	0.33	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
89	5.86	0.33	0.00	0.33	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
90	5.93	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
91	5.99	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
92	6.04	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
93	6.11	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
94	6.17	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
95	6.24	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
96	6.30	0.36	0.00	0.36	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.38	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
98	6.44	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
99	6.51	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
100	6.58	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
101	6.64	0.38	0.00	0.38	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
102	6.71	0.38	0.00	0.38	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
103	6.78	0.39	0.00	0.39	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
104	6.84	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
105	6.91	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
106	6.98	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
107	7.02	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
108	7.09	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
109	7.16	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
110	7.23	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
111	7.29	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
112	7.36	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
113	7.43	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
114	7.50	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
115	7.56	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
116	7.61	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
117	7.68	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
118	7.75	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
119	7.81	0.45	0.00	0.45	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
120	7.88	0.45	0.00	0.45	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
121	7.95	0.45	0.00	0.45	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
122	8.02	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
123	8.09	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
124	8.14	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
125	8.20	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
126	8.28	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
127	8.35	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
128	8.42	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
129	8.46	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
130	8.54	0.49	0.00	0.49	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
131	8.61	0.49	0.00	0.49	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
132	8.66	0.50	0.00	0.50	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
133	8.73	0.50	0.00	0.50	0.98	0.460	0.83	0.554	1.00	1.00	2.000	No
134	8.80	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
135	8.88	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
136	8.93	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
137	9.00	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
138	9.07	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
139	9.13	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
140	9.20	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
141	9.27	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
142	9.34	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
143	9.39	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
144	9.46	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.53	0.55	0.00	0.55	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
146	9.58	0.55	0.00	0.55	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
147	9.65	0.55	0.00	0.55	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
148	9.73	0.56	0.00	0.56	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
149	9.78	0.56	0.00	0.56	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
150	9.85	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
151	9.92	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
152	9.99	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
153	10.04	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
154	10.12	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
155	10.19	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
156	10.24	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
157	10.31	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
158	10.38	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
159	10.46	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
160	10.51	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
161	10.58	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
162	10.65	0.62	0.00	0.62	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
163	10.70	0.62	0.00	0.62	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
164	10.77	0.62	0.00	0.62	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
165	10.84	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
166	10.91	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
167	10.96	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
168	11.04	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
169	11.11	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
170	11.16	0.65	0.00	0.65	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
171	11.22	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
172	11.29	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
173	11.36	0.66	0.00	0.66	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
174	11.43	0.66	0.00	0.66	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
175	11.49	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
176	11.56	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
177	11.63	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
178	11.68	0.68	0.00	0.68	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
179	11.76	0.68	0.00	0.68	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
180	11.83	0.69	0.00	0.69	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
181	11.88	0.69	0.00	0.69	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
182	11.95	0.69	0.00	0.69	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
183	12.03	0.70	0.00	0.70	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
184	12.10	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
185	12.14	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
186	12.22	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
187	12.29	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
188	12.34	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
189	12.41	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
190	12.49	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
191	12.54	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
192	12.61	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.68	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
194	12.73	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
195	12.80	0.75	0.00	0.75	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
196	12.87	0.75	0.00	0.75	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
197	12.95	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
198	12.99	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
199	13.07	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
200	13.14	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
201	13.19	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
202	13.26	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
203	13.34	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
204	13.39	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
205	13.46	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
206	13.54	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
207	13.59	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
208	13.66	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
209	13.73	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
210	13.78	0.81	0.00	0.81	0.97	0.455	0.83	0.548	1.00	1.00	2.000	No
211	13.86	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
212	13.93	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
213	13.98	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
214	14.05	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
215	14.11	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
216	14.18	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
217	14.25	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
218	14.32	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
219	14.37	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
220	14.44	0.85	0.00	0.85	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
221	14.51	0.85	0.00	0.85	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
222	14.59	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
223	14.64	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
224	14.71	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
225	14.78	0.87	0.00	0.87	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
226	14.83	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
227	14.91	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
228	14.97	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
229	15.03	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
230	15.10	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
231	15.17	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
232	15.23	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
233	15.30	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
234	15.37	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
235	15.44	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
236	15.51	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
237	15.57	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
238	15.64	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
239	15.68	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
240	15.75	0.93	0.00	0.93	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.82	0.93	0.00	0.93	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
242	15.89	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
243	15.96	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
244	16.01	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
245	16.09	0.95	0.00	0.95	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
246	16.16	0.95	0.00	0.95	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
247	16.21	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
248	16.28	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
249	16.35	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
250	16.42	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
251	16.47	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
252	16.54	0.98	0.00	0.98	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
253	16.62	0.98	0.00	0.98	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
254	16.69	0.98	0.00	0.98	0.96	0.452	0.83	0.545	1.00	1.00	2.000	No
255	16.74	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
256	16.81	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
257	16.88	1.00	0.00	1.00	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
258	16.93	1.00	0.00	1.00	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
259	17.01	1.00	0.00	1.00	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
260	17.08	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
261	17.13	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
262	17.20	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
263	17.27	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
264	17.34	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
265	17.39	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
266	17.46	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
267	17.52	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
268	17.60	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
269	17.67	1.05	0.00	1.05	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
270	17.72	1.05	0.00	1.05	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
271	17.79	1.05	0.00	1.05	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
272	17.86	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
273	17.93	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
274	17.98	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
275	18.05	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
276	18.11	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
277	18.19	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
278	18.26	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
279	18.33	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
280	18.38	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
281	18.45	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
282	18.52	1.10	0.00	1.10	0.96	0.450	0.83	0.542	0.99	1.00	2.000	No
283	18.57	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
284	18.64	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
285	18.71	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
286	18.79	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
287	18.84	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
288	18.91	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.98	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
290	19.05	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
291	19.10	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
292	19.18	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
293	19.25	1.14	0.00	1.14	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
294	19.30	1.15	0.00	1.15	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
295	19.37	1.15	0.00	1.15	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
296	19.44	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
297	19.51	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
298	19.56	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
299	19.63	1.17	0.00	1.17	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
300	19.70	1.17	0.00	1.17	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
301	19.75	1.18	0.00	1.18	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
302	19.83	1.18	0.00	1.18	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
303	19.90	1.18	0.00	1.18	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
304	19.95	1.19	0.00	1.19	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
305	20.02	1.19	0.00	1.19	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
306	20.10	1.20	0.00	1.20	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
307	20.15	1.20	0.00	1.20	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
308	20.23	1.20	0.00	1.20	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
309	20.29	1.21	0.00	1.21	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
310	20.34	1.21	0.00	1.21	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
311	20.41	1.22	0.00	1.22	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
312	20.49	1.22	0.00	1.22	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
313	20.56	1.23	0.00	1.23	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
314	20.61	1.23	0.00	1.23	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
315	20.68	1.23	0.00	1.23	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
316	20.75	1.24	0.00	1.24	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
317	20.81	1.24	0.00	1.24	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
318	20.87	1.25	0.00	1.25	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
319	20.94	1.25	0.00	1.25	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
320	21.01	1.25	0.00	1.25	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
321	21.07	1.26	0.00	1.26	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
322	21.14	1.26	0.00	1.26	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
323	21.21	1.27	0.00	1.27	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
324	21.28	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
325	21.33	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
326	21.40	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
327	21.47	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
328	21.55	1.29	0.00	1.29	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
329	21.60	1.29	0.00	1.29	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
330	21.67	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
331	21.74	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
332	21.79	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
333	21.86	1.31	0.00	1.31	0.95	0.445	0.83	0.538	0.96	1.00	2.000	No
334	21.93	1.31	0.00	1.31	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
335	21.98	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
336	22.06	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.13	1.33	0.00	1.33	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
338	22.20	1.33	0.00	1.33	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
339	22.25	1.33	0.00	1.33	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
340	22.32	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
341	22.39	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
342	22.45	1.35	0.00	1.35	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
343	22.52	1.35	0.00	1.35	0.95	0.445	0.83	0.536	0.95	1.00	2.000	No
344	22.58	1.35	0.00	1.35	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
345	22.64	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
346	22.71	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
347	22.77	1.37	0.00	1.37	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
348	22.85	1.37	0.00	1.37	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
349	22.92	1.37	0.00	1.37	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
350	22.97	1.38	0.00	1.38	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
351	23.04	1.38	0.00	1.38	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
352	23.11	1.39	0.00	1.39	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
353	23.18	1.39	0.00	1.39	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
354	23.23	1.39	0.00	1.39	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
355	23.30	1.40	0.00	1.40	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
356	23.38	1.40	0.00	1.40	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
357	23.45	1.41	0.00	1.41	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
358	23.50	1.41	0.00	1.41	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
359	23.57	1.41	0.00	1.41	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
360	23.65	1.42	0.00	1.42	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
361	23.69	1.42	0.00	1.42	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
362	23.77	1.43	0.00	1.43	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
363	23.84	1.43	0.00	1.43	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
364	23.89	1.43	0.00	1.43	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
365	23.96	1.44	0.00	1.44	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
366	24.03	1.44	0.00	1.44	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
367	24.11	1.45	0.00	1.45	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
368	24.15	1.45	0.00	1.45	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
369	24.23	1.46	0.00	1.46	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
370	24.30	1.46	0.00	1.46	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
371	24.35	1.46	0.00	1.46	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
372	24.42	1.47	0.00	1.47	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
373	24.50	1.47	0.00	1.47	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
374	24.54	1.48	0.00	1.48	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
375	24.62	1.48	0.00	1.48	0.94	0.441	0.83	0.533	0.94	1.00	2.000	No
376	24.69	1.48	0.00	1.48	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
377	24.74	1.49	0.00	1.49	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
378	24.81	1.49	0.00	1.49	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
379	24.88	1.50	0.00	1.50	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
380	24.95	1.50	0.00	1.50	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
381	25.00	1.50	0.00	1.50	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
382	25.08	1.51	0.00	1.51	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
383	25.15	1.51	0.00	1.51	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
384	25.20	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.27	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
386	25.34	1.53	0.00	1.53	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
387	25.41	1.53	0.00	1.53	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
388	25.46	1.53	0.00	1.53	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
389	25.54	1.54	0.00	1.54	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
390	25.61	1.54	0.00	1.54	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
391	25.67	1.55	0.00	1.55	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
392	25.74	1.55	0.00	1.55	0.94	0.440	0.83	0.530	0.93	1.00	2.000	No
393	25.79	1.56	0.00	1.56	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
394	25.86	1.56	0.00	1.56	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
395	25.94	1.57	0.00	1.57	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
396	25.99	1.57	0.00	1.57	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
397	26.06	1.57	0.00	1.57	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
398	26.13	1.58	0.00	1.58	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
399	26.19	1.58	0.00	1.58	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
400	26.25	1.59	0.00	1.59	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
401	26.33	1.59	0.00	1.59	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
402	26.39	1.60	0.00	1.60	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
403	26.47	1.60	0.00	1.60	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
404	26.51	1.60	0.00	1.60	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
405	26.59	1.61	0.00	1.61	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
406	26.66	1.61	0.00	1.61	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
407	26.71	1.61	0.00	1.61	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
408	26.78	1.62	0.00	1.62	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
409	26.84	1.62	0.00	1.62	0.93	0.438	0.83	0.528	0.92	1.00	2.000	No
410	26.91	1.63	0.00	1.63	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
411	26.98	1.63	0.00	1.63	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
412	27.04	1.64	0.00	1.64	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
413	27.11	1.64	0.00	1.64	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
414	27.17	1.64	0.00	1.64	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
415	27.24	1.65	0.00	1.65	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
416	27.31	1.65	0.00	1.65	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
417	27.36	1.66	0.00	1.66	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
418	27.44	1.66	0.00	1.66	0.93	0.436	0.83	0.527	0.91	1.00	2.000	No
419	27.51	1.66	0.00	1.66	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
420	27.56	1.67	0.00	1.67	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
421	27.64	1.67	0.00	1.67	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
422	27.71	1.68	0.00	1.68	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
423	27.76	1.68	0.00	1.68	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
424	27.83	1.68	0.00	1.68	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
425	27.89	1.69	0.00	1.69	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
426	27.96	1.69	0.00	1.69	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
427	28.03	1.70	0.00	1.70	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
428	28.09	1.70	0.00	1.70	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
429	28.16	1.71	0.00	1.71	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
430	28.23	1.71	0.00	1.71	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
431	28.28	1.71	0.00	1.71	0.93	0.435	0.83	0.524	0.91	1.00	2.000	No
432	28.36	1.72	0.00	1.72	0.93	0.435	0.83	0.524	0.91	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.43	1.72	0.00	1.72	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
434	28.48	1.73	0.00	1.73	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
435	28.55	1.73	0.00	1.73	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
436	28.62	1.74	0.00	1.74	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
437	28.68	1.74	0.00	1.74	0.93	0.434	0.83	0.523	0.91	1.00	2.000	No
438	28.74	1.74	0.00	1.74	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
439	28.81	1.75	0.00	1.75	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
440	28.88	1.75	0.00	1.75	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
441	28.94	1.76	0.00	1.76	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
442	29.01	1.76	0.00	1.76	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
443	29.07	1.77	0.00	1.77	0.93	0.433	0.83	0.522	0.90	1.00	2.000	No
444	29.14	1.77	0.00	1.77	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
445	29.21	1.77	0.00	1.77	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
446	29.28	1.78	0.00	1.78	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
447	29.33	1.78	0.00	1.78	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
448	29.42	1.79	0.00	1.79	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
449	29.48	1.79	0.00	1.79	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
450	29.53	1.80	0.00	1.80	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
451	29.60	1.80	0.00	1.80	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
452	29.66	1.80	0.00	1.80	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
453	29.74	1.81	0.00	1.81	0.92	0.431	0.83	0.521	0.90	1.00	2.000	No
454	29.80	1.81	0.00	1.81	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
455	29.87	1.82	0.00	1.82	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
456	29.94	1.82	0.00	1.82	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
457	30.01	1.83	0.00	1.83	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
458	30.06	1.83	0.00	1.83	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
459	30.13	1.83	0.00	1.83	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
460	30.19	1.84	0.00	1.84	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
461	30.26	1.84	0.00	1.84	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
462	30.33	1.85	0.00	1.85	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
463	30.40	1.85	0.00	1.85	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
464	30.45	1.86	0.00	1.86	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
465	30.52	1.86	0.00	1.86	0.92	0.430	0.83	0.518	0.89	1.00	2.000	No
466	30.59	1.86	0.00	1.86	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
467	30.65	1.87	0.00	1.87	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
468	30.71	1.87	0.00	1.87	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
469	30.79	1.88	0.00	1.88	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
470	30.84	1.88	0.00	1.88	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
471	30.92	1.89	0.00	1.89	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
472	30.98	1.89	0.00	1.89	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
473	31.04	1.89	0.00	1.89	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
474	31.11	1.90	0.00	1.90	0.91	0.428	0.83	0.517	0.89	1.00	2.000	No
475	31.17	1.90	0.00	1.90	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
476	31.25	1.91	0.00	1.91	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
477	31.31	1.91	0.00	1.91	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
478	31.37	1.91	0.00	1.91	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
479	31.45	1.92	0.00	1.92	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
480	31.51	1.92	0.00	1.92	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.57	1.93	0.00	1.93	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
482	31.63	1.93	0.00	1.93	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
483	31.70	1.94	0.00	1.94	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
484	31.77	1.94	0.00	1.94	0.91	0.426	0.83	0.515	0.89	1.00	2.000	No
485	31.83	1.94	0.00	1.94	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
486	31.89	1.95	0.00	1.95	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
487	31.96	1.95	0.00	1.95	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
488	32.02	1.96	0.00	1.96	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
489	32.09	1.96	0.00	1.96	0.91	0.426	0.83	0.513	0.88	1.00	2.000	No
490	32.16	1.96	0.00	1.96	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
491	32.22	1.97	0.00	1.97	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
492	32.30	1.97	0.00	1.97	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
493	32.36	1.98	0.00	1.98	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
494	32.42	1.98	0.00	1.98	0.91	0.425	0.83	0.512	0.88	1.00	2.000	No
495	32.49	1.99	0.00	1.99	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
496	32.55	1.99	0.00	1.99	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
497	32.62	1.99	0.00	1.99	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
498	32.69	2.00	0.00	2.00	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
499	32.75	2.00	0.00	2.00	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
500	32.82	2.01	0.00	2.01	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
501	32.88	2.01	0.00	2.01	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
502	32.95	2.02	0.00	2.02	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
503	33.01	2.02	0.00	2.02	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
504	33.09	2.03	0.00	2.03	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
505	33.16	2.03	0.00	2.03	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
506	33.22	2.03	0.00	2.03	0.90	0.422	0.83	0.510	0.88	1.00	2.000	No
507	33.28	2.04	0.00	2.04	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
508	33.34	2.04	0.00	2.04	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
509	33.41	2.05	0.00	2.05	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
510	33.47	2.05	0.00	2.05	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
511	33.53	2.05	0.00	2.05	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
512	33.60	2.06	0.00	2.06	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
513	33.67	2.06	0.00	2.06	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
514	33.73	2.07	0.00	2.07	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
515	33.80	2.07	0.00	2.07	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
516	33.86	2.08	0.00	2.08	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
517	33.93	2.08	0.00	2.08	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
518	34.00	2.09	0.00	2.09	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
519	34.06	2.09	0.00	2.09	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
520	34.13	2.09	0.00	2.09	0.90	0.420	0.83	0.506	0.87	1.00	2.000	No
521	34.20	2.10	0.00	2.10	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
522	34.26	2.10	0.00	2.10	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
523	34.33	2.11	0.00	2.11	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
524	34.40	2.11	0.00	2.11	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
525	34.46	2.12	0.00	2.12	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
526	34.52	2.12	0.00	2.12	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
527	34.58	2.12	0.00	2.12	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
528	34.65	2.13	0.00	2.13	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.72	2.13	0.00	2.13	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
530	34.78	2.14	0.00	2.14	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
531	34.84	2.14	0.00	2.14	0.89	0.417	0.83	0.504	0.87	1.00	2.000	No
532	34.91	2.15	0.00	2.15	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
533	34.98	2.15	0.00	2.15	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
534	35.04	2.15	0.00	2.15	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
535	35.11	2.16	0.00	2.16	0.89	0.416	0.83	0.503	0.87	1.00	2.000	No
536	35.18	2.16	0.00	2.16	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
537	35.24	2.17	0.00	2.17	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
538	35.30	2.17	0.00	2.17	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
539	35.37	2.18	0.00	2.18	0.89	0.416	0.83	0.501	0.87	1.00	2.000	No
540	35.44	2.18	0.00	2.18	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
541	35.50	2.19	0.00	2.19	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
542	35.57	2.19	0.00	2.19	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
543	35.63	2.19	0.00	2.19	0.89	0.415	0.83	0.500	0.86	1.00	2.000	No
544	35.70	2.20	0.00	2.20	0.89	0.414	0.83	0.500	0.86	1.00	2.000	No
545	35.77	2.20	0.00	2.20	0.89	0.414	0.83	0.500	0.86	1.00	2.000	No
546	35.83	2.21	0.00	2.21	0.88	0.414	0.83	0.500	0.86	1.00	2.000	No
547	35.90	2.21	0.00	2.21	0.88	0.414	0.83	0.499	0.86	1.00	2.000	No
548	35.96	2.22	0.00	2.22	0.88	0.414	0.83	0.499	0.86	1.00	2.000	No
549	36.03	2.22	0.00	2.22	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
550	36.09	2.22	0.00	2.22	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
551	36.16	2.23	0.00	2.23	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
552	36.22	2.23	0.00	2.23	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
553	36.29	2.24	0.00	2.24	0.88	0.412	0.83	0.498	0.86	1.00	2.000	No
554	36.36	2.24	0.00	2.24	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
555	36.43	2.25	0.00	2.25	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
556	36.49	2.25	0.00	2.25	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
557	36.55	2.26	0.00	2.26	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
558	36.63	2.26	0.00	2.26	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
559	36.68	2.26	0.00	2.26	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
560	36.76	2.27	0.00	2.27	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
561	36.81	2.27	0.00	2.27	0.88	0.411	0.83	0.495	0.86	1.00	2.000	No
562	36.88	2.28	0.00	2.28	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
563	36.95	2.28	0.00	2.28	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
564	37.01	2.29	0.00	2.29	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
565	37.08	2.29	0.00	2.29	0.88	0.410	0.83	0.494	0.86	1.00	2.000	No
566	37.14	2.29	0.00	2.29	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
567	37.21	2.30	0.00	2.30	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
568	37.27	2.30	0.00	2.30	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
569	37.34	2.31	0.00	2.31	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
570	37.41	2.31	0.00	2.31	0.87	0.408	0.83	0.493	0.86	1.00	2.000	No
571	37.47	2.32	0.00	2.32	0.87	0.408	0.83	0.493	0.85	1.00	2.000	No
572	37.54	2.32	0.00	2.32	0.87	0.408	0.83	0.492	0.85	1.00	2.000	No
573	37.61	2.33	0.00	2.33	0.87	0.408	0.83	0.492	0.85	1.00	2.000	No
574	37.66	2.33	0.00	2.33	0.87	0.407	0.83	0.492	0.85	1.00	2.000	No
575	37.74	2.33	0.00	2.33	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No
576	37.81	2.34	0.00	2.34	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	37.86	2.34	0.00	2.34	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No
578	37.93	2.35	0.00	2.35	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
579	38.00	2.35	0.00	2.35	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
580	38.06	2.36	0.00	2.36	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
581	38.13	2.36	0.00	2.36	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
582	38.19	2.37	0.00	2.37	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
583	38.26	2.37	0.00	2.37	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
584	38.32	2.37	0.00	2.37	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
585	38.39	2.38	0.00	2.38	0.86	0.405	0.83	0.488	0.85	1.00	2.000	No
586	38.45	2.38	0.00	2.38	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
587	38.52	2.39	0.00	2.39	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
588	38.59	2.39	0.00	2.39	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
589	38.65	2.40	0.00	2.40	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
590	38.72	2.40	0.00	2.40	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
591	38.79	2.41	0.00	2.41	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
592	38.86	2.41	0.00	2.41	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
593	38.91	2.41	0.00	2.41	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
594	38.98	2.42	0.00	2.42	0.86	0.402	0.83	0.486	0.85	1.00	2.000	No
595	39.04	2.42	0.00	2.42	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
596	39.11	2.43	0.00	2.43	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
597	39.18	2.43	0.00	2.43	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
598	39.24	2.44	0.00	2.44	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
599	39.31	2.44	0.00	2.44	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
600	39.38	2.45	0.00	2.45	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
601	39.44	2.45	0.00	2.45	0.86	0.401	0.83	0.483	0.85	1.00	2.000	No
602	39.51	2.45	0.00	2.45	0.86	0.400	0.83	0.483	0.85	1.00	2.000	No
603	39.57	2.46	0.00	2.46	0.85	0.400	0.83	0.483	0.84	1.00	2.000	No
604	39.63	2.46	0.00	2.46	0.85	0.400	0.83	0.482	0.84	1.00	2.000	No
605	39.70	2.47	0.00	2.47	0.85	0.400	0.83	0.482	0.84	1.00	2.000	No
606	39.77	2.47	0.00	2.47	0.85	0.399	0.83	0.482	0.84	1.00	2.000	No
607	39.83	2.48	0.00	2.48	0.85	0.399	0.83	0.481	0.84	1.00	2.000	No
608	39.90	2.48	0.00	2.48	0.85	0.399	0.83	0.481	0.84	1.00	2.000	No
609	39.97	2.48	0.00	2.48	0.85	0.398	0.83	0.481	0.84	1.00	2.000	No
610	40.03	2.49	0.00	2.49	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
611	40.09	2.49	0.00	2.49	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
612	40.16	2.49	0.00	2.49	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
613	40.23	2.50	0.00	2.50	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
614	40.30	2.50	0.00	2.50	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
615	40.36	2.51	0.00	2.51	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
616	40.43	2.51	0.00	2.51	0.85	0.397	0.83	0.478	0.84	1.00	2.000	No
617	40.49	2.51	0.00	2.51	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
618	40.56	2.52	0.00	2.52	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
619	40.63	2.52	0.00	2.52	0.85	0.396	0.83	0.477	0.84	1.00	2.000	No
620	40.69	2.53	0.00	2.53	0.84	0.395	0.83	0.477	0.84	1.00	2.000	No
621	40.76	2.53	0.00	2.53	0.84	0.395	0.83	0.477	0.84	1.00	2.000	No
622	40.81	2.53	0.00	2.53	0.84	0.395	0.83	0.476	0.84	1.00	2.000	No
623	40.89	2.54	0.00	2.54	0.84	0.395	0.83	0.476	0.84	1.00	2.000	No
624	40.95	2.54	0.00	2.54	0.84	0.394	0.83	0.476	0.84	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
625	41.01	2.54	0.00	2.54	0.84	0.394	0.83	0.475	0.84	1.00	2.000	No
626	41.08	2.55	0.00	2.55	0.84	0.394	0.83	0.475	0.84	1.00	2.000	No
627	41.15	2.55	0.00	2.55	0.84	0.393	0.83	0.475	0.84	1.00	2.000	No
628	41.21	2.55	0.00	2.55	0.84	0.393	0.83	0.474	0.84	1.00	2.000	No

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.07	3.27	3.15	2.07	1.00	5.25	11.63	61.06	4.000	No	Yes	2.00
2	0.14	9.16	2.60	0.99	0.79	14.71	3.78	55.57	4.000	No	Yes	2.00
3	0.20	21.69	2.18	0.61	0.66	34.83	1.56	54.24	4.000	No	No	2.00
4	0.26	38.54	1.91	0.49	0.58	61.90	1.00	61.90	4.000	No	No	2.00
5	0.33	52.15	1.80	0.50	0.55	83.77	1.00	83.77	4.000	No	No	2.00
6	0.40	62.47	1.75	0.54	0.53	100.33	1.08	108.52	4.000	No	No	2.00
7	0.47	70.50	1.72	0.57	0.52	113.23	1.03	116.86	4.000	No	No	2.00
8	0.53	78.88	1.69	0.59	0.52	126.69	1.00	126.69	4.000	No	No	2.00
9	0.60	85.20	1.67	0.62	0.51	136.84	1.00	136.84	4.000	No	No	2.00
10	0.66	89.47	1.67	0.65	0.51	143.69	1.00	143.69	4.000	No	No	2.00
11	0.72	91.25	1.68	0.68	0.51	146.54	1.00	146.54	4.000	No	No	2.00
12	0.79	91.71	1.69	0.71	0.51	147.28	1.00	147.28	4.000	No	No	2.00
13	0.85	91.53	1.71	0.76	0.52	146.98	1.00	146.98	4.000	No	No	2.00
14	0.93	91.39	1.73	0.82	0.53	146.75	1.04	153.27	4.000	No	No	2.00
15	0.99	90.27	1.75	0.89	0.53	144.94	1.09	158.31	4.000	No	No	2.00
16	1.05	89.96	1.77	0.93	0.54	144.43	1.12	161.16	4.000	No	No	2.00
17	1.12	91.47	1.77	0.96	0.54	146.85	1.12	164.37	4.000	No	No	2.00
18	1.18	94.71	1.76	0.97	0.54	152.06	1.11	168.23	4.000	No	No	2.00
19	1.25	94.96	1.77	1.00	0.54	152.45	1.12	170.94	4.000	No	No	2.00
20	1.32	91.97	1.80	1.06	0.55	147.64	1.15	170.14	4.000	No	No	2.00
21	1.38	86.49	1.84	1.12	0.56	138.83	1.19	164.96	4.000	No	No	2.00
22	1.45	81.56	1.86	1.14	0.57	130.91	1.21	158.32	4.000	No	No	2.00
23	1.51	76.80	1.88	1.16	0.57	123.25	1.23	151.15	4.000	No	No	2.00
24	1.58	71.22	1.92	1.21	0.58	114.28	1.25	142.92	4.000	No	No	2.00
25	1.64	65.40	1.97	1.29	0.60	104.91	1.28	134.49	4.000	No	No	2.00
26	1.71	59.63	2.02	1.38	0.61	95.65	1.32	126.47	4.000	No	No	2.00
27	1.78	55.30	2.05	1.41	0.62	88.68	1.35	119.96	4.000	No	No	2.00
28	1.84	52.12	2.05	1.35	0.62	83.57	1.36	113.56	4.000	No	No	2.00
29	1.91	49.60	2.05	1.25	0.62	79.52	1.35	107.64	4.000	No	No	2.00
30	1.98	47.95	2.04	1.17	0.62	76.86	1.35	103.55	4.000	No	No	2.00
31	2.04	46.99	2.05	1.18	0.62	75.30	1.36	102.17	4.000	No	No	2.00
32	2.11	47.39	2.05	1.19	0.62	75.94	1.35	102.88	4.000	No	No	2.00
33	2.17	48.42	2.04	1.18	0.62	77.58	1.35	104.39	4.000	No	No	2.00
34	2.24	52.47	1.99	1.09	0.61	84.09	1.30	109.39	4.000	No	No	2.00
35	2.31	58.60	1.92	0.97	0.59	93.94	1.25	117.68	4.000	No	No	2.00
36	2.37	66.52	1.85	0.87	0.56	106.65	1.20	128.09	4.000	No	No	2.00
37	2.44	68.67	1.84	0.86	0.56	110.09	1.19	130.87	4.000	No	No	2.00
38	2.50	68.98	1.83	0.86	0.56	110.59	1.19	131.24	4.000	No	No	2.00
39	2.56	67.05	1.84	0.84	0.56	107.48	1.19	128.04	4.000	No	No	2.00
40	2.63	67.39	1.82	0.78	0.55	108.03	1.17	126.44	4.000	No	No	2.00
41	2.69	66.08	1.81	0.75	0.55	105.92	1.17	123.54	4.000	No	No	2.00
42	2.76	64.52	1.82	0.75	0.55	103.41	1.18	121.56	4.000	No	No	2.00
43	2.83	63.34	1.83	0.77	0.56	101.50	1.19	120.45	4.000	No	No	2.00
44	2.89	63.12	1.84	0.78	0.56	101.15	1.19	120.52	4.000	No	No	2.00
45	2.96	63.22	1.84	0.79	0.56	101.29	1.19	120.87	4.000	No	No	2.00
46	3.02	62.84	1.85	0.81	0.56	100.68	1.20	120.84	4.000	No	No	2.00
47	3.09	61.41	1.87	0.83	0.57	98.37	1.21	119.40	4.000	No	No	2.00
48	3.15	58.73	1.89	0.87	0.58	94.06	1.23	115.91	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.22	55.36	1.92	0.89	0.58	88.65	1.25	110.88	4.000	No	No	2.00
50	3.28	51.69	1.95	0.90	0.59	82.74	1.27	104.90	4.000	No	No	2.00
51	3.35	47.98	1.97	0.89	0.60	76.77	1.28	98.61	4.000	No	No	2.00
52	3.42	44.52	1.99	0.88	0.61	71.21	1.30	92.72	4.000	No	No	2.00
53	3.48	41.31	2.02	0.87	0.61	66.05	1.32	87.23	4.000	No	No	2.00
54	3.55	38.88	2.03	0.84	0.62	62.14	1.33	82.94	4.000	No	No	2.00
55	3.61	36.95	2.04	0.81	0.62	59.03	1.34	79.32	4.000	No	No	2.00
56	3.68	35.77	2.04	0.78	0.62	57.12	1.35	76.91	4.000	No	No	2.00
57	3.74	35.08	2.04	0.75	0.62	56.02	1.34	75.32	4.000	No	No	2.00
58	3.81	34.80	2.04	0.73	0.62	55.56	1.34	74.47	4.000	No	No	2.00
59	3.88	34.71	2.03	0.71	0.62	55.41	1.34	74.02	4.000	No	No	2.00
60	3.94	34.68	2.03	0.70	0.62	55.35	1.33	73.77	4.000	No	No	2.00
61	4.00	34.64	2.03	0.69	0.62	55.29	1.33	73.60	4.000	No	No	2.00
62	4.08	34.61	2.03	0.69	0.62	55.24	1.33	73.52	4.000	No	No	2.00
63	4.14	34.46	2.03	0.69	0.62	54.98	1.33	73.35	4.000	No	No	2.00
64	4.21	34.24	2.03	0.70	0.62	54.63	1.34	73.11	4.000	No	No	2.00
65	4.26	33.75	2.04	0.71	0.62	53.83	1.35	72.48	4.000	No	No	2.00
66	4.33	33.03	2.05	0.71	0.62	52.67	1.36	71.47	4.000	No	No	2.00
67	4.41	32.09	2.06	0.72	0.63	51.16	1.37	70.11	4.000	No	No	2.00
68	4.46	31.19	2.07	0.72	0.63	49.70	1.38	68.74	4.000	No	No	2.00
69	4.54	30.44	2.08	0.71	0.63	48.49	1.39	67.56	4.000	No	No	2.00
70	4.60	29.94	2.08	0.67	0.63	47.69	1.38	66.02	4.000	No	No	2.00
71	4.67	29.79	2.05	0.59	0.62	47.43	1.35	64.24	4.000	No	No	2.00
72	4.73	30.10	2.02	0.51	0.61	47.93	1.32	63.35	4.000	No	No	2.00
73	4.80	30.78	1.99	0.48	0.61	49.02	1.00	49.02	4.000	No	No	2.00
74	4.86	31.75	1.99	0.49	0.60	50.56	1.00	50.56	4.000	No	No	2.00
75	4.93	32.71	1.98	0.50	0.60	52.11	1.29	67.32	4.000	No	No	2.00
76	4.99	32.84	1.99	0.52	0.60	52.31	1.30	67.76	4.000	No	No	2.00
77	5.05	33.99	1.97	0.51	0.60	54.16	1.28	69.52	4.000	No	No	2.00
78	5.12	35.68	1.95	0.51	0.59	56.85	1.27	72.26	4.000	No	No	2.00
79	5.19	38.79	1.92	0.53	0.59	61.85	1.25	77.50	4.000	No	No	2.00
80	5.25	41.66	1.92	0.57	0.58	66.45	1.25	82.88	4.000	No	No	2.00
81	5.32	45.43	1.91	0.63	0.58	72.50	1.24	89.93	4.000	No	No	2.00
82	5.39	49.70	1.89	0.68	0.57	79.36	1.23	97.57	4.000	No	No	2.00
83	5.45	54.74	1.87	0.72	0.57	87.46	1.22	106.29	4.000	No	No	2.00
84	5.52	59.98	1.85	0.75	0.56	95.86	1.20	114.84	4.000	No	No	2.00
85	5.59	65.71	1.83	0.78	0.56	105.06	1.18	123.91	4.000	No	No	2.00
86	5.66	70.72	1.81	0.81	0.55	113.11	1.16	131.70	4.000	No	No	2.00
87	5.73	74.83	1.80	0.84	0.55	119.71	1.16	138.43	4.000	No	No	2.00
88	5.79	77.61	1.80	0.88	0.55	124.16	1.15	143.32	4.000	No	No	2.00
89	5.86	79.32	1.80	0.90	0.55	126.91	1.15	146.54	4.000	No	No	2.00
90	5.93	79.88	1.81	0.92	0.55	127.81	1.16	148.11	4.000	No	No	2.00
91	5.99	79.63	1.81	0.94	0.55	127.40	1.17	148.57	4.000	No	No	2.00
92	6.04	78.98	1.82	0.96	0.55	126.34	1.18	148.47	4.000	No	No	2.00
93	6.11	78.26	1.83	0.98	0.56	125.18	1.18	148.05	4.000	No	No	2.00
94	6.17	77.54	1.84	0.99	0.56	124.02	1.19	147.33	4.000	No	No	2.00
95	6.24	76.79	1.84	0.99	0.56	122.81	1.19	146.34	4.000	No	No	2.00
96	6.30	75.89	1.84	0.99	0.56	121.36	1.19	145.01	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.38	74.84	1.85	0.99	0.56	119.65	1.20	143.35	4.000	No	No	2.00
98	6.44	73.37	1.85	0.98	0.56	117.30	1.20	140.98	4.000	No	No	2.00
99	6.51	71.29	1.86	0.97	0.57	113.94	1.21	137.63	4.000	No	No	2.00
100	6.58	68.54	1.87	0.97	0.57	109.53	1.22	133.23	4.000	No	No	2.00
101	6.64	65.21	1.88	0.96	0.57	104.16	1.23	127.73	4.000	No	No	2.00
102	6.71	61.44	1.90	0.94	0.58	98.10	1.24	121.28	4.000	No	No	2.00
103	6.78	57.39	1.92	0.91	0.58	91.58	1.25	114.19	4.000	No	No	2.00
104	6.84	53.43	1.93	0.89	0.59	85.22	1.26	107.27	4.000	No	No	2.00
105	6.91	50.13	1.95	0.88	0.59	79.91	1.27	101.60	4.000	No	No	2.00
106	6.98	48.17	1.97	0.87	0.60	76.75	1.28	98.27	4.000	No	No	2.00
107	7.02	47.39	1.97	0.88	0.60	75.49	1.28	97.00	4.000	No	No	2.00
108	7.09	48.23	1.96	0.87	0.60	76.84	1.28	98.36	4.000	No	No	2.00
109	7.16	50.10	1.96	0.89	0.59	79.83	1.27	101.70	4.000	No	No	2.00
110	7.23	52.87	1.95	0.92	0.59	84.28	1.27	106.83	4.000	No	No	2.00
111	7.29	55.30	1.95	0.98	0.59	88.18	1.27	111.86	4.000	No	No	2.00
112	7.36	56.80	1.96	1.06	0.60	90.58	1.28	115.62	4.000	No	No	2.00
113	7.43	57.21	1.98	1.15	0.60	91.23	1.29	117.79	4.000	No	No	2.00
114	7.50	56.74	2.00	1.24	0.61	90.47	1.31	118.63	4.000	No	No	2.00
115	7.56	55.86	2.03	1.33	0.62	89.06	1.33	118.78	4.000	No	No	2.00
116	7.61	54.74	2.05	1.42	0.62	87.25	1.36	118.63	4.000	No	No	2.00
117	7.68	53.65	2.07	1.48	0.63	85.49	1.38	118.26	4.000	No	No	2.00
118	7.75	52.61	2.08	1.49	0.63	83.82	1.39	116.87	4.000	No	No	2.00
119	7.81	51.80	2.09	1.49	0.63	82.51	1.40	115.43	4.000	No	No	2.00
120	7.88	51.12	2.09	1.49	0.64	81.40	1.41	114.39	4.000	No	No	2.00
121	7.95	50.46	2.11	1.55	0.64	80.35	1.43	114.84	4.000	No	No	2.00
122	8.02	49.84	2.13	1.63	0.65	79.34	1.46	115.75	4.000	No	No	2.00
123	8.09	49.03	2.15	1.71	0.65	78.02	1.49	116.61	4.000	No	No	2.00
124	8.14	48.03	2.17	1.79	0.66	76.42	1.54	117.31	4.000	No	No	2.00
125	8.20	47.19	2.18	1.86	0.66	75.07	1.57	118.02	4.000	No	No	2.00
126	8.28	46.64	2.20	1.94	0.67	74.17	1.61	119.51	4.000	No	No	2.00
127	8.35	46.33	2.21	2.03	0.67	73.66	1.65	121.47	4.000	No	No	2.00
128	8.42	45.98	2.23	2.10	0.68	73.10	1.69	123.24	4.000	No	No	2.00
129	8.46	45.69	2.23	2.14	0.68	72.64	1.71	124.01	4.000	No	No	2.00
130	8.54	45.57	2.24	2.13	0.68	72.01	1.71	123.14	4.000	No	No	2.00
131	8.61	45.50	2.23	2.09	0.68	71.43	1.70	121.61	4.000	No	No	2.00
132	8.66	45.50	2.23	2.03	0.68	71.01	1.68	119.38	4.000	No	No	2.00
133	8.73	45.53	2.22	1.96	0.67	70.50	1.66	116.96	4.000	No	No	2.00
134	8.80	45.50	2.21	1.89	0.67	69.92	1.64	114.40	4.000	No	No	2.00
135	8.88	45.35	2.20	1.83	0.67	69.21	1.62	112.37	4.000	No	No	2.00
136	8.93	44.98	2.20	1.81	0.67	68.38	1.62	111.08	4.000	No	No	2.00
137	9.00	44.82	2.21	1.81	0.67	67.79	1.63	110.42	4.000	No	No	2.00
138	9.07	44.58	2.21	1.81	0.67	67.11	1.64	110.12	4.000	No	No	2.00
139	9.13	44.70	2.21	1.82	0.67	67.02	1.64	110.11	4.000	No	No	2.00
140	9.20	45.01	2.21	1.82	0.67	67.13	1.64	110.29	4.000	No	No	2.00
141	9.27	46.07	2.20	1.81	0.67	68.25	1.62	110.83	4.000	No	No	2.00
142	9.34	47.38	2.19	1.79	0.67	69.71	1.60	111.54	4.000	No	No	2.00
143	9.39	48.97	2.18	1.76	0.66	71.61	1.57	112.33	4.000	No	No	2.00
144	9.46	50.63	2.17	1.72	0.66	73.43	1.54	112.79	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.53	52.15	2.15	1.68	0.65	75.04	1.51	113.17	4.000	No	No	2.00
146	9.58	53.46	2.14	1.66	0.65	76.53	1.49	114.03	4.000	No	No	2.00
147	9.65	54.49	2.14	1.70	0.65	77.66	1.49	116.03	4.000	No	No	2.00
148	9.73	55.37	2.16	1.79	0.65	78.68	1.51	119.18	4.000	No	No	2.00
149	9.78	55.83	2.18	1.96	0.66	79.41	1.57	124.33	4.000	No	No	2.00
150	9.85	55.55	2.22	2.21	0.67	79.16	1.66	131.36	4.000	No	No	2.00
151	9.92	54.24	2.27	2.57	0.69	77.65	1.82	141.17	4.000	No	No	2.00
152	9.99	52.22	2.33	2.97	0.71	75.06	2.02	151.87	4.000	No	No	2.00
153	10.04	49.73	2.38	3.38	0.72	71.87	2.27	163.24	4.000	No	No	2.00
154	10.12	47.73	2.42	3.71	0.73	69.07	2.49	171.95	4.000	No	No	2.00
155	10.19	46.79	2.44	3.90	0.74	67.56	2.62	176.79	4.000	No	No	2.00
156	10.24	46.07	2.45	3.95	0.74	66.36	2.67	177.34	4.000	No	No	2.00
157	10.31	46.39	2.44	3.81	0.74	66.31	2.60	172.66	4.000	No	No	2.00
158	10.38	47.51	2.41	3.53	0.73	67.21	2.44	164.14	4.000	No	No	2.00
159	10.46	50.24	2.36	3.13	0.72	70.14	2.19	153.35	4.000	No	No	2.00
160	10.51	53.41	2.31	2.74	0.70	73.66	1.95	143.51	4.000	No	No	2.00
161	10.58	56.37	2.26	2.44	0.69	76.77	1.78	136.39	4.000	No	No	2.00
162	10.65	59.00	2.22	2.22	0.67	79.46	1.66	131.82	4.000	No	No	2.00
163	10.70	61.30	2.19	2.09	0.66	81.97	1.59	130.32	4.000	No	No	2.00
164	10.77	63.36	2.16	1.93	0.66	83.91	1.52	127.51	4.000	No	No	2.00
165	10.84	65.32	2.12	1.73	0.64	85.59	1.45	123.91	4.000	No	No	2.00
166	10.91	66.72	2.08	1.55	0.63	86.59	1.40	120.85	4.000	No	No	2.00
167	10.96	67.90	2.07	1.50	0.63	87.67	1.38	120.64	4.000	No	No	2.00
168	11.04	69.49	2.06	1.50	0.63	89.26	1.37	122.26	4.000	No	No	2.00
169	11.11	71.89	2.05	1.47	0.62	91.77	1.35	124.16	4.000	No	No	2.00
170	11.16	73.42	2.03	1.42	0.62	93.27	1.34	124.82	4.000	No	No	2.00
171	11.22	76.33	2.00	1.31	0.61	96.17	1.31	125.71	4.000	No	No	2.00
172	11.29	79.39	1.96	1.17	0.60	99.07	1.28	126.39	4.000	No	No	2.00
173	11.36	83.87	1.91	1.03	0.58	103.54	1.24	128.56	4.000	No	No	2.00
174	11.43	86.83	1.88	0.96	0.57	106.37	1.22	129.92	4.000	No	No	2.00
175	11.49	89.67	1.86	0.94	0.57	109.33	1.21	132.30	4.000	No	No	2.00
176	11.56	92.25	1.86	0.95	0.57	112.04	1.21	135.30	4.000	No	No	2.00
177	11.63	94.43	1.86	0.98	0.57	114.31	1.21	138.24	4.000	No	No	2.00
178	11.68	95.84	1.87	1.03	0.57	115.84	1.22	140.76	4.000	No	No	2.00
179	11.76	96.39	1.88	1.07	0.57	116.24	1.22	142.17	4.000	No	No	2.00
180	11.83	96.46	1.89	1.11	0.58	116.07	1.23	142.91	4.000	No	No	2.00
181	11.88	95.96	1.90	1.14	0.58	115.32	1.24	142.79	4.000	No	No	2.00
182	11.95	95.00	1.91	1.16	0.58	113.86	1.24	141.66	4.000	No	No	2.00
183	12.03	93.41	1.92	1.18	0.58	111.65	1.25	139.63	4.000	No	No	2.00
184	12.10	91.35	1.93	1.19	0.59	108.94	1.26	137.02	4.000	No	No	2.00
185	12.14	88.64	1.95	1.21	0.59	105.59	1.27	133.83	4.000	No	No	2.00
186	12.22	85.65	1.96	1.23	0.60	101.82	1.28	130.19	4.000	No	No	2.00
187	12.29	82.66	1.98	1.24	0.60	98.04	1.29	126.51	4.000	No	No	2.00
188	12.34	80.04	1.99	1.26	0.61	94.82	1.30	123.42	4.000	No	No	2.00
189	12.41	77.82	2.01	1.28	0.61	91.98	1.31	120.83	4.000	No	No	2.00
190	12.49	76.08	2.02	1.30	0.61	89.70	1.33	118.89	4.000	No	No	2.00
191	12.54	74.90	2.03	1.32	0.62	88.17	1.33	117.69	4.000	No	No	2.00
192	12.61	74.15	2.04	1.34	0.62	87.04	1.34	116.89	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.68	73.66	2.05	1.36	0.62	86.20	1.35	116.44	4.000	No	No	2.00
194	12.73	73.41	2.05	1.38	0.62	85.74	1.36	116.45	4.000	No	No	2.00
195	12.80	73.38	2.06	1.40	0.63	85.44	1.36	116.56	4.000	No	No	2.00
196	12.87	73.38	2.06	1.42	0.63	85.17	1.37	116.64	4.000	No	No	2.00
197	12.95	73.50	2.07	1.43	0.63	85.02	1.37	116.66	4.000	No	No	2.00
198	12.99	73.66	2.07	1.43	0.63	84.99	1.37	116.73	4.000	No	No	2.00
199	13.07	73.75	2.07	1.43	0.63	84.78	1.37	116.53	4.000	No	No	2.00
200	13.14	73.72	2.07	1.43	0.63	84.44	1.38	116.15	4.000	No	No	2.00
201	13.19	73.53	2.07	1.43	0.63	84.03	1.38	115.66	4.000	No	No	2.00
202	13.26	73.41	2.07	1.43	0.63	83.59	1.38	115.16	4.000	No	No	2.00
203	13.34	73.50	2.07	1.42	0.63	83.38	1.38	114.90	4.000	No	No	2.00
204	13.39	74.28	2.07	1.41	0.63	84.03	1.37	115.37	4.000	No	No	2.00
205	13.46	76.06	2.06	1.40	0.63	85.69	1.36	116.76	4.000	No	No	2.00
206	13.54	78.20	2.05	1.39	0.62	87.72	1.35	118.59	4.000	No	No	2.00
207	13.59	80.73	2.04	1.39	0.62	90.30	1.34	121.18	4.000	No	No	2.00
208	13.66	83.31	2.03	1.38	0.62	92.81	1.33	123.54	4.000	No	No	2.00
209	13.73	85.96	2.01	1.36	0.61	95.35	1.32	125.81	4.000	No	No	2.00
210	13.78	88.21	2.00	1.35	0.61	97.56	1.31	127.82	4.000	No	No	2.00
211	13.86	88.92	2.01	1.36	0.61	98.03	1.31	128.61	4.000	No	No	2.00
212	13.93	88.23	2.02	1.41	0.61	97.03	1.32	128.38	4.000	No	No	2.00
213	13.98	85.62	2.05	1.49	0.62	94.11	1.35	127.02	4.000	No	No	2.00
214	14.05	81.47	2.09	1.62	0.63	89.48	1.40	125.15	4.000	No	No	2.00
215	14.11	77.33	2.13	1.78	0.65	84.92	1.47	124.67	4.000	No	No	2.00
216	14.18	73.94	2.17	1.95	0.66	81.12	1.55	125.63	4.000	No	No	2.00
217	14.25	71.85	2.21	2.12	0.67	78.72	1.63	128.47	4.000	No	No	2.00
218	14.32	69.82	2.24	2.31	0.68	76.38	1.73	132.09	4.000	No	No	2.00
219	14.37	67.92	2.27	2.50	0.69	74.26	1.83	136.15	4.000	No	No	2.00
220	14.44	67.61	2.28	2.56	0.69	73.69	1.87	137.69	4.000	No	No	2.00
221	14.51	69.48	2.27	2.50	0.69	75.40	1.82	137.20	4.000	No	No	2.00
222	14.59	73.55	2.24	2.35	0.68	79.39	1.71	135.64	4.000	No	No	2.00
223	14.64	80.25	2.18	2.13	0.66	86.19	1.57	135.02	4.000	No	No	2.00
224	14.71	90.19	2.10	1.85	0.64	96.17	1.42	136.77	4.000	No	No	2.00
225	14.78	101.84	2.02	1.56	0.61	107.82	1.32	142.48	4.000	No	No	2.00
226	14.83	113.22	1.94	1.34	0.59	119.16	1.26	150.41	4.000	No	No	2.00
227	14.91	121.82	1.89	1.21	0.57	127.46	1.23	156.57	4.000	No	No	2.00
228	14.97	129.08	1.85	1.14	0.56	134.50	1.20	161.61	4.000	No	No	2.00
229	15.03	135.31	1.82	1.08	0.56	140.47	1.18	165.36	4.000	No	No	2.00
230	15.10	141.35	1.80	1.04	0.55	146.20	1.15	168.08	4.000	No	No	2.00
231	15.17	146.05	1.78	1.01	0.54	150.56	1.13	169.93	4.000	No	No	2.00
232	15.23	147.36	1.78	1.02	0.54	151.54	1.13	171.25	4.000	No	No	2.00
233	15.30	143.75	1.80	1.06	0.55	147.57	1.16	170.51	4.000	No	No	2.00
234	15.37	135.37	1.84	1.14	0.56	138.81	1.19	165.67	4.000	No	No	2.00
235	15.44	124.56	1.89	1.22	0.57	127.59	1.23	156.82	4.000	No	No	2.00
236	15.51	113.97	1.93	1.28	0.59	116.57	1.26	146.64	4.000	No	No	2.00
237	15.57	105.34	1.96	1.30	0.60	107.52	1.28	137.50	4.000	No	No	2.00
238	15.64	99.36	1.98	1.30	0.60	101.16	1.29	130.68	4.000	No	No	2.00
239	15.68	95.31	1.99	1.27	0.60	96.87	1.30	125.74	4.000	No	No	2.00
240	15.75	92.69	1.99	1.24	0.61	93.93	1.30	122.20	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.82	90.88	1.99	1.21	0.61	91.82	1.30	119.35	4.000	No	No	2.00
242	15.89	90.10	1.99	1.16	0.60	90.75	1.30	117.54	4.000	No	No	2.00
243	15.96	90.14	1.98	1.12	0.60	90.49	1.29	116.61	4.000	No	No	2.00
244	16.01	90.38	1.97	1.10	0.60	90.55	1.28	116.21	4.000	No	No	2.00
245	16.09	90.91	1.97	1.09	0.60	90.80	1.28	116.29	4.000	No	No	2.00
246	16.16	91.66	1.96	1.08	0.60	91.29	1.28	116.70	4.000	No	No	2.00
247	16.21	92.97	1.96	1.07	0.59	92.42	1.27	117.75	4.000	No	No	2.00
248	16.28	94.62	1.95	1.06	0.59	93.79	1.27	118.96	4.000	No	No	2.00
249	16.35	96.61	1.94	1.05	0.59	95.50	1.26	120.59	4.000	No	No	2.00
250	16.42	98.33	1.93	1.05	0.59	96.94	1.26	122.08	4.000	No	No	2.00
251	16.47	100.26	1.93	1.05	0.59	98.67	1.26	123.88	4.000	No	No	2.00
252	16.54	102.88	1.92	1.04	0.58	100.98	1.25	126.19	4.000	No	No	2.00
253	16.62	106.90	1.90	1.03	0.58	104.64	1.24	129.71	4.000	No	No	2.00
254	16.69	110.26	1.88	0.99	0.57	107.63	1.22	131.85	4.000	No	No	2.00
255	16.74	113.44	1.83	0.83	0.56	110.44	1.18	130.39	4.000	No	No	2.00
256	16.81	116.30	1.78	0.71	0.54	112.86	1.12	126.86	4.000	No	No	2.00
257	16.88	119.82	1.74	0.64	0.53	115.95	1.07	123.89	4.000	No	No	2.00
258	16.93	124.09	1.75	0.70	0.53	119.94	1.09	130.39	4.000	No	No	2.00
259	17.01	128.58	1.76	0.75	0.54	124.02	1.10	136.33	4.000	No	No	2.00
260	17.08	131.29	1.77	0.81	0.54	126.38	1.12	141.28	4.000	No	No	2.00
261	17.13	135.43	1.77	0.84	0.54	130.20	1.12	146.05	4.000	No	No	2.00
262	17.20	140.23	1.78	0.88	0.54	134.52	1.12	151.17	4.000	No	No	2.00
263	17.27	147.80	1.77	0.91	0.54	141.48	1.12	157.92	4.000	No	No	2.00
264	17.34	153.00	1.77	0.95	0.54	146.15	1.12	163.25	4.000	No	No	2.00
265	17.39	156.90	1.77	0.97	0.54	149.65	1.12	167.17	4.000	No	No	2.00
266	17.46	159.67	1.77	0.98	0.54	151.98	1.11	169.33	4.000	No	No	2.00
267	17.52	161.88	1.77	0.99	0.54	153.75	1.11	170.96	4.000	No	No	2.00
268	17.60	163.41	1.77	1.00	0.54	154.84	1.11	172.41	4.000	No	No	2.00
269	17.67	164.34	1.77	1.01	0.54	155.35	1.12	173.42	4.000	No	No	2.00
270	17.72	164.93	1.77	1.02	0.54	155.67	1.12	173.92	4.000	No	No	2.00
271	17.79	165.21	1.77	1.01	0.54	155.58	1.11	173.19	4.000	No	No	2.00
272	17.86	165.62	1.76	0.98	0.54	155.61	1.10	171.61	4.000	No	No	2.00
273	17.93	165.84	1.76	0.96	0.53	155.45	1.09	169.99	4.000	No	No	2.00
274	17.98	164.56	1.76	0.96	0.54	154.00	1.10	168.88	4.000	No	No	2.00
275	18.05	163.59	1.76	0.96	0.54	152.74	1.10	168.15	4.000	No	No	2.00
276	18.11	163.25	1.76	0.97	0.54	152.12	1.11	168.46	4.000	No	No	2.00
277	18.19	164.93	1.76	0.97	0.54	153.31	1.10	169.27	4.000	No	No	2.00
278	18.26	166.46	1.76	0.98	0.54	154.41	1.11	170.70	4.000	No	No	2.00
279	18.33	167.74	1.76	0.99	0.54	155.25	1.11	171.59	4.000	No	No	2.00
280	18.38	168.98	1.76	0.99	0.54	156.18	1.10	172.41	4.000	No	No	2.00
281	18.45	170.45	1.76	0.99	0.54	157.19	1.10	172.77	4.000	No	No	2.00
282	18.52	171.94	1.75	0.98	0.53	158.23	1.09	172.70	4.000	No	No	2.00
283	18.57	173.34	1.75	0.96	0.53	159.30	1.08	172.07	4.000	No	No	2.00
284	18.64	174.68	1.74	0.94	0.53	160.21	1.07	170.98	4.000	No	No	2.00
285	18.71	176.12	1.73	0.92	0.53	161.20	1.05	169.19	4.000	No	No	2.00
286	18.79	177.52	1.72	0.89	0.52	162.16	1.03	166.91	4.000	No	No	2.00
287	18.84	179.45	1.71	0.86	0.52	163.72	1.00	163.72	4.000	No	No	2.00
288	18.91	181.16	1.70	0.84	0.52	164.97	1.00	164.97	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.98	182.85	1.69	0.82	0.51	166.20	1.00	166.20	4.000	No	No	2.00
290	19.05	183.22	1.68	0.81	0.51	166.21	1.00	166.21	4.000	No	No	2.00
291	19.10	182.57	1.67	0.77	0.51	165.42	1.00	165.42	4.000	No	No	2.00
292	19.18	181.41	1.66	0.72	0.50	164.08	1.00	164.08	4.000	No	No	2.00
293	19.25	179.82	1.64	0.69	0.50	162.35	1.00	162.35	4.000	No	No	2.00
294	19.30	175.80	1.65	0.67	0.50	158.48	1.00	158.48	4.000	No	No	2.00
295	19.37	168.36	1.65	0.65	0.50	151.39	1.00	151.39	4.000	No	No	2.00
296	19.44	160.67	1.66	0.64	0.51	144.11	1.00	144.11	4.000	No	No	2.00
297	19.51	152.72	1.69	0.65	0.51	136.57	1.00	136.57	4.000	No	No	2.00
298	19.56	145.74	1.72	0.68	0.52	130.00	1.02	132.58	4.000	No	No	2.00
299	19.63	138.70	1.75	0.71	0.53	123.30	1.08	133.14	4.000	No	No	2.00
300	19.70	135.34	1.76	0.72	0.54	120.00	1.10	132.20	4.000	No	No	2.00
301	19.75	136.09	1.76	0.71	0.53	120.52	1.09	131.69	4.000	No	No	2.00
302	19.83	139.05	1.74	0.70	0.53	122.96	1.08	132.20	4.000	No	No	2.00
303	19.90	143.72	1.74	0.71	0.53	126.90	1.06	134.45	4.000	No	No	2.00
304	19.95	149.02	1.73	0.74	0.53	131.43	1.06	138.96	4.000	No	No	2.00
305	20.02	157.24	1.72	0.75	0.53	138.52	1.04	143.54	4.000	No	No	2.00
306	20.10	160.57	1.73	0.78	0.53	141.16	1.05	147.56	4.000	No	No	2.00
307	20.15	169.89	1.71	0.78	0.52	149.32	1.00	149.32	4.000	No	No	2.00
308	20.23	178.55	1.68	0.76	0.51	156.79	1.00	156.79	4.000	No	No	2.00
309	20.29	192.44	1.65	0.72	0.50	169.03	1.00	169.03	4.000	No	No	2.00
310	20.34	202.16	1.62	0.70	0.50	177.43	1.00	177.43	4.000	No	No	2.00
311	20.41	210.54	1.61	0.69	0.50	184.48	1.00	184.48	4.000	No	No	2.00
312	20.49	219.38	1.59	0.68	0.50	191.92	1.00	191.92	4.000	No	No	2.00
313	20.56	228.14	1.57	0.66	0.50	199.26	1.00	199.26	4.000	No	No	2.00
314	20.61	239.95	1.53	0.62	0.50	209.36	1.00	209.36	4.000	No	No	2.00
315	20.68	251.57	1.51	0.60	0.50	219.12	1.00	219.12	4.000	No	No	2.00
316	20.75	255.15	1.51	0.62	0.50	221.84	1.00	221.84	4.000	No	No	2.00
317	20.81	245.77	1.54	0.64	0.50	213.35	1.00	213.35	4.000	No	No	2.00
318	20.87	239.98	1.54	0.64	0.50	207.97	1.00	207.97	4.000	No	No	2.00
319	20.94	234.09	1.56	0.66	0.50	202.44	1.00	202.44	4.000	No	No	2.00
320	21.01	224.93	1.62	0.76	0.50	194.13	1.00	194.13	4.000	No	No	2.00
321	21.07	204.68	1.70	0.92	0.52	175.69	1.00	175.69	4.000	No	No	2.00
322	21.14	185.05	1.79	1.11	0.55	157.73	1.15	180.64	4.000	No	No	2.00
323	21.21	174.87	1.84	1.22	0.56	148.28	1.19	177.16	4.000	No	No	2.00
324	21.28	168.85	1.87	1.30	0.57	142.60	1.22	173.87	4.000	No	No	2.00
325	21.33	165.12	1.89	1.33	0.57	139.13	1.23	170.95	4.000	No	No	2.00
326	21.40	163.09	1.89	1.33	0.58	137.09	1.23	168.90	4.000	No	No	2.00
327	21.47	161.88	1.89	1.31	0.58	135.77	1.23	167.15	4.000	No	No	2.00
328	21.55	161.54	1.88	1.27	0.57	135.26	1.23	165.78	4.000	No	No	2.00
329	21.60	161.38	1.87	1.22	0.57	135.04	1.22	164.30	4.000	No	No	2.00
330	21.67	160.97	1.86	1.17	0.57	134.51	1.21	162.40	4.000	No	No	2.00
331	21.74	160.10	1.85	1.13	0.56	133.57	1.20	160.45	4.000	No	No	2.00
332	21.79	155.96	1.86	1.13	0.57	129.84	1.21	156.89	4.000	No	No	2.00
333	21.86	149.42	1.88	1.15	0.57	123.93	1.22	151.72	4.000	No	No	2.00
334	21.93	142.13	1.91	1.19	0.58	117.40	1.24	145.75	4.000	No	No	2.00
335	21.98	135.84	1.93	1.21	0.59	111.85	1.25	140.36	4.000	No	No	2.00
336	22.06	130.10	1.95	1.24	0.59	106.70	1.27	135.46	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.13	123.56	1.97	1.24	0.60	100.94	1.28	129.54	4.000	No	No	2.00
338	22.20	116.83	1.99	1.24	0.60	95.07	1.30	123.26	4.000	No	No	2.00
339	22.25	108.61	2.02	1.25	0.61	88.01	1.32	116.20	4.000	No	No	2.00
340	22.32	100.10	2.07	1.35	0.63	80.57	1.37	110.60	4.000	No	No	2.00
341	22.39	91.76	2.13	1.52	0.65	73.25	1.47	107.70	4.000	No	No	2.00
342	22.45	84.40	2.20	1.76	0.67	66.85	1.62	108.41	4.000	No	No	2.00
343	22.52	76.37	2.29	2.08	0.69	59.87	1.88	112.44	4.000	No	No	2.00
344	22.58	68.76	2.37	2.47	0.72	53.36	2.25	119.88	4.000	No	No	2.00
345	22.64	61.91	2.46	2.87	0.74	47.53	2.69	127.99	4.000	No	No	2.00
346	22.71	56.39	2.52	3.20	0.76	42.89	3.12	133.98	4.000	No	No	2.00
347	22.77	50.29	2.59	3.53	0.79	37.84	3.66	138.65	4.000	No	No	2.00
348	22.85	44.59	2.66	3.85	0.81	33.17	4.27	141.68	4.000	No	Yes	2.00
349	22.92	40.51	2.71	4.09	0.82	29.84	4.80	143.14	4.000	No	Yes	2.00
350	22.97	39.14	2.72	4.09	0.82	28.71	4.93	141.48	4.000	No	Yes	2.00
351	23.04	38.05	2.73	4.09	0.83	27.79	5.05	140.21	4.000	No	Yes	2.00
352	23.11	38.75	2.71	3.93	0.82	28.27	4.85	137.26	4.000	No	Yes	2.00
353	23.18	39.28	2.70	3.84	0.82	28.62	4.74	135.72	4.000	No	Yes	2.00
354	23.23	42.23	2.66	3.56	0.81	30.92	4.27	132.12	4.000	No	Yes	2.00
355	23.30	45.90	2.61	3.30	0.79	33.75	3.81	128.60	4.000	No	Yes	2.00
356	23.38	51.59	2.54	2.97	0.77	38.19	3.23	123.51	4.000	No	No	2.00
357	23.45	57.64	2.47	2.67	0.75	42.93	2.76	118.68	4.000	No	No	2.00
358	23.50	63.67	2.40	2.42	0.73	47.73	2.40	114.35	4.000	No	No	2.00
359	23.57	67.73	2.37	2.28	0.72	50.88	2.21	112.30	4.000	No	No	2.00
360	23.65	69.84	2.35	2.23	0.71	52.45	2.13	111.87	4.000	No	No	2.00
361	23.69	69.85	2.36	2.27	0.71	52.35	2.16	112.83	4.000	No	No	2.00
362	23.77	69.36	2.37	2.33	0.72	51.80	2.21	114.42	4.000	No	No	2.00
363	23.84	68.82	2.38	2.42	0.72	51.21	2.28	116.69	4.000	No	No	2.00
364	23.89	67.61	2.41	2.60	0.73	50.08	2.42	121.43	4.000	No	No	2.00
365	23.96	65.96	2.45	2.84	0.74	48.55	2.63	127.70	4.000	No	No	2.00
366	24.03	64.18	2.48	3.10	0.75	46.94	2.86	134.19	4.000	No	No	2.00
367	24.11	62.78	2.51	3.27	0.76	45.67	3.03	138.24	4.000	No	No	2.00
368	24.15	61.59	2.52	3.37	0.77	44.64	3.15	140.41	4.000	No	No	2.00
369	24.23	62.49	2.52	3.35	0.76	45.22	3.10	140.17	4.000	No	No	2.00
370	24.30	66.47	2.48	3.17	0.75	48.22	2.85	137.56	4.000	No	No	2.00
371	24.35	75.51	2.41	2.84	0.73	55.24	2.40	132.59	4.000	No	No	2.00
372	24.42	87.66	2.32	2.50	0.70	64.71	1.99	128.93	4.000	No	No	2.00
373	24.50	99.50	2.25	2.26	0.68	73.96	1.74	128.56	4.000	No	No	2.00
374	24.54	108.48	2.20	2.11	0.67	81.01	1.61	130.05	4.000	No	No	2.00
375	24.62	113.59	2.17	2.03	0.66	84.93	1.54	131.18	4.000	No	No	2.00
376	24.69	116.55	2.15	1.98	0.65	87.12	1.51	131.86	4.000	No	No	2.00
377	24.74	117.55	2.15	1.97	0.65	87.79	1.51	132.18	4.000	No	No	2.00
378	24.81	118.14	2.15	1.97	0.65	88.07	1.50	132.36	4.000	No	No	2.00
379	24.88	119.79	2.14	1.94	0.65	89.21	1.49	132.68	4.000	No	No	2.00
380	24.95	122.50	2.13	1.89	0.65	91.22	1.46	133.17	4.000	No	No	2.00
381	25.00	125.68	2.11	1.83	0.64	93.67	1.43	133.93	4.000	No	No	2.00
382	25.08	128.51	2.09	1.77	0.64	95.77	1.41	134.72	4.000	No	No	2.00
383	25.15	131.66	2.08	1.73	0.63	98.10	1.39	136.00	4.000	No	No	2.00
384	25.20	137.01	2.05	1.68	0.62	102.24	1.36	139.05	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.27	146.45	2.02	1.63	0.62	109.53	1.33	145.44	4.000	No	No	2.00
386	25.34	161.84	1.98	1.56	0.60	121.52	1.29	156.86	4.000	No	No	2.00
387	25.41	178.48	1.94	1.52	0.59	134.46	1.26	169.83	4.000	No	No	2.00
388	25.46	191.84	1.92	1.51	0.58	144.82	1.25	180.63	4.000	No	No	2.00
389	25.54	196.86	1.92	1.54	0.58	148.37	1.25	185.03	4.000	No	No	2.00
390	25.61	195.74	1.93	1.60	0.59	147.00	1.26	184.83	4.000	No	No	2.00
391	25.67	191.41	1.95	1.64	0.59	143.26	1.27	181.49	4.000	No	No	2.00
392	25.74	187.02	1.95	1.64	0.59	139.57	1.27	177.51	4.000	No	No	2.00
393	25.79	181.63	1.97	1.65	0.60	135.16	1.28	173.07	4.000	No	No	2.00
394	25.86	174.78	1.99	1.72	0.61	129.38	1.30	168.20	4.000	No	No	2.00
395	25.94	166.55	2.03	1.84	0.62	122.47	1.33	163.13	4.000	No	No	2.00
396	25.99	157.11	2.06	1.94	0.63	114.81	1.37	157.48	4.000	No	No	2.00
397	26.06	143.78	2.11	2.07	0.64	104.16	1.44	149.96	4.000	No	No	2.00
398	26.13	130.79	2.16	2.17	0.66	93.96	1.52	143.04	4.000	No	No	2.00
399	26.19	118.64	2.20	2.26	0.67	84.53	1.62	137.20	4.000	No	No	2.00
400	26.25	109.45	2.24	2.34	0.68	77.39	1.73	133.77	4.000	No	No	2.00
401	26.33	98.73	2.30	2.52	0.70	69.07	1.92	132.79	4.000	No	No	2.00
402	26.39	86.49	2.37	2.76	0.72	59.71	2.24	133.54	4.000	No	No	2.00
403	26.47	75.52	2.44	2.98	0.74	51.43	2.61	134.08	4.000	No	No	2.00
404	26.51	64.40	2.52	3.23	0.76	43.21	3.13	135.05	4.000	No	No	2.00
405	26.59	54.99	2.60	3.54	0.79	36.27	3.78	137.29	4.000	No	Yes	2.00
406	26.66	46.96	2.69	3.94	0.82	30.40	4.62	140.53	4.000	No	Yes	2.00
407	26.71	42.19	2.75	4.24	0.83	26.96	5.28	142.22	4.000	No	Yes	2.00
408	26.78	40.82	2.77	4.29	0.84	25.93	5.46	141.58	4.000	No	Yes	2.00
409	26.84	41.25	2.76	4.18	0.84	26.20	5.33	139.71	4.000	No	Yes	2.00
410	26.91	43.59	2.72	3.92	0.82	27.82	4.91	136.52	4.000	No	Yes	2.00
411	26.98	47.39	2.66	3.58	0.81	30.49	4.33	131.94	4.000	No	Yes	2.00
412	27.04	53.78	2.58	3.10	0.78	35.08	3.55	124.49	4.000	No	No	2.00
413	27.11	61.65	2.48	2.63	0.75	40.81	2.84	115.92	4.000	No	No	2.00
414	27.17	70.51	2.38	2.22	0.72	47.34	2.29	108.21	4.000	No	No	2.00
415	27.24	80.15	2.29	1.90	0.70	54.53	1.89	103.10	4.000	No	No	2.00
416	27.31	90.45	2.21	1.65	0.67	62.26	1.63	101.66	4.000	No	No	2.00
417	27.36	101.73	2.13	1.47	0.65	70.78	1.47	104.12	4.000	No	No	2.00
418	27.44	112.18	2.08	1.37	0.63	78.61	1.39	109.13	4.000	No	No	2.00
419	27.51	121.26	2.04	1.33	0.62	85.32	1.35	114.98	4.000	No	No	2.00
420	27.56	128.84	2.02	1.34	0.62	90.84	1.33	120.74	4.000	No	No	2.00
421	27.64	136.05	2.01	1.36	0.61	96.00	1.32	126.38	4.000	No	No	2.00
422	27.71	143.00	2.00	1.37	0.61	101.00	1.30	131.73	4.000	No	No	2.00
423	27.76	150.19	1.98	1.36	0.60	106.27	1.29	137.13	4.000	No	No	2.00
424	27.83	156.83	1.96	1.35	0.60	111.09	1.28	141.99	4.000	No	No	2.00
425	27.89	164.15	1.94	1.33	0.59	116.47	1.27	147.47	4.000	No	No	2.00
426	27.96	170.97	1.93	1.33	0.59	121.42	1.26	152.53	4.000	No	No	2.00
427	28.03	177.42	1.92	1.32	0.58	126.08	1.25	157.27	4.000	No	No	2.00
428	28.09	183.43	1.90	1.31	0.58	130.46	1.24	161.68	4.000	No	No	2.00
429	28.16	189.73	1.89	1.30	0.58	135.01	1.23	166.19	4.000	No	No	2.00
430	28.23	195.71	1.88	1.30	0.57	139.30	1.22	170.42	4.000	No	No	2.00
431	28.28	201.29	1.87	1.29	0.57	143.32	1.22	174.39	4.000	No	No	2.00
432	28.36	205.18	1.87	1.31	0.57	145.94	1.21	177.31	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.43	208.01	1.87	1.33	0.57	147.68	1.22	179.70	4.000	No	No	2.00
434	28.48	209.38	1.88	1.37	0.57	148.32	1.22	181.24	4.000	No	No	2.00
435	28.55	208.17	1.89	1.41	0.57	146.98	1.23	180.79	4.000	No	No	2.00
436	28.62	207.61	1.90	1.43	0.58	146.24	1.23	180.50	4.000	No	No	2.00
437	28.68	206.80	1.90	1.44	0.58	145.35	1.24	179.82	4.000	No	No	2.00
438	28.74	207.08	1.90	1.45	0.58	145.32	1.24	179.97	4.000	No	No	2.00
439	28.81	205.09	1.91	1.48	0.58	143.45	1.25	178.70	4.000	No	No	2.00
440	28.88	202.38	1.93	1.52	0.59	141.05	1.25	176.89	4.000	No	No	2.00
441	28.94	198.98	1.94	1.55	0.59	138.25	1.26	174.39	4.000	No	No	2.00
442	29.01	195.65	1.94	1.55	0.59	135.57	1.27	171.59	4.000	No	No	2.00
443	29.07	191.04	1.95	1.55	0.59	132.01	1.27	167.77	4.000	No	No	2.00
444	29.14	185.49	1.96	1.54	0.60	127.76	1.28	163.18	4.000	No	No	2.00
445	29.21	179.01	1.97	1.54	0.60	122.85	1.29	157.91	4.000	No	No	2.00
446	29.28	173.13	1.98	1.54	0.60	118.38	1.29	153.13	4.000	No	No	2.00
447	29.33	168.27	1.99	1.54	0.61	114.73	1.30	149.19	4.000	No	No	2.00
448	29.42	166.93	1.99	1.52	0.61	113.60	1.30	147.71	4.000	No	No	2.00
449	29.48	166.05	1.99	1.52	0.61	112.78	1.30	146.87	4.000	No	No	2.00
450	29.53	167.45	2.00	1.54	0.61	113.60	1.30	148.08	4.000	No	No	2.00
451	29.60	168.23	2.01	1.60	0.61	113.74	1.31	149.42	4.000	No	No	2.00
452	29.66	170.53	2.02	1.69	0.61	114.89	1.33	152.32	4.000	No	No	2.00
453	29.74	172.65	2.04	1.79	0.62	115.85	1.34	155.31	4.000	No	No	2.00
454	29.80	174.80	2.05	1.87	0.62	116.92	1.35	158.13	4.000	No	No	2.00
455	29.87	176.76	2.05	1.92	0.62	117.95	1.36	160.27	4.000	No	No	2.00
456	29.94	177.79	2.06	1.95	0.63	118.39	1.36	161.36	4.000	No	No	2.00
457	30.01	177.92	2.06	1.97	0.63	118.24	1.37	161.51	4.000	No	No	2.00
458	30.06	176.40	2.07	1.98	0.63	116.97	1.37	160.59	4.000	No	No	2.00
459	30.13	171.88	2.08	2.02	0.63	113.48	1.39	157.98	4.000	No	No	2.00
460	30.19	163.34	2.11	2.08	0.64	107.16	1.43	153.06	4.000	No	No	2.00
461	30.26	152.88	2.11	1.97	0.64	99.99	1.43	143.43	4.000	No	No	2.00
462	30.33	143.87	2.08	1.68	0.63	94.38	1.39	131.13	4.000	No	No	2.00
463	30.40	136.99	2.03	1.37	0.62	90.34	1.34	120.85	4.000	No	No	2.00
464	30.45	135.06	2.01	1.26	0.61	89.27	1.32	117.71	4.000	No	No	2.00
465	30.52	132.66	2.04	1.36	0.62	87.08	1.35	117.36	4.000	No	No	2.00
466	30.59	134.24	2.06	1.46	0.63	87.77	1.37	119.90	4.000	No	No	2.00
467	30.65	129.88	2.10	1.60	0.64	84.14	1.42	119.60	4.000	No	No	2.00
468	30.71	135.67	2.09	1.61	0.63	88.04	1.40	123.45	4.000	No	No	2.00
469	30.79	140.96	2.07	1.59	0.63	91.62	1.38	126.53	4.000	No	No	2.00
470	30.84	151.77	2.03	1.49	0.62	99.38	1.33	132.40	4.000	No	No	2.00
471	30.92	155.14	2.01	1.46	0.61	101.69	1.32	134.15	4.000	No	No	2.00
472	30.98	157.60	2.00	1.41	0.61	103.47	1.31	135.16	4.000	No	No	2.00
473	31.04	159.32	1.98	1.35	0.60	104.80	1.29	135.41	4.000	No	No	2.00
474	31.11	162.47	1.95	1.26	0.59	107.29	1.27	136.43	4.000	No	No	2.00
475	31.17	169.04	1.92	1.19	0.58	112.11	1.25	140.35	4.000	No	No	2.00
476	31.25	177.20	1.89	1.14	0.58	117.98	1.23	145.50	4.000	No	No	2.00
477	31.31	187.17	1.87	1.11	0.57	125.17	1.21	151.89	4.000	No	No	2.00
478	31.37	195.74	1.84	1.07	0.56	131.42	1.19	156.72	4.000	No	No	2.00
479	31.45	202.78	1.82	1.05	0.56	136.37	1.18	160.66	4.000	No	No	2.00
480	31.51	209.85	1.81	1.05	0.55	141.35	1.16	164.64	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.57	217.33	1.79	1.03	0.55	146.72	1.15	168.06	4.000	No	No	2.00
482	31.63	226.31	1.77	0.98	0.54	153.43	1.11	170.16	4.000	No	No	2.00
483	31.70	232.41	1.74	0.94	0.53	158.04	1.07	169.76	4.000	No	No	2.00
484	31.77	237.46	1.71	0.86	0.52	162.34	1.00	163.12	4.000	No	No	2.00
485	31.83	242.53	1.65	0.72	0.50	167.49	1.00	167.49	4.000	No	No	2.00
486	31.89	248.83	1.59	0.61	0.50	171.96	1.00	171.96	4.000	No	No	2.00
487	31.96	252.91	1.56	0.55	0.50	174.62	1.00	174.62	4.000	No	No	2.00
488	32.02	256.55	1.57	0.58	0.50	176.97	1.00	176.97	4.000	No	No	2.00
489	32.09	258.02	1.59	0.62	0.50	177.79	1.00	177.79	4.000	No	No	2.00
490	32.16	259.67	1.61	0.69	0.50	178.73	1.00	178.73	4.000	No	No	2.00
491	32.22	261.29	1.64	0.75	0.50	179.67	1.00	179.67	4.000	No	No	2.00
492	32.30	261.10	1.66	0.81	0.51	178.66	1.00	178.66	4.000	No	No	2.00
493	32.36	261.63	1.67	0.85	0.51	178.31	1.00	178.31	4.000	No	No	2.00
494	32.42	261.22	1.69	0.88	0.51	177.41	1.00	177.41	4.000	No	No	2.00
495	32.49	263.87	1.69	0.89	0.51	179.00	1.00	179.00	4.000	No	No	2.00
496	32.55	266.33	1.68	0.88	0.51	180.70	1.00	180.70	4.000	No	No	2.00
497	32.62	268.33	1.67	0.86	0.51	182.20	1.00	182.20	4.000	No	No	2.00
498	32.69	270.42	1.66	0.84	0.51	183.76	1.00	183.76	4.000	No	No	2.00
499	32.75	273.81	1.65	0.83	0.50	186.20	1.00	186.20	4.000	No	No	2.00
500	32.82	277.02	1.65	0.82	0.50	188.40	1.00	188.40	4.000	No	No	2.00
501	32.88	278.64	1.65	0.83	0.50	189.23	1.00	189.23	4.000	No	No	2.00
502	32.95	277.83	1.66	0.87	0.51	187.95	1.00	187.95	4.000	No	No	2.00
503	33.01	276.99	1.68	0.90	0.51	186.63	1.00	186.63	4.000	No	No	2.00
504	33.09	276.71	1.69	0.93	0.51	185.87	1.00	185.87	4.000	No	No	2.00
505	33.16	277.27	1.69	0.94	0.52	185.84	1.00	185.84	4.000	No	No	2.00
506	33.22	278.76	1.69	0.94	0.52	186.78	1.00	186.78	4.000	No	No	2.00
507	33.28	281.63	1.68	0.93	0.51	188.79	1.00	188.79	4.000	No	No	2.00
508	33.34	287.80	1.66	0.89	0.51	193.46	1.00	193.46	4.000	No	No	2.00
509	33.41	295.71	1.65	0.87	0.50	199.31	1.00	199.31	4.000	No	No	2.00
510	33.47	305.43	1.64	0.87	0.50	205.97	1.00	205.97	4.000	No	No	2.00
511	33.53	312.25	1.64	0.90	0.50	210.28	1.00	210.28	4.000	No	No	2.00
512	33.60	313.97	1.67	0.97	0.51	210.24	1.00	210.24	4.000	No	No	2.00
513	33.67	305.59	1.70	1.04	0.52	203.01	1.00	203.01	4.000	No	No	2.00
514	33.73	294.81	1.73	1.10	0.53	194.39	1.05	203.59	4.000	No	No	2.00
515	33.80	280.07	1.76	1.17	0.54	183.11	1.11	202.67	4.000	No	No	2.00
516	33.86	268.17	1.79	1.21	0.55	174.09	1.14	199.03	4.000	No	No	2.00
517	33.93	252.69	1.84	1.30	0.56	162.34	1.19	192.89	4.000	No	No	2.00
518	34.00	240.91	1.87	1.38	0.57	153.43	1.22	186.58	4.000	No	No	2.00
519	34.06	226.15	1.92	1.50	0.58	142.32	1.25	177.87	4.000	No	No	2.00
520	34.13	219.23	1.94	1.55	0.59	137.20	1.26	173.29	4.000	No	No	2.00
521	34.20	217.45	1.95	1.57	0.59	135.65	1.27	172.14	4.000	No	No	2.00
522	34.26	226.80	1.93	1.55	0.59	141.88	1.26	178.34	4.000	No	No	2.00
523	34.33	240.85	1.91	1.55	0.58	151.15	1.24	188.16	4.000	No	No	2.00
524	34.40	255.62	1.90	1.56	0.58	160.83	1.23	198.47	4.000	No	No	2.00
525	34.46	273.28	1.87	1.55	0.57	172.67	1.22	210.32	4.000	No	No	2.00
526	34.52	287.70	1.86	1.54	0.57	182.27	1.21	219.78	4.000	No	No	2.00
527	34.58	301.04	1.84	1.52	0.56	191.26	1.19	227.83	4.000	No	No	2.00
528	34.65	309.48	1.82	1.49	0.56	197.06	1.18	231.96	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.72	316.09	1.80	1.41	0.55	202.12	1.15	232.58	4.000	No	No	2.00
530	34.78	321.88	1.76	1.30	0.54	207.14	1.10	228.82	4.000	No	No	2.00
531	34.84	327.27	1.72	1.18	0.53	212.15	1.04	220.15	4.000	No	No	2.00
532	34.91	333.03	1.69	1.08	0.52	217.23	1.00	217.23	4.000	No	No	2.00
533	34.98	337.05	1.68	1.05	0.51	220.20	1.00	220.20	4.000	No	No	2.00
534	35.04	342.07	1.68	1.08	0.51	223.04	1.00	223.04	4.000	No	No	2.00
535	35.11	342.28	1.70	1.14	0.52	222.01	1.00	222.01	4.000	No	No	2.00
536	35.18	344.15	1.71	1.18	0.52	222.50	1.01	225.41	4.000	No	No	2.00
537	35.24	346.27	1.71	1.18	0.52	223.72	1.01	225.83	4.000	No	No	2.00
538	35.30	347.11	1.71	1.18	0.52	224.12	1.01	225.37	4.000	No	No	2.00
539	35.37	346.24	1.71	1.17	0.52	223.43	1.00	223.60	4.000	No	No	2.00
540	35.44	342.24	1.70	1.14	0.52	220.75	1.00	220.75	4.000	No	No	2.00
541	35.50	341.88	1.68	1.06	0.51	221.44	1.00	221.44	4.000	No	No	2.00
542	35.57	341.97	1.64	0.96	0.50	222.99	1.00	222.99	4.000	No	No	2.00
543	35.63	338.50	1.62	0.88	0.50	220.69	1.00	220.69	4.000	No	No	2.00
544	35.70	331.63	1.62	0.85	0.50	215.97	1.00	215.97	4.000	No	No	2.00
545	35.77	322.94	1.63	0.87	0.50	210.04	1.00	210.04	4.000	No	No	2.00
546	35.83	316.05	1.65	0.90	0.50	204.84	1.00	204.84	4.000	No	No	2.00
547	35.90	311.63	1.66	0.92	0.51	201.25	1.00	201.25	4.000	No	No	2.00
548	35.96	308.01	1.67	0.92	0.51	198.56	1.00	198.56	4.000	No	No	2.00
549	36.03	305.21	1.66	0.90	0.51	196.67	1.00	196.67	4.000	No	No	2.00
550	36.09	300.91	1.66	0.89	0.51	193.59	1.00	193.59	4.000	No	No	2.00
551	36.16	293.22	1.68	0.91	0.51	187.77	1.00	187.77	4.000	No	No	2.00
552	36.22	285.02	1.70	0.95	0.52	181.28	1.00	181.28	4.000	No	No	2.00
553	36.29	278.73	1.73	1.01	0.53	175.97	1.05	185.29	4.000	No	No	2.00
554	36.36	277.34	1.75	1.07	0.53	174.05	1.09	189.79	4.000	No	No	2.00
555	36.43	276.35	1.78	1.15	0.54	172.31	1.13	193.91	4.000	No	No	2.00
556	36.49	276.91	1.80	1.22	0.55	171.72	1.15	197.38	4.000	No	No	2.00
557	36.55	278.83	1.81	1.28	0.55	172.15	1.17	200.79	4.000	No	No	2.00
558	36.63	281.38	1.82	1.33	0.55	173.11	1.18	203.69	4.000	No	No	2.00
559	36.68	284.96	1.83	1.37	0.56	174.96	1.18	206.76	4.000	No	No	2.00
560	36.76	286.95	1.83	1.39	0.56	175.82	1.19	208.39	4.000	No	No	2.00
561	36.81	289.07	1.83	1.40	0.56	176.95	1.19	209.73	4.000	No	No	2.00
562	36.88	288.88	1.83	1.40	0.56	176.59	1.19	209.49	4.000	No	No	2.00
563	36.95	287.67	1.83	1.40	0.56	175.58	1.19	208.55	4.000	No	No	2.00
564	37.01	286.36	1.84	1.40	0.56	174.54	1.19	207.50	4.000	No	No	2.00
565	37.08	285.32	1.84	1.39	0.56	173.67	1.19	206.62	4.000	No	No	2.00
566	37.14	284.88	1.84	1.39	0.56	173.25	1.19	206.03	4.000	No	No	2.00
567	37.21	284.91	1.83	1.38	0.56	173.16	1.19	205.61	4.000	No	No	2.00
568	37.27	285.05	1.83	1.37	0.56	173.11	1.19	205.34	4.000	No	No	2.00
569	37.34	285.58	1.83	1.37	0.56	173.25	1.19	205.42	4.000	No	No	2.00
570	37.41	285.95	1.83	1.38	0.56	173.21	1.19	205.63	4.000	No	No	2.00
571	37.47	285.89	1.84	1.38	0.56	172.96	1.19	205.55	4.000	No	No	2.00
572	37.54	285.55	1.84	1.39	0.56	172.45	1.19	205.35	4.000	No	No	2.00
573	37.61	285.40	1.84	1.41	0.56	171.91	1.20	205.56	4.000	No	No	2.00
574	37.66	285.64	1.85	1.45	0.56	171.50	1.20	206.48	4.000	No	No	2.00
575	37.74	286.51	1.87	1.50	0.57	171.37	1.21	207.78	4.000	No	No	2.00
576	37.81	288.26	1.87	1.54	0.57	171.96	1.22	209.30	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	37.86	289.94	1.87	1.56	0.57	172.67	1.22	210.61	4.000	No	No	2.00
578	37.93	291.03	1.88	1.57	0.57	173.04	1.22	211.32	4.000	No	No	2.00
579	38.00	292.75	1.88	1.58	0.57	173.90	1.22	212.29	4.000	No	No	2.00
580	38.06	294.21	1.87	1.57	0.57	174.67	1.22	213.02	4.000	No	No	2.00
581	38.13	296.80	1.87	1.57	0.57	176.18	1.22	214.37	4.000	No	No	2.00
582	38.19	298.17	1.87	1.56	0.57	176.89	1.22	214.99	4.000	No	No	2.00
583	38.26	300.50	1.86	1.55	0.57	178.34	1.21	215.97	4.000	No	No	2.00
584	38.32	303.25	1.85	1.51	0.56	180.24	1.20	216.88	4.000	No	No	2.00
585	38.39	307.30	1.84	1.47	0.56	183.11	1.19	218.11	4.000	No	No	2.00
586	38.45	313.06	1.82	1.42	0.55	187.16	1.18	219.96	4.000	No	No	2.00
587	38.52	319.69	1.81	1.38	0.55	191.71	1.16	222.09	4.000	No	No	2.00
588	38.59	327.57	1.79	1.34	0.54	197.05	1.14	224.63	4.000	No	No	2.00
589	38.65	335.36	1.77	1.32	0.54	202.26	1.12	226.91	4.000	No	No	2.00
590	38.72	342.53	1.76	1.29	0.54	207.08	1.10	228.35	4.000	No	No	2.00
591	38.79	346.33	1.75	1.28	0.53	209.54	1.09	228.79	4.000	No	No	2.00
592	38.86	346.27	1.75	1.27	0.53	209.29	1.09	228.43	4.000	No	No	2.00
593	38.91	342.97	1.76	1.28	0.54	206.81	1.10	227.56	4.000	No	No	2.00
594	38.98	340.18	1.76	1.28	0.54	204.78	1.10	226.13	4.000	No	No	2.00
595	39.04	338.06	1.76	1.27	0.54	203.39	1.10	224.07	4.000	No	No	2.00
596	39.11	338.34	1.75	1.24	0.53	203.71	1.09	222.15	4.000	No	No	2.00
597	39.18	337.98	1.75	1.22	0.53	203.62	1.08	219.90	4.000	No	No	2.00
598	39.24	337.36	1.74	1.19	0.53	203.45	1.07	216.82	4.000	No	No	2.00
599	39.31	334.40	1.73	1.15	0.53	201.87	1.05	212.22	4.000	No	No	2.00
600	39.38	331.75	1.72	1.11	0.52	200.53	1.03	207.05	4.000	No	No	2.00
601	39.44	329.47	1.71	1.06	0.52	199.60	1.01	200.79	4.000	No	No	2.00
602	39.51	325.95	1.70	1.02	0.52	197.81	1.00	197.81	4.000	No	No	2.00
603	39.57	319.00	1.69	0.97	0.52	193.72	1.00	193.72	4.000	No	No	2.00
604	39.63	308.69	1.68	0.91	0.51	187.85	1.00	187.85	4.000	No	No	2.00
605	39.70	295.73	1.66	0.82	0.51	180.48	1.00	180.48	4.000	No	No	2.00
606	39.77	279.22	1.64	0.73	0.50	170.91	1.00	170.91	4.000	No	No	2.00
607	39.83	250.56	1.67	0.69	0.51	152.26	1.00	152.26	4.000	No	No	2.00
608	39.90	205.86	1.73	0.67	0.53	122.56	1.06	129.42	4.000	No	No	2.00
609	39.97	153.96	1.85	0.67	0.56	88.54	1.20	106.24	4.000	No	No	2.00
610	40.03	107.42	2.00	0.68	0.61	58.98	1.31	77.02	4.000	No	No	2.00
611	40.09	74.71	2.17	0.72	0.66	38.83	1.54	59.77	4.000	No	No	2.00
612	40.16	54.24	2.34	0.83	0.71	26.58	2.09	55.61	4.000	No	No	2.00
613	40.23	46.14	2.42	0.87	0.74	21.92	2.51	54.94	4.000	No	No	2.00
614	40.30	47.10	2.44	0.95	0.74	22.31	2.57	57.36	4.000	No	No	2.00
615	40.36	53.09	2.43	1.13	0.74	25.34	2.52	63.83	4.000	No	No	2.00
616	40.43	59.91	2.47	1.61	0.75	28.39	2.79	79.15	4.000	No	No	2.00
617	40.49	68.01	2.49	2.05	0.76	32.20	2.91	93.64	4.000	No	No	2.00
618	40.56	73.40	2.51	2.40	0.76	34.64	3.03	105.09	4.000	No	No	2.00
619	40.63	71.06	2.56	2.77	0.78	32.97	3.45	113.74	4.000	No	No	2.00
620	40.69	61.12	2.67	3.27	0.81	27.37	4.42	121.00	4.000	No	Yes	2.00
621	40.76	50.06	2.80	3.82	0.85	21.46	5.81	124.63	4.000	No	Yes	2.00
622	40.81	46.83	2.71	2.62	0.82	20.42	4.83	98.57	4.000	No	Yes	2.00
623	40.89	56.80	2.37	1.00	0.72	27.31	2.23	61.03	4.000	No	No	2.00
624	40.95	97.01	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
625	41.01	157.17	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
626	41.08	239.94	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
627	41.15	298.91	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
628	41.21	335.52	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.07	2.00	0.00	0.00	0.07	0.00	0.14	2.00	0.00	0.00	0.07	0.00
0.20	2.00	0.00	0.00	0.06	0.00	0.26	2.00	0.00	0.00	0.06	0.00
0.33	2.00	0.00	0.00	0.07	0.00	0.40	2.00	0.00	0.00	0.07	0.00
0.47	2.00	0.00	0.00	0.07	0.00	0.53	2.00	0.00	0.00	0.07	0.00
0.60	2.00	0.00	0.00	0.07	0.00	0.66	2.00	0.00	0.00	0.06	0.00
0.72	2.00	0.00	0.00	0.06	0.00	0.79	2.00	0.00	0.00	0.07	0.00
0.85	2.00	0.00	0.00	0.06	0.00	0.93	2.00	0.00	0.00	0.07	0.00
0.99	2.00	0.00	0.00	0.06	0.00	1.05	2.00	0.00	0.00	0.06	0.00
1.12	2.00	0.00	0.00	0.07	0.00	1.18	2.00	0.00	0.00	0.06	0.00
1.25	2.00	0.00	0.00	0.07	0.00	1.32	2.00	0.00	0.00	0.07	0.00
1.38	2.00	0.00	0.00	0.06	0.00	1.45	2.00	0.00	0.00	0.07	0.00
1.51	2.00	0.00	0.00	0.07	0.00	1.58	2.00	0.00	0.00	0.06	0.00
1.64	2.00	0.00	0.00	0.06	0.00	1.71	2.00	0.00	0.00	0.07	0.00
1.78	2.00	0.00	0.00	0.07	0.00	1.84	2.00	0.00	0.00	0.06	0.00
1.91	2.00	0.00	0.00	0.06	0.00	1.98	2.00	0.00	0.00	0.07	0.00
2.04	2.00	0.00	0.00	0.06	0.00	2.11	2.00	0.00	0.00	0.07	0.00
2.17	2.00	0.00	0.00	0.07	0.00	2.24	2.00	0.00	0.00	0.07	0.00
2.31	2.00	0.00	0.00	0.06	0.00	2.37	2.00	0.00	0.00	0.06	0.00
2.44	2.00	0.00	0.00	0.07	0.00	2.50	2.00	0.00	0.00	0.06	0.00
2.56	2.00	0.00	0.00	0.06	0.00	2.63	2.00	0.00	0.00	0.07	0.00
2.69	2.00	0.00	0.00	0.06	0.00	2.76	2.00	0.00	0.00	0.07	0.00
2.83	2.00	0.00	0.00	0.07	0.00	2.89	2.00	0.00	0.00	0.06	0.00
2.96	2.00	0.00	0.00	0.07	0.00	3.02	2.00	0.00	0.00	0.06	0.00
3.09	2.00	0.00	0.00	0.07	0.00	3.15	2.00	0.00	0.00	0.06	0.00
3.22	2.00	0.00	0.00	0.07	0.00	3.28	2.00	0.00	0.00	0.06	0.00
3.35	2.00	0.00	0.00	0.06	0.00	3.42	2.00	0.00	0.00	0.07	0.00
3.48	2.00	0.00	0.00	0.06	0.00	3.55	2.00	0.00	0.00	0.07	0.00
3.61	2.00	0.00	0.00	0.06	0.00	3.68	2.00	0.00	0.00	0.07	0.00
3.74	2.00	0.00	0.00	0.06	0.00	3.81	2.00	0.00	0.00	0.07	0.00
3.88	2.00	0.00	0.00	0.07	0.00	3.94	2.00	0.00	0.00	0.06	0.00
4.00	2.00	0.00	0.00	0.06	0.00	4.08	2.00	0.00	0.00	0.07	0.00
4.14	2.00	0.00	0.00	0.06	0.00	4.21	2.00	0.00	0.00	0.07	0.00
4.26	2.00	0.00	0.00	0.06	0.00	4.33	2.00	0.00	0.00	0.07	0.00
4.41	2.00	0.00	0.00	0.07	0.00	4.46	2.00	0.00	0.00	0.06	0.00
4.54	2.00	0.00	0.00	0.07	0.00	4.60	2.00	0.00	0.00	0.06	0.00
4.67	2.00	0.00	0.00	0.07	0.00	4.73	2.00	0.00	0.00	0.06	0.00
4.80	2.00	0.00	0.00	0.07	0.00	4.86	2.00	0.00	0.00	0.06	0.00
4.93	2.00	0.00	0.00	0.07	0.00	4.99	2.00	0.00	0.00	0.06	0.00
5.05	2.00	0.00	0.00	0.06	0.00	5.12	2.00	0.00	0.00	0.07	0.00
5.19	2.00	0.00	0.00	0.06	0.00	5.25	2.00	0.00	0.00	0.06	0.00
5.32	2.00	0.00	0.00	0.06	0.00	5.39	2.00	0.00	0.00	0.08	0.00
5.45	2.00	0.00	0.00	0.06	0.00	5.52	2.00	0.00	0.00	0.07	0.00
5.59	2.00	0.00	0.00	0.07	0.00	5.66	2.00	0.00	0.00	0.07	0.00
5.73	2.00	0.00	0.00	0.07	0.00	5.79	2.00	0.00	0.00	0.07	0.00
5.86	2.00	0.00	0.00	0.07	0.00	5.93	2.00	0.00	0.00	0.07	0.00
5.99	2.00	0.00	0.00	0.07	0.00	6.04	2.00	0.00	0.00	0.05	0.00
6.11	2.00	0.00	0.00	0.06	0.00	6.17	2.00	0.00	0.00	0.07	0.00
6.24	2.00	0.00	0.00	0.07	0.00	6.30	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.38	2.00	0.00	0.00	0.07	0.00	6.44	2.00	0.00	0.00	0.07	0.00
6.51	2.00	0.00	0.00	0.07	0.00	6.58	2.00	0.00	0.00	0.07	0.00
6.64	2.00	0.00	0.00	0.07	0.00	6.71	2.00	0.00	0.00	0.07	0.00
6.78	2.00	0.00	0.00	0.07	0.00	6.84	2.00	0.00	0.00	0.07	0.00
6.91	2.00	0.00	0.00	0.06	0.00	6.98	2.00	0.00	0.00	0.07	0.00
7.02	2.00	0.00	0.00	0.04	0.00	7.09	2.00	0.00	0.00	0.07	0.00
7.16	2.00	0.00	0.00	0.07	0.00	7.23	2.00	0.00	0.00	0.07	0.00
7.29	2.00	0.00	0.00	0.07	0.00	7.36	2.00	0.00	0.00	0.07	0.00
7.43	2.00	0.00	0.00	0.07	0.00	7.50	2.00	0.00	0.00	0.07	0.00
7.56	2.00	0.00	0.00	0.07	0.00	7.61	2.00	0.00	0.00	0.05	0.00
7.68	2.00	0.00	0.00	0.06	0.00	7.75	2.00	0.00	0.00	0.07	0.00
7.81	2.00	0.00	0.00	0.07	0.00	7.88	2.00	0.00	0.00	0.07	0.00
7.95	2.00	0.00	0.00	0.07	0.00	8.02	2.00	0.00	0.00	0.07	0.00
8.09	2.00	0.00	0.00	0.07	0.00	8.14	2.00	0.00	0.00	0.05	0.00
8.20	2.00	0.00	0.00	0.06	0.00	8.28	2.00	0.00	0.00	0.07	0.00
8.35	2.00	0.00	0.00	0.07	0.00	8.42	2.00	0.00	0.00	0.07	0.00
8.46	2.00	0.00	0.00	0.05	0.00	8.54	2.00	0.00	0.00	0.07	0.00
8.61	2.00	0.00	0.00	0.07	0.00	8.66	2.00	0.00	0.00	0.05	0.00
8.73	2.00	0.00	0.00	0.07	0.00	8.80	2.00	0.00	0.00	0.07	0.00
8.88	2.00	0.00	0.00	0.07	0.00	8.93	2.00	0.00	0.00	0.05	0.00
9.00	2.00	0.00	0.00	0.07	0.00	9.07	2.00	0.00	0.00	0.07	0.00
9.13	2.00	0.00	0.00	0.05	0.00	9.20	2.00	0.00	0.00	0.07	0.00
9.27	2.00	0.00	0.00	0.07	0.00	9.34	2.00	0.00	0.00	0.07	0.00
9.39	2.00	0.00	0.00	0.05	0.00	9.46	2.00	0.00	0.00	0.07	0.00
9.53	2.00	0.00	0.00	0.07	0.00	9.58	2.00	0.00	0.00	0.05	0.00
9.65	2.00	0.00	0.00	0.07	0.00	9.73	2.00	0.00	0.00	0.07	0.00
9.78	2.00	0.00	0.00	0.05	0.00	9.85	2.00	0.00	0.00	0.07	0.00
9.92	2.00	0.00	0.00	0.07	0.00	9.99	2.00	0.00	0.00	0.07	0.00
10.04	2.00	0.00	0.00	0.05	0.00	10.12	2.00	0.00	0.00	0.07	0.00
10.19	2.00	0.00	0.00	0.07	0.00	10.24	2.00	0.00	0.00	0.05	0.00
10.31	2.00	0.00	0.00	0.07	0.00	10.38	2.00	0.00	0.00	0.07	0.00
10.46	2.00	0.00	0.00	0.07	0.00	10.51	2.00	0.00	0.00	0.05	0.00
10.58	2.00	0.00	0.00	0.07	0.00	10.65	2.00	0.00	0.00	0.07	0.00
10.70	2.00	0.00	0.00	0.05	0.00	10.77	2.00	0.00	0.00	0.07	0.00
10.84	2.00	0.00	0.00	0.07	0.00	10.91	2.00	0.00	0.00	0.07	0.00
10.96	2.00	0.00	0.00	0.05	0.00	11.04	2.00	0.00	0.00	0.08	0.00
11.11	2.00	0.00	0.00	0.07	0.00	11.16	2.00	0.00	0.00	0.05	0.00
11.22	2.00	0.00	0.00	0.06	0.00	11.29	2.00	0.00	0.00	0.07	0.00
11.36	2.00	0.00	0.00	0.07	0.00	11.43	2.00	0.00	0.00	0.07	0.00
11.49	2.00	0.00	0.00	0.05	0.00	11.56	2.00	0.00	0.00	0.07	0.00
11.63	2.00	0.00	0.00	0.08	0.00	11.68	2.00	0.00	0.00	0.05	0.00
11.76	2.00	0.00	0.00	0.07	0.00	11.83	2.00	0.00	0.00	0.07	0.00
11.88	2.00	0.00	0.00	0.05	0.00	11.95	2.00	0.00	0.00	0.07	0.00
12.03	2.00	0.00	0.00	0.07	0.00	12.10	2.00	0.00	0.00	0.07	0.00
12.14	2.00	0.00	0.00	0.05	0.00	12.22	2.00	0.00	0.00	0.07	0.00
12.29	2.00	0.00	0.00	0.07	0.00	12.34	2.00	0.00	0.00	0.05	0.00
12.41	2.00	0.00	0.00	0.07	0.00	12.49	2.00	0.00	0.00	0.07	0.00
12.54	2.00	0.00	0.00	0.05	0.00	12.61	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.68	2.00	0.00	0.00	0.07	0.00	12.73	2.00	0.00	0.00	0.05	0.00
12.80	2.00	0.00	0.00	0.07	0.00	12.87	2.00	0.00	0.00	0.07	0.00
12.95	2.00	0.00	0.00	0.07	0.00	12.99	2.00	0.00	0.00	0.05	0.00
13.07	2.00	0.00	0.00	0.07	0.00	13.14	2.00	0.00	0.00	0.07	0.00
13.19	2.00	0.00	0.00	0.05	0.00	13.26	2.00	0.00	0.00	0.07	0.00
13.34	2.00	0.00	0.00	0.08	0.00	13.39	2.00	0.00	0.00	0.05	0.00
13.46	2.00	0.00	0.00	0.07	0.00	13.54	2.00	0.00	0.00	0.08	0.00
13.59	2.00	0.00	0.00	0.05	0.00	13.66	2.00	0.00	0.00	0.07	0.00
13.73	2.00	0.00	0.00	0.07	0.00	13.78	2.00	0.00	0.00	0.05	0.00
13.86	2.00	0.00	0.00	0.07	0.00	13.93	2.00	0.00	0.00	0.07	0.00
13.98	2.00	0.00	0.00	0.05	0.00	14.05	2.00	0.00	0.00	0.07	0.00
14.11	2.00	0.00	0.00	0.06	0.00	14.18	2.00	0.00	0.00	0.07	0.00
14.25	2.00	0.00	0.00	0.07	0.00	14.32	2.00	0.00	0.00	0.07	0.00
14.37	2.00	0.00	0.00	0.05	0.00	14.44	2.00	0.00	0.00	0.07	0.00
14.51	2.00	0.00	0.00	0.07	0.00	14.59	2.00	0.00	0.00	0.08	0.00
14.64	2.00	0.00	0.00	0.05	0.00	14.71	2.00	0.00	0.00	0.07	0.00
14.78	2.00	0.00	0.00	0.07	0.00	14.83	2.00	0.00	0.00	0.05	0.00
14.91	2.00	0.00	0.00	0.08	0.00	14.97	2.00	0.00	0.00	0.06	0.00
15.03	2.00	0.00	0.00	0.06	0.00	15.10	2.00	0.00	0.00	0.07	0.00
15.17	2.00	0.00	0.00	0.07	0.00	15.23	2.00	0.00	0.00	0.06	0.00
15.30	2.00	0.00	0.00	0.07	0.00	15.37	2.00	0.00	0.00	0.07	0.00
15.44	2.00	0.00	0.00	0.07	0.00	15.51	2.00	0.00	0.00	0.07	0.00
15.57	2.00	0.00	0.00	0.07	0.00	15.64	2.00	0.00	0.00	0.07	0.00
15.68	2.00	0.00	0.00	0.04	0.00	15.75	2.00	0.00	0.00	0.07	0.00
15.82	2.00	0.00	0.00	0.07	0.00	15.89	2.00	0.00	0.00	0.07	0.00
15.96	2.00	0.00	0.00	0.07	0.00	16.01	2.00	0.00	0.00	0.05	0.00
16.09	2.00	0.00	0.00	0.08	0.00	16.16	2.00	0.00	0.00	0.07	0.00
16.21	2.00	0.00	0.00	0.05	0.00	16.28	2.00	0.00	0.00	0.07	0.00
16.35	2.00	0.00	0.00	0.07	0.00	16.42	2.00	0.00	0.00	0.07	0.00
16.47	2.00	0.00	0.00	0.05	0.00	16.54	2.00	0.00	0.00	0.07	0.00
16.62	2.00	0.00	0.00	0.07	0.00	16.69	2.00	0.00	0.00	0.07	0.00
16.74	2.00	0.00	0.00	0.05	0.00	16.81	2.00	0.00	0.00	0.07	0.00
16.88	2.00	0.00	0.00	0.07	0.00	16.93	2.00	0.00	0.00	0.05	0.00
17.01	2.00	0.00	0.00	0.08	0.00	17.08	2.00	0.00	0.00	0.07	0.00
17.13	2.00	0.00	0.00	0.05	0.00	17.20	2.00	0.00	0.00	0.07	0.00
17.27	2.00	0.00	0.00	0.07	0.00	17.34	2.00	0.00	0.00	0.07	0.00
17.39	2.00	0.00	0.00	0.05	0.00	17.46	2.00	0.00	0.00	0.07	0.00
17.52	2.00	0.00	0.00	0.07	0.00	17.60	2.00	0.00	0.00	0.07	0.00
17.67	2.00	0.00	0.00	0.08	0.00	17.72	2.00	0.00	0.00	0.05	0.00
17.79	2.00	0.00	0.00	0.07	0.00	17.86	2.00	0.00	0.00	0.07	0.00
17.93	2.00	0.00	0.00	0.07	0.00	17.98	2.00	0.00	0.00	0.05	0.00
18.05	2.00	0.00	0.00	0.07	0.00	18.11	2.00	0.00	0.00	0.06	0.00
18.19	2.00	0.00	0.00	0.08	0.00	18.26	2.00	0.00	0.00	0.07	0.00
18.33	2.00	0.00	0.00	0.07	0.00	18.38	2.00	0.00	0.00	0.05	0.00
18.45	2.00	0.00	0.00	0.07	0.00	18.52	2.00	0.00	0.00	0.07	0.00
18.57	2.00	0.00	0.00	0.05	0.00	18.64	2.00	0.00	0.00	0.07	0.00
18.71	2.00	0.00	0.00	0.07	0.00	18.79	2.00	0.00	0.00	0.07	0.00
18.84	2.00	0.00	0.00	0.05	0.00	18.91	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.98	2.00	0.00	0.00	0.07	0.00	19.05	2.00	0.00	0.00	0.07	0.00
19.10	2.00	0.00	0.00	0.05	0.00	19.18	2.00	0.00	0.00	0.07	0.00
19.25	2.00	0.00	0.00	0.07	0.00	19.30	2.00	0.00	0.00	0.05	0.00
19.37	2.00	0.00	0.00	0.07	0.00	19.44	2.00	0.00	0.00	0.07	0.00
19.51	2.00	0.00	0.00	0.07	0.00	19.56	2.00	0.00	0.00	0.05	0.00
19.63	2.00	0.00	0.00	0.07	0.00	19.70	2.00	0.00	0.00	0.07	0.00
19.75	2.00	0.00	0.00	0.05	0.00	19.83	2.00	0.00	0.00	0.07	0.00
19.90	2.00	0.00	0.00	0.07	0.00	19.95	2.00	0.00	0.00	0.05	0.00
20.02	2.00	0.00	0.00	0.07	0.00	20.10	2.00	0.00	0.00	0.07	0.00
20.15	2.00	0.00	0.00	0.05	0.00	20.23	2.00	0.00	0.00	0.08	0.00
20.29	2.00	0.00	0.00	0.07	0.00	20.34	2.00	0.00	0.00	0.05	0.00
20.41	2.00	0.00	0.00	0.07	0.00	20.49	2.00	0.00	0.00	0.07	0.00
20.56	2.00	0.00	0.00	0.07	0.00	20.61	2.00	0.00	0.00	0.05	0.00
20.68	2.00	0.00	0.00	0.08	0.00	20.75	2.00	0.00	0.00	0.07	0.00
20.81	2.00	0.00	0.00	0.05	0.00	20.87	2.00	0.00	0.00	0.06	0.00
20.94	2.00	0.00	0.00	0.08	0.00	21.01	2.00	0.00	0.00	0.07	0.00
21.07	2.00	0.00	0.00	0.06	0.00	21.14	2.00	0.00	0.00	0.06	0.00
21.21	2.00	0.00	0.00	0.07	0.00	21.28	2.00	0.00	0.00	0.07	0.00
21.33	2.00	0.00	0.00	0.05	0.00	21.40	2.00	0.00	0.00	0.07	0.00
21.47	2.00	0.00	0.00	0.07	0.00	21.55	2.00	0.00	0.00	0.07	0.00
21.60	2.00	0.00	0.00	0.05	0.00	21.67	2.00	0.00	0.00	0.07	0.00
21.74	2.00	0.00	0.00	0.07	0.00	21.79	2.00	0.00	0.00	0.05	0.00
21.86	2.00	0.00	0.00	0.07	0.00	21.93	2.00	0.00	0.00	0.07	0.00
21.98	2.00	0.00	0.00	0.05	0.00	22.06	2.00	0.00	0.00	0.07	0.00
22.13	2.00	0.00	0.00	0.07	0.00	22.20	2.00	0.00	0.00	0.07	0.00
22.25	2.00	0.00	0.00	0.05	0.00	22.32	2.00	0.00	0.00	0.07	0.00
22.39	2.00	0.00	0.00	0.07	0.00	22.45	2.00	0.00	0.00	0.05	0.00
22.52	2.00	0.00	0.00	0.07	0.00	22.58	2.00	0.00	0.00	0.06	0.00
22.64	2.00	0.00	0.00	0.07	0.00	22.71	2.00	0.00	0.00	0.07	0.00
22.77	2.00	0.00	0.00	0.06	0.00	22.85	2.00	0.00	0.00	0.07	0.00
22.92	2.00	0.00	0.00	0.07	0.00	22.97	2.00	0.00	0.00	0.05	0.00
23.04	2.00	0.00	0.00	0.07	0.00	23.11	2.00	0.00	0.00	0.07	0.00
23.18	2.00	0.00	0.00	0.07	0.00	23.23	2.00	0.00	0.00	0.05	0.00
23.30	2.00	0.00	0.00	0.07	0.00	23.38	2.00	0.00	0.00	0.07	0.00
23.45	2.00	0.00	0.00	0.07	0.00	23.50	2.00	0.00	0.00	0.05	0.00
23.57	2.00	0.00	0.00	0.08	0.00	23.65	2.00	0.00	0.00	0.08	0.00
23.69	2.00	0.00	0.00	0.05	0.00	23.77	2.00	0.00	0.00	0.07	0.00
23.84	2.00	0.00	0.00	0.07	0.00	23.89	2.00	0.00	0.00	0.05	0.00
23.96	2.00	0.00	0.00	0.07	0.00	24.03	2.00	0.00	0.00	0.07	0.00
24.11	2.00	0.00	0.00	0.07	0.00	24.15	2.00	0.00	0.00	0.05	0.00
24.23	2.00	0.00	0.00	0.07	0.00	24.30	2.00	0.00	0.00	0.07	0.00
24.35	2.00	0.00	0.00	0.05	0.00	24.42	2.00	0.00	0.00	0.07	0.00
24.50	2.00	0.00	0.00	0.07	0.00	24.54	2.00	0.00	0.00	0.05	0.00
24.62	2.00	0.00	0.00	0.07	0.00	24.69	2.00	0.00	0.00	0.07	0.00
24.74	2.00	0.00	0.00	0.05	0.00	24.81	2.00	0.00	0.00	0.07	0.00
24.88	2.00	0.00	0.00	0.07	0.00	24.95	2.00	0.00	0.00	0.07	0.00
25.00	2.00	0.00	0.00	0.05	0.00	25.08	2.00	0.00	0.00	0.07	0.00
25.15	2.00	0.00	0.00	0.07	0.00	25.20	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.27	2.00	0.00	0.00	0.07	0.00	25.34	2.00	0.00	0.00	0.07	0.00
25.41	2.00	0.00	0.00	0.07	0.00	25.46	2.00	0.00	0.00	0.05	0.00
25.54	2.00	0.00	0.00	0.07	0.00	25.61	2.00	0.00	0.00	0.07	0.00
25.67	2.00	0.00	0.00	0.06	0.00	25.74	2.00	0.00	0.00	0.07	0.00
25.79	2.00	0.00	0.00	0.05	0.00	25.86	2.00	0.00	0.00	0.07	0.00
25.94	2.00	0.00	0.00	0.08	0.00	25.99	2.00	0.00	0.00	0.05	0.00
26.06	2.00	0.00	0.00	0.07	0.00	26.13	2.00	0.00	0.00	0.07	0.00
26.19	2.00	0.00	0.00	0.06	0.00	26.25	2.00	0.00	0.00	0.07	0.00
26.33	2.00	0.00	0.00	0.07	0.00	26.39	2.00	0.00	0.00	0.07	0.00
26.47	2.00	0.00	0.00	0.07	0.00	26.51	2.00	0.00	0.00	0.05	0.00
26.59	2.00	0.00	0.00	0.07	0.00	26.66	2.00	0.00	0.00	0.08	0.00
26.71	2.00	0.00	0.00	0.05	0.00	26.78	2.00	0.00	0.00	0.07	0.00
26.84	2.00	0.00	0.00	0.06	0.00	26.91	2.00	0.00	0.00	0.07	0.00
26.98	2.00	0.00	0.00	0.07	0.00	27.04	2.00	0.00	0.00	0.06	0.00
27.11	2.00	0.00	0.00	0.07	0.00	27.17	2.00	0.00	0.00	0.07	0.00
27.24	2.00	0.00	0.00	0.07	0.00	27.31	2.00	0.00	0.00	0.07	0.00
27.36	2.00	0.00	0.00	0.05	0.00	27.44	2.00	0.00	0.00	0.07	0.00
27.51	2.00	0.00	0.00	0.07	0.00	27.56	2.00	0.00	0.00	0.05	0.00
27.64	2.00	0.00	0.00	0.07	0.00	27.71	2.00	0.00	0.00	0.07	0.00
27.76	2.00	0.00	0.00	0.05	0.00	27.83	2.00	0.00	0.00	0.07	0.00
27.89	2.00	0.00	0.00	0.05	0.00	27.96	2.00	0.00	0.00	0.07	0.00
28.03	2.00	0.00	0.00	0.07	0.00	28.09	2.00	0.00	0.00	0.05	0.00
28.16	2.00	0.00	0.00	0.07	0.00	28.23	2.00	0.00	0.00	0.07	0.00
28.28	2.00	0.00	0.00	0.05	0.00	28.36	2.00	0.00	0.00	0.07	0.00
28.43	2.00	0.00	0.00	0.07	0.00	28.48	2.00	0.00	0.00	0.06	0.00
28.55	2.00	0.00	0.00	0.07	0.00	28.62	2.00	0.00	0.00	0.06	0.00
28.68	2.00	0.00	0.00	0.07	0.00	28.74	2.00	0.00	0.00	0.06	0.00
28.81	2.00	0.00	0.00	0.07	0.00	28.88	2.00	0.00	0.00	0.07	0.00
28.94	2.00	0.00	0.00	0.06	0.00	29.01	2.00	0.00	0.00	0.07	0.00
29.07	2.00	0.00	0.00	0.06	0.00	29.14	2.00	0.00	0.00	0.07	0.00
29.21	2.00	0.00	0.00	0.07	0.00	29.28	2.00	0.00	0.00	0.07	0.00
29.33	2.00	0.00	0.00	0.05	0.00	29.42	2.00	0.00	0.00	0.08	0.00
29.48	2.00	0.00	0.00	0.07	0.00	29.53	2.00	0.00	0.00	0.05	0.00
29.60	2.00	0.00	0.00	0.07	0.00	29.66	2.00	0.00	0.00	0.07	0.00
29.74	2.00	0.00	0.00	0.07	0.00	29.80	2.00	0.00	0.00	0.07	0.00
29.87	2.00	0.00	0.00	0.07	0.00	29.94	2.00	0.00	0.00	0.07	0.00
30.01	2.00	0.00	0.00	0.07	0.00	30.06	2.00	0.00	0.00	0.05	0.00
30.13	2.00	0.00	0.00	0.07	0.00	30.19	2.00	0.00	0.00	0.07	0.00
30.26	2.00	0.00	0.00	0.07	0.00	30.33	2.00	0.00	0.00	0.07	0.00
30.40	2.00	0.00	0.00	0.07	0.00	30.45	2.00	0.00	0.00	0.05	0.00
30.52	2.00	0.00	0.00	0.07	0.00	30.59	2.00	0.00	0.00	0.07	0.00
30.65	2.00	0.00	0.00	0.07	0.00	30.71	2.00	0.00	0.00	0.06	0.00
30.79	2.00	0.00	0.00	0.08	0.00	30.84	2.00	0.00	0.00	0.05	0.00
30.92	2.00	0.00	0.00	0.08	0.00	30.98	2.00	0.00	0.00	0.06	0.00
31.04	2.00	0.00	0.00	0.06	0.00	31.11	2.00	0.00	0.00	0.07	0.00
31.17	2.00	0.00	0.00	0.07	0.00	31.25	2.00	0.00	0.00	0.08	0.00
31.31	2.00	0.00	0.00	0.06	0.00	31.37	2.00	0.00	0.00	0.06	0.00
31.45	2.00	0.00	0.00	0.08	0.00	31.51	2.00	0.00	0.00	0.06	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.57	2.00	0.00	0.00	0.06	0.00	31.63	2.00	0.00	0.00	0.06	0.00
31.70	2.00	0.00	0.00	0.07	0.00	31.77	2.00	0.00	0.00	0.07	0.00
31.83	2.00	0.00	0.00	0.06	0.00	31.89	2.00	0.00	0.00	0.07	0.00
31.96	2.00	0.00	0.00	0.06	0.00	32.02	2.00	0.00	0.00	0.07	0.00
32.09	2.00	0.00	0.00	0.07	0.00	32.16	2.00	0.00	0.00	0.07	0.00
32.22	2.00	0.00	0.00	0.06	0.00	32.30	2.00	0.00	0.00	0.08	0.00
32.36	2.00	0.00	0.00	0.06	0.00	32.42	2.00	0.00	0.00	0.06	0.00
32.49	2.00	0.00	0.00	0.07	0.00	32.55	2.00	0.00	0.00	0.07	0.00
32.62	2.00	0.00	0.00	0.07	0.00	32.69	2.00	0.00	0.00	0.07	0.00
32.75	2.00	0.00	0.00	0.07	0.00	32.82	2.00	0.00	0.00	0.07	0.00
32.88	2.00	0.00	0.00	0.05	0.00	32.95	2.00	0.00	0.00	0.07	0.00
33.01	2.00	0.00	0.00	0.07	0.00	33.09	2.00	0.00	0.00	0.08	0.00
33.16	2.00	0.00	0.00	0.06	0.00	33.22	2.00	0.00	0.00	0.06	0.00
33.28	2.00	0.00	0.00	0.06	0.00	33.34	2.00	0.00	0.00	0.06	0.00
33.41	2.00	0.00	0.00	0.06	0.00	33.47	2.00	0.00	0.00	0.06	0.00
33.53	2.00	0.00	0.00	0.06	0.00	33.60	2.00	0.00	0.00	0.07	0.00
33.67	2.00	0.00	0.00	0.07	0.00	33.73	2.00	0.00	0.00	0.07	0.00
33.80	2.00	0.00	0.00	0.06	0.00	33.86	2.00	0.00	0.00	0.07	0.00
33.93	2.00	0.00	0.00	0.06	0.00	34.00	2.00	0.00	0.00	0.07	0.00
34.06	2.00	0.00	0.00	0.07	0.00	34.13	2.00	0.00	0.00	0.06	0.00
34.20	2.00	0.00	0.00	0.07	0.00	34.26	2.00	0.00	0.00	0.07	0.00
34.33	2.00	0.00	0.00	0.06	0.00	34.40	2.00	0.00	0.00	0.07	0.00
34.46	2.00	0.00	0.00	0.06	0.00	34.52	2.00	0.00	0.00	0.06	0.00
34.58	2.00	0.00	0.00	0.07	0.00	34.65	2.00	0.00	0.00	0.07	0.00
34.72	2.00	0.00	0.00	0.07	0.00	34.78	2.00	0.00	0.00	0.07	0.00
34.84	2.00	0.00	0.00	0.06	0.00	34.91	2.00	0.00	0.00	0.07	0.00
34.98	2.00	0.00	0.00	0.07	0.00	35.04	2.00	0.00	0.00	0.06	0.00
35.11	2.00	0.00	0.00	0.07	0.00	35.18	2.00	0.00	0.00	0.06	0.00
35.24	2.00	0.00	0.00	0.07	0.00	35.30	2.00	0.00	0.00	0.06	0.00
35.37	2.00	0.00	0.00	0.06	0.00	35.44	2.00	0.00	0.00	0.07	0.00
35.50	2.00	0.00	0.00	0.06	0.00	35.57	2.00	0.00	0.00	0.06	0.00
35.63	2.00	0.00	0.00	0.07	0.00	35.70	2.00	0.00	0.00	0.07	0.00
35.77	2.00	0.00	0.00	0.07	0.00	35.83	2.00	0.00	0.00	0.06	0.00
35.90	2.00	0.00	0.00	0.07	0.00	35.96	2.00	0.00	0.00	0.06	0.00
36.03	2.00	0.00	0.00	0.06	0.00	36.09	2.00	0.00	0.00	0.06	0.00
36.16	2.00	0.00	0.00	0.06	0.00	36.22	2.00	0.00	0.00	0.07	0.00
36.29	2.00	0.00	0.00	0.07	0.00	36.36	2.00	0.00	0.00	0.07	0.00
36.43	2.00	0.00	0.00	0.07	0.00	36.49	2.00	0.00	0.00	0.07	0.00
36.55	2.00	0.00	0.00	0.06	0.00	36.63	2.00	0.00	0.00	0.08	0.00
36.68	2.00	0.00	0.00	0.05	0.00	36.76	2.00	0.00	0.00	0.08	0.00
36.81	2.00	0.00	0.00	0.06	0.00	36.88	2.00	0.00	0.00	0.07	0.00
36.95	2.00	0.00	0.00	0.07	0.00	37.01	2.00	0.00	0.00	0.06	0.00
37.08	2.00	0.00	0.00	0.06	0.00	37.14	2.00	0.00	0.00	0.06	0.00
37.21	2.00	0.00	0.00	0.07	0.00	37.27	2.00	0.00	0.00	0.06	0.00
37.34	2.00	0.00	0.00	0.07	0.00	37.41	2.00	0.00	0.00	0.07	0.00
37.47	2.00	0.00	0.00	0.05	0.00	37.54	2.00	0.00	0.00	0.07	0.00
37.61	2.00	0.00	0.00	0.07	0.00	37.66	2.00	0.00	0.00	0.05	0.00
37.74	2.00	0.00	0.00	0.07	0.00	37.81	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
37.86	2.00	0.00	0.00	0.05	0.00	37.93	2.00	0.00	0.00	0.07	0.00
38.00	2.00	0.00	0.00	0.07	0.00	38.06	2.00	0.00	0.00	0.06	0.00
38.13	2.00	0.00	0.00	0.07	0.00	38.19	2.00	0.00	0.00	0.06	0.00
38.26	2.00	0.00	0.00	0.07	0.00	38.32	2.00	0.00	0.00	0.06	0.00
38.39	2.00	0.00	0.00	0.07	0.00	38.45	2.00	0.00	0.00	0.07	0.00
38.52	2.00	0.00	0.00	0.07	0.00	38.59	2.00	0.00	0.00	0.06	0.00
38.65	2.00	0.00	0.00	0.07	0.00	38.72	2.00	0.00	0.00	0.07	0.00
38.79	2.00	0.00	0.00	0.07	0.00	38.86	2.00	0.00	0.00	0.07	0.00
38.91	2.00	0.00	0.00	0.06	0.00	38.98	2.00	0.00	0.00	0.06	0.00
39.04	2.00	0.00	0.00	0.07	0.00	39.11	2.00	0.00	0.00	0.07	0.00
39.18	2.00	0.00	0.00	0.07	0.00	39.24	2.00	0.00	0.00	0.07	0.00
39.31	2.00	0.00	0.00	0.06	0.00	39.38	2.00	0.00	0.00	0.07	0.00
39.44	2.00	0.00	0.00	0.06	0.00	39.51	2.00	0.00	0.00	0.07	0.00
39.57	2.00	0.00	0.00	0.06	0.00	39.63	2.00	0.00	0.00	0.07	0.00
39.70	2.00	0.00	0.00	0.07	0.00	39.77	2.00	0.00	0.00	0.07	0.00
39.83	2.00	0.00	0.00	0.06	0.00	39.90	2.00	0.00	0.00	0.07	0.00
39.97	2.00	0.00	0.00	0.07	0.00	40.03	2.00	0.00	0.00	0.06	0.00
40.09	2.00	0.00	0.00	0.06	0.00	40.16	2.00	0.00	0.00	0.06	0.00
40.23	2.00	0.00	0.00	0.07	0.00	40.30	2.00	0.00	0.00	0.07	0.00
40.36	2.00	0.00	0.00	0.06	0.00	40.43	2.00	0.00	0.00	0.07	0.00
40.49	2.00	0.00	0.00	0.06	0.00	40.56	2.00	0.00	0.00	0.07	0.00
40.63	2.00	0.00	0.00	0.06	0.00	40.69	2.00	0.00	0.00	0.07	0.00
40.76	2.00	0.00	0.00	0.07	0.00	40.81	2.00	0.00	0.00	0.05	0.00
40.89	2.00	0.00	0.00	0.07	0.00	40.95	2.00	0.00	0.00	0.06	0.00
41.01	2.00	0.00	0.00	0.07	0.00	41.08	2.00	0.00	0.00	0.07	0.00
41.15	2.00	0.00	0.00	0.07	0.00	41.21	2.00	0.00	0.00	0.05	0.00

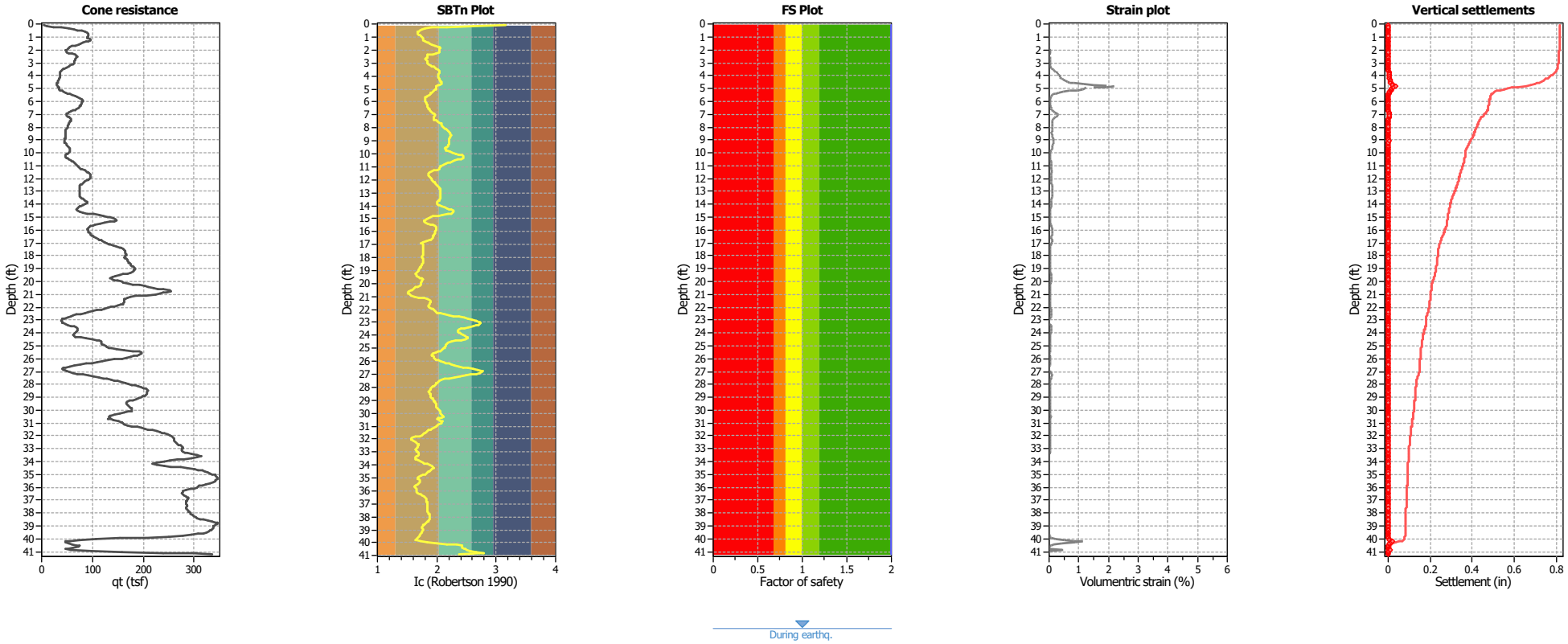
Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.07	3.15	5.25	11.63	61.06	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.14	2.60	14.71	3.78	55.57	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.20	2.18	34.83	1.56	54.24	12	307	0.57	0.002	0.00	21.03	0.00	0.000
0.26	1.91	61.90	1.00	61.90	12	390	0.57	0.002	0.00	21.03	0.00	0.000
0.33	1.80	83.77	1.00	83.77	16	457	0.57	0.002	0.00	21.03	0.00	0.000
0.40	1.75	100.33	1.08	108.52	21	514	0.57	0.002	0.00	21.03	0.00	0.000
0.47	1.72	113.23	1.03	116.86	22	561	0.57	0.003	0.00	21.03	0.00	0.000
0.53	1.69	126.69	1.00	126.69	24	604	0.56	0.003	0.00	21.03	0.00	0.000
0.60	1.67	136.84	1.00	136.84	25	638	0.56	0.003	0.00	21.03	0.00	0.000
0.66	1.67	143.69	1.00	143.69	27	667	0.56	0.003	0.00	21.03	0.00	0.000
0.72	1.68	146.54	1.00	146.54	27	686	0.56	0.003	0.00	21.03	0.00	0.000
0.79	1.69	147.28	1.00	147.28	27	698	0.56	0.004	0.00	21.03	0.00	0.000
0.85	1.71	146.98	1.00	146.98	27	714	0.56	0.004	0.00	21.03	0.00	0.000
0.93	1.73	146.75	1.04	153.27	29	733	0.56	0.004	0.00	21.03	0.00	0.000
0.99	1.75	144.94	1.09	158.31	30	749	0.56	0.004	0.00	21.03	0.00	0.000
1.05	1.77	144.43	1.12	161.16	31	762	0.56	0.005	0.00	21.03	0.00	0.000
1.12	1.77	146.85	1.12	164.37	31	777	0.56	0.005	0.00	21.03	0.00	0.000
1.18	1.76	152.06	1.11	168.23	32	795	0.56	0.005	0.00	21.03	0.00	0.000
1.25	1.77	152.45	1.12	170.94	33	808	0.56	0.005	0.00	21.03	0.00	0.000
1.32	1.80	147.64	1.15	170.14	33	808	0.56	0.006	0.00	21.03	0.00	0.000
1.38	1.84	138.83	1.19	164.96	32	795	0.56	0.006	0.00	21.03	0.00	0.000
1.45	1.86	130.91	1.21	158.32	31	774	0.56	0.007	0.00	21.03	0.00	0.000
1.51	1.88	123.25	1.23	151.15	30	751	0.56	0.008	0.00	21.03	0.01	0.000
1.58	1.92	114.28	1.25	142.92	29	729	0.56	0.009	0.01	21.03	0.01	0.000
1.64	1.97	104.91	1.28	134.49	28	710	0.56	0.009	0.01	21.03	0.01	0.000
1.71	2.02	95.65	1.32	126.47	27	689	0.56	0.010	0.01	21.03	0.01	0.000
1.78	2.05	88.68	1.35	119.96	25	664	0.56	0.012	0.01	21.03	0.01	0.000
1.84	2.05	83.57	1.36	113.56	24	631	0.56	0.014	0.01	21.03	0.01	0.000
1.91	2.05	79.52	1.35	107.64	23	596	0.56	0.016	0.01	21.03	0.02	0.000
1.98	2.04	76.86	1.35	103.55	22	572	0.56	0.018	0.02	21.03	0.02	0.000
2.04	2.05	75.30	1.36	102.17	22	567	0.56	0.020	0.02	21.03	0.02	0.000
2.11	2.05	75.94	1.35	102.88	22	570	0.56	0.021	0.02	21.03	0.02	0.000
2.17	2.04	77.58	1.35	104.39	22	576	0.56	0.021	0.02	21.03	0.02	0.000
2.24	1.99	84.09	1.30	109.39	23	587	0.56	0.021	0.02	21.03	0.02	0.000
2.31	1.92	93.94	1.25	117.68	24	601	0.56	0.021	0.02	21.03	0.02	0.000
2.37	1.85	106.65	1.20	128.09	25	622	0.56	0.020	0.02	21.03	0.02	0.000
2.44	1.84	110.09	1.19	130.87	26	631	0.56	0.020	0.02	21.03	0.02	0.000
2.50	1.83	110.59	1.19	131.24	26	632	0.56	0.021	0.02	21.03	0.02	0.000
2.56	1.84	107.48	1.19	128.04	25	618	0.56	0.023	0.02	21.03	0.02	0.000
2.63	1.82	108.03	1.17	126.44	25	604	0.56	0.025	0.02	21.03	0.02	0.000
2.69	1.81	105.92	1.17	123.54	24	589	0.56	0.028	0.02	21.03	0.02	0.000
2.76	1.82	103.41	1.18	121.56	24	582	0.56	0.030	0.02	21.03	0.03	0.000
2.83	1.83	101.50	1.19	120.45	24	580	0.56	0.032	0.03	21.03	0.03	0.000
2.89	1.84	101.15	1.19	120.52	24	582	0.56	0.032	0.03	21.03	0.03	0.000
2.96	1.84	101.29	1.19	120.87	24	584	0.56	0.033	0.03	21.03	0.03	0.001
3.02	1.85	100.68	1.20	120.84	24	587	0.56	0.034	0.03	21.03	0.03	0.000
3.09	1.87	98.37	1.21	119.40	24	586	0.56	0.036	0.03	21.03	0.03	0.001
3.15	1.89	94.06	1.23	115.91	23	579	0.56	0.038	0.03	21.03	0.04	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.22	1.92	88.65	1.25	110.88	22	566	0.56	0.042	0.04	21.03	0.04	0.001
3.28	1.95	82.74	1.27	104.90	21	545	0.56	0.049	0.04	21.03	0.05	0.001
3.35	1.97	76.77	1.28	98.61	20	521	0.56	0.058	0.06	21.03	0.06	0.001
3.42	1.99	71.21	1.30	92.72	19	498	0.56	0.071	0.07	21.03	0.08	0.001
3.48	2.02	66.05	1.32	87.23	18	475	0.56	0.087	0.10	21.03	0.11	0.001
3.55	2.03	62.14	1.33	82.94	17	455	0.56	0.106	0.12	21.03	0.14	0.002
3.61	2.04	59.03	1.34	79.32	17	438	0.56	0.129	0.16	21.03	0.17	0.003
3.68	2.04	57.12	1.35	76.91	16	425	0.56	0.153	0.20	21.03	0.21	0.004
3.74	2.04	56.02	1.34	75.32	16	416	0.56	0.175	0.23	21.03	0.25	0.004
3.81	2.04	55.56	1.34	74.47	16	410	0.56	0.194	0.26	21.03	0.28	0.005
3.88	2.03	55.41	1.34	74.02	16	407	0.56	0.211	0.28	21.03	0.31	0.005
3.94	2.03	55.35	1.33	73.77	16	405	0.56	0.224	0.30	21.03	0.33	0.005
4.00	2.03	55.29	1.33	73.60	15	403	0.56	0.236	0.32	21.03	0.35	0.005
4.08	2.03	55.24	1.33	73.52	15	403	0.56	0.248	0.34	21.03	0.37	0.006
4.14	2.03	54.98	1.33	73.35	15	403	0.56	0.258	0.35	21.03	0.38	0.006
4.21	2.03	54.63	1.34	73.11	15	402	0.56	0.270	0.37	21.03	0.40	0.007
4.26	2.04	53.83	1.35	72.48	15	400	0.56	0.285	0.39	21.03	0.42	0.006
4.33	2.05	52.67	1.36	71.47	15	397	0.56	0.312	0.43	21.03	0.47	0.008
4.41	2.06	51.16	1.37	70.11	15	391	0.56	0.349	0.49	21.03	0.53	0.009
4.46	2.07	49.70	1.38	68.74	15	385	0.56	0.393	0.57	21.03	0.61	0.009
4.54	2.08	48.49	1.39	67.56	15	379	0.56	0.442	0.65	21.03	0.70	0.012
4.60	2.08	47.69	1.38	66.02	14	370	0.56	0.526	0.80	21.03	0.86	0.013
4.67	2.05	47.43	1.35	64.24	14	356	0.56	0.679	1.08	21.03	1.15	0.019
4.73	2.02	47.93	1.32	63.35	13	345	0.56	0.849	1.39	21.03	1.49	0.022
4.80	1.99	49.02	1.00	49.02	10	343	0.56	0.918	2.06	21.03	2.21	0.037
4.86	1.99	50.56	1.00	50.56	10	351	0.56	0.828	1.80	21.03	1.92	0.028
4.93	1.98	52.11	1.29	67.32	14	358	0.56	0.759	1.17	21.03	1.25	0.021
4.99	1.99	52.31	1.30	67.76	14	362	0.56	0.742	1.14	21.03	1.21	0.017
5.05	1.97	54.16	1.28	69.52	14	367	0.56	0.704	1.05	21.03	1.12	0.017
5.12	1.95	56.85	1.27	72.26	15	377	0.56	0.630	0.91	21.03	0.96	0.016
5.19	1.92	61.85	1.25	77.50	16	396	0.56	0.492	0.66	21.03	0.70	0.011
5.25	1.92	66.45	1.25	82.88	17	421	0.56	0.369	0.46	21.03	0.49	0.007
5.32	1.91	72.50	1.24	89.93	18	453	0.56	0.264	0.30	21.03	0.32	0.005
5.39	1.89	79.36	1.23	97.57	19	486	0.56	0.199	0.20	21.03	0.22	0.004
5.45	1.87	87.46	1.22	106.29	21	522	0.56	0.150	0.14	21.03	0.15	0.002
5.52	1.85	95.86	1.20	114.84	23	557	0.56	0.120	0.10	21.03	0.11	0.002
5.59	1.83	105.06	1.18	123.91	24	594	0.56	0.097	0.08	21.03	0.08	0.001
5.66	1.81	113.11	1.16	131.70	26	627	0.56	0.083	0.06	21.03	0.06	0.001
5.73	1.80	119.71	1.16	138.43	27	658	0.56	0.073	0.05	21.03	0.05	0.001
5.79	1.80	124.16	1.15	143.32	28	681	0.56	0.067	0.05	21.03	0.05	0.001
5.86	1.80	126.91	1.15	146.54	28	696	0.56	0.064	0.04	21.03	0.04	0.001
5.93	1.81	127.81	1.16	148.11	29	704	0.56	0.063	0.04	21.03	0.04	0.001
5.99	1.81	127.40	1.17	148.57	29	708	0.56	0.063	0.04	21.03	0.04	0.001
6.04	1.82	126.34	1.18	148.47	29	710	0.56	0.064	0.04	21.03	0.04	0.000
6.11	1.83	125.18	1.18	148.05	29	711	0.56	0.065	0.04	21.03	0.04	0.001
6.17	1.84	124.02	1.19	147.33	29	710	0.56	0.067	0.04	21.03	0.04	0.001
6.24	1.84	122.81	1.19	146.34	29	706	0.56	0.069	0.04	21.03	0.05	0.001
6.30	1.84	121.36	1.19	145.01	28	701	0.56	0.072	0.05	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.38	1.85	119.65	1.20	143.35	28	695	0.56	0.076	0.05	21.03	0.05	0.001
6.44	1.85	117.30	1.20	140.98	28	685	0.56	0.081	0.05	21.03	0.06	0.001
6.51	1.86	113.94	1.21	137.63	27	672	0.56	0.088	0.06	21.03	0.06	0.001
6.58	1.87	109.53	1.22	133.23	26	655	0.56	0.097	0.07	21.03	0.07	0.001
6.64	1.88	104.16	1.23	127.73	25	634	0.56	0.111	0.08	21.03	0.09	0.001
6.71	1.90	98.10	1.24	121.28	24	609	0.56	0.132	0.10	21.03	0.11	0.002
6.78	1.92	91.58	1.25	114.19	23	580	0.56	0.163	0.14	21.03	0.14	0.002
6.84	1.93	85.22	1.26	107.27	22	552	0.56	0.204	0.18	21.03	0.19	0.003
6.91	1.95	79.91	1.27	101.60	21	530	0.56	0.249	0.24	21.03	0.24	0.004
6.98	1.97	76.75	1.28	98.27	20	518	0.56	0.284	0.28	21.03	0.29	0.005
7.02	1.97	75.49	1.28	97.00	20	513	0.56	0.301	0.30	21.03	0.31	0.003
7.09	1.96	76.84	1.28	98.36	20	518	0.56	0.295	0.29	21.03	0.30	0.005
7.16	1.96	79.83	1.27	101.70	21	532	0.56	0.267	0.25	21.03	0.26	0.004
7.23	1.95	84.28	1.27	106.83	22	555	0.56	0.226	0.20	21.03	0.21	0.003
7.29	1.95	88.18	1.27	111.86	23	582	0.56	0.189	0.16	21.03	0.16	0.003
7.36	1.96	90.58	1.28	115.62	24	607	0.56	0.164	0.13	21.03	0.14	0.002
7.43	1.98	91.23	1.29	117.79	24	627	0.56	0.147	0.12	21.03	0.12	0.002
7.50	2.00	90.47	1.31	118.63	25	642	0.56	0.137	0.11	21.03	0.11	0.002
7.56	2.03	89.06	1.33	118.78	25	652	0.56	0.132	0.10	21.03	0.10	0.002
7.61	2.05	87.25	1.36	118.63	25	659	0.56	0.129	0.10	21.03	0.10	0.001
7.68	2.07	85.49	1.38	118.26	25	662	0.56	0.129	0.10	21.03	0.10	0.002
7.75	2.08	83.82	1.39	116.87	25	656	0.56	0.136	0.10	21.03	0.10	0.002
7.81	2.09	82.51	1.40	115.43	25	649	0.56	0.144	0.11	21.03	0.11	0.002
7.88	2.09	81.40	1.41	114.39	25	644	0.56	0.151	0.12	21.03	0.12	0.002
7.95	2.11	80.35	1.43	114.84	25	649	0.56	0.150	0.12	21.03	0.12	0.002
8.02	2.13	79.34	1.46	115.75	25	656	0.56	0.147	0.11	21.03	0.11	0.002
8.09	2.15	78.02	1.49	116.61	26	661	0.56	0.145	0.11	21.03	0.11	0.002
8.14	2.17	76.42	1.54	117.31	26	664	0.56	0.144	0.10	21.03	0.11	0.001
8.20	2.18	75.07	1.57	118.02	26	667	0.56	0.145	0.10	21.03	0.10	0.002
8.28	2.20	74.17	1.61	119.51	27	673	0.56	0.143	0.10	21.03	0.10	0.002
8.35	2.21	73.66	1.65	121.47	28	681	0.55	0.139	0.09	21.03	0.09	0.002
8.42	2.23	73.10	1.69	123.24	28	687	0.55	0.137	0.09	21.03	0.09	0.002
8.46	2.23	72.64	1.71	124.01	28	689	0.55	0.137	0.09	21.03	0.09	0.001
8.54	2.24	72.01	1.71	123.14	28	688	0.55	0.141	0.09	21.03	0.09	0.002
8.61	2.23	71.43	1.70	121.61	28	685	0.55	0.146	0.10	21.03	0.10	0.002
8.66	2.23	71.01	1.68	119.38	27	678	0.55	0.153	0.11	21.03	0.11	0.001
8.73	2.22	70.50	1.66	116.96	27	672	0.55	0.162	0.12	21.03	0.11	0.002
8.80	2.21	69.92	1.64	114.40	26	664	0.55	0.172	0.13	21.03	0.13	0.002
8.88	2.20	69.21	1.62	112.37	25	657	0.55	0.182	0.14	21.03	0.14	0.002
8.93	2.20	68.38	1.62	111.08	25	652	0.55	0.190	0.15	21.03	0.14	0.002
9.00	2.21	67.79	1.63	110.42	25	651	0.55	0.195	0.15	21.03	0.15	0.003
9.07	2.21	67.11	1.64	110.12	25	652	0.55	0.198	0.15	21.03	0.15	0.003
9.13	2.21	67.02	1.64	110.11	25	654	0.55	0.198	0.15	21.03	0.15	0.002
9.20	2.21	67.13	1.64	110.29	25	659	0.55	0.196	0.15	21.03	0.15	0.003
9.27	2.20	68.25	1.62	110.83	25	668	0.55	0.189	0.14	21.03	0.14	0.002
9.34	2.19	69.71	1.60	111.54	25	679	0.55	0.180	0.14	21.03	0.13	0.002
9.39	2.18	71.61	1.57	112.33	25	690	0.55	0.171	0.13	21.03	0.13	0.002
9.46	2.17	73.43	1.54	112.79	25	700	0.55	0.165	0.13	21.03	0.12	0.002

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.53	2.15	75.04	1.51	113.17	25	709	0.55	0.160	0.12	21.03	0.12	0.002
9.58	2.14	76.53	1.49	114.03	25	718	0.55	0.154	0.12	21.03	0.11	0.001
9.65	2.14	77.66	1.49	116.03	26	734	0.55	0.145	0.11	21.03	0.10	0.002
9.73	2.16	78.68	1.51	119.18	26	756	0.55	0.133	0.10	21.03	0.09	0.002
9.78	2.18	79.41	1.57	124.33	28	786	0.55	0.118	0.08	21.03	0.08	0.001
9.85	2.22	79.16	1.66	131.36	30	820	0.55	0.104	0.06	21.03	0.06	0.001
9.92	2.27	77.65	1.82	141.17	33	856	0.55	0.092	0.05	21.03	0.05	0.001
9.99	2.33	75.06	2.02	151.87	36	883	0.55	0.085	0.04	21.03	0.04	0.001
10.04	2.38	71.87	2.27	163.24	40	901	0.55	0.081	0.04	21.03	0.03	0.000
10.12	2.42	69.07	2.49	171.95	43	911	0.55	0.080	0.03	21.03	0.03	0.001
10.19	2.44	67.56	2.62	176.79	44	918	0.55	0.079	0.03	21.03	0.03	0.001
10.24	2.45	66.36	2.67	177.34	45	914	0.55	0.081	0.03	21.03	0.03	0.000
10.31	2.44	66.31	2.60	172.66	43	907	0.55	0.084	0.03	21.03	0.03	0.001
10.38	2.41	67.21	2.44	164.14	41	896	0.55	0.088	0.04	21.03	0.04	0.001
10.46	2.36	70.14	2.19	153.35	37	890	0.55	0.091	0.04	21.03	0.04	0.001
10.51	2.31	73.66	1.95	143.51	34	882	0.55	0.095	0.05	21.03	0.05	0.001
10.58	2.26	76.77	1.78	136.39	32	875	0.55	0.098	0.06	21.03	0.05	0.001
10.65	2.22	79.46	1.66	131.82	30	871	0.55	0.101	0.06	21.03	0.06	0.001
10.70	2.19	81.97	1.59	130.32	29	875	0.55	0.100	0.06	21.03	0.06	0.001
10.77	2.16	83.91	1.52	127.51	28	868	0.55	0.104	0.07	21.03	0.07	0.001
10.84	2.12	85.59	1.45	123.91	27	852	0.55	0.112	0.08	21.03	0.07	0.001
10.91	2.08	86.59	1.40	120.85	26	832	0.55	0.122	0.09	21.03	0.08	0.001
10.96	2.07	87.67	1.38	120.64	26	831	0.55	0.124	0.09	21.03	0.09	0.001
11.04	2.06	89.26	1.37	122.26	26	845	0.55	0.119	0.09	21.03	0.08	0.001
11.11	2.05	91.77	1.35	124.16	26	858	0.55	0.115	0.08	21.03	0.08	0.001
11.16	2.03	93.27	1.34	124.82	26	861	0.55	0.115	0.08	21.03	0.08	0.001
11.22	2.00	96.17	1.31	125.71	26	857	0.55	0.117	0.08	21.03	0.08	0.001
11.29	1.96	99.07	1.28	126.39	26	846	0.55	0.124	0.09	21.03	0.09	0.001
11.36	1.91	103.54	1.24	128.56	26	838	0.55	0.130	0.10	21.03	0.09	0.002
11.43	1.88	106.37	1.22	129.92	26	836	0.55	0.132	0.10	21.03	0.09	0.002
11.49	1.86	109.33	1.21	132.30	26	846	0.55	0.128	0.09	21.03	0.09	0.001
11.56	1.86	112.04	1.21	135.30	27	867	0.55	0.120	0.08	21.03	0.08	0.001
11.63	1.86	114.31	1.21	138.24	27	891	0.55	0.112	0.08	21.03	0.07	0.001
11.68	1.87	115.84	1.22	140.76	28	913	0.55	0.104	0.07	21.03	0.07	0.001
11.76	1.88	116.24	1.22	142.17	28	931	0.55	0.100	0.07	21.03	0.06	0.001
11.83	1.89	116.07	1.23	142.91	29	946	0.55	0.096	0.06	21.03	0.06	0.001
11.88	1.90	115.32	1.24	142.79	29	953	0.55	0.095	0.06	21.03	0.06	0.001
11.95	1.91	113.86	1.24	141.66	29	954	0.55	0.095	0.06	21.03	0.06	0.001
12.03	1.92	111.65	1.25	139.63	28	950	0.55	0.098	0.06	21.03	0.06	0.001
12.10	1.93	108.94	1.26	137.02	28	942	0.55	0.101	0.07	21.03	0.06	0.001
12.14	1.95	105.59	1.27	133.83	27	931	0.55	0.106	0.07	21.03	0.07	0.001
12.22	1.96	101.82	1.28	130.19	27	918	0.55	0.112	0.08	21.03	0.07	0.001
12.29	1.98	98.04	1.29	126.51	26	903	0.55	0.119	0.09	21.03	0.08	0.001
12.34	1.99	94.82	1.30	123.42	26	891	0.55	0.125	0.09	21.03	0.09	0.001
12.41	2.01	91.98	1.31	120.83	25	882	0.55	0.131	0.10	21.03	0.09	0.002
12.49	2.02	89.70	1.33	118.89	25	876	0.55	0.135	0.10	21.03	0.10	0.002
12.54	2.03	88.17	1.33	117.69	25	873	0.55	0.138	0.11	21.03	0.10	0.001
12.61	2.04	87.04	1.34	116.89	25	874	0.55	0.139	0.11	21.03	0.10	0.002

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.68	2.05	86.20	1.35	116.44	25	876	0.55	0.140	0.11	21.03	0.10	0.002
12.73	2.05	85.74	1.36	116.45	25	880	0.55	0.139	0.11	21.03	0.10	0.001
12.80	2.06	85.44	1.36	116.56	25	886	0.55	0.137	0.11	21.03	0.10	0.002
12.87	2.06	85.17	1.37	116.64	25	891	0.55	0.136	0.10	21.03	0.10	0.002
12.95	2.07	85.02	1.37	116.66	25	895	0.55	0.136	0.10	21.03	0.09	0.002
12.99	2.07	84.99	1.37	116.73	25	898	0.55	0.135	0.10	21.03	0.09	0.001
13.07	2.07	84.78	1.37	116.53	25	900	0.55	0.136	0.10	21.03	0.09	0.002
13.14	2.07	84.44	1.38	116.15	25	901	0.55	0.137	0.11	21.03	0.10	0.002
13.19	2.07	84.03	1.38	115.66	25	899	0.55	0.139	0.11	21.03	0.10	0.001
13.26	2.07	83.59	1.38	115.16	25	899	0.55	0.141	0.11	21.03	0.10	0.002
13.34	2.07	83.38	1.38	114.90	25	900	0.55	0.142	0.11	21.03	0.10	0.002
13.39	2.07	84.03	1.37	115.37	25	905	0.55	0.140	0.11	21.03	0.10	0.001
13.46	2.06	85.69	1.36	116.76	25	916	0.55	0.136	0.10	21.03	0.09	0.002
13.54	2.05	87.72	1.35	118.59	25	931	0.55	0.131	0.10	21.03	0.09	0.002
13.59	2.04	90.30	1.34	121.18	26	950	0.55	0.124	0.09	21.03	0.08	0.001
13.66	2.03	92.81	1.33	123.54	26	967	0.55	0.118	0.09	21.03	0.08	0.001
13.73	2.01	95.35	1.32	125.81	26	982	0.55	0.114	0.08	21.03	0.07	0.001
13.78	2.00	97.56	1.31	127.82	27	995	0.55	0.110	0.08	21.03	0.07	0.001
13.86	2.01	98.03	1.31	128.61	27	1005	0.55	0.108	0.08	21.03	0.07	0.001
13.93	2.02	97.03	1.32	128.38	27	1013	0.55	0.107	0.07	21.03	0.07	0.001
13.98	2.05	94.11	1.35	127.02	27	1017	0.55	0.106	0.07	21.03	0.07	0.001
14.05	2.09	89.48	1.40	125.15	27	1018	0.55	0.107	0.07	21.03	0.07	0.001
14.11	2.13	84.92	1.47	124.67	27	1023	0.55	0.106	0.07	21.03	0.06	0.001
14.18	2.17	81.12	1.55	125.63	28	1030	0.55	0.105	0.07	21.03	0.06	0.001
14.25	2.21	78.72	1.63	128.47	29	1046	0.55	0.102	0.06	21.03	0.06	0.001
14.32	2.24	76.38	1.73	132.09	30	1062	0.55	0.098	0.06	21.03	0.05	0.001
14.37	2.27	74.26	1.83	136.15	32	1076	0.55	0.095	0.05	21.03	0.05	0.001
14.44	2.28	73.69	1.87	137.69	32	1085	0.55	0.094	0.05	21.03	0.05	0.001
14.51	2.27	75.40	1.82	137.20	32	1095	0.55	0.092	0.05	21.03	0.05	0.001
14.59	2.24	79.39	1.71	135.64	31	1109	0.55	0.090	0.05	21.03	0.05	0.001
14.64	2.18	86.19	1.57	135.02	30	1130	0.55	0.086	0.05	21.03	0.05	0.001
14.71	2.10	96.17	1.42	136.77	30	1152	0.55	0.083	0.05	21.03	0.05	0.001
14.78	2.02	107.82	1.32	142.48	30	1168	0.55	0.081	0.05	21.03	0.04	0.001
14.83	1.94	119.16	1.26	150.41	31	1177	0.55	0.079	0.05	21.03	0.04	0.000
14.91	1.89	127.46	1.23	156.57	31	1188	0.55	0.078	0.05	21.03	0.04	0.001
14.97	1.85	134.50	1.20	161.61	32	1203	0.55	0.077	0.04	21.03	0.04	0.001
15.03	1.82	140.47	1.18	165.36	32	1217	0.55	0.075	0.04	21.03	0.04	0.001
15.10	1.80	146.20	1.15	168.08	32	1231	0.55	0.073	0.04	21.03	0.04	0.001
15.17	1.78	150.56	1.13	169.93	33	1245	0.55	0.072	0.04	21.03	0.03	0.001
15.23	1.78	151.54	1.13	171.25	33	1258	0.55	0.071	0.04	21.03	0.03	0.001
15.30	1.80	147.57	1.16	170.51	33	1260	0.55	0.071	0.04	21.03	0.03	0.001
15.37	1.84	138.81	1.19	165.67	33	1246	0.55	0.073	0.04	21.03	0.04	0.001
15.44	1.89	127.59	1.23	156.82	31	1216	0.55	0.079	0.05	21.03	0.04	0.001
15.51	1.93	116.57	1.26	146.64	30	1175	0.55	0.086	0.05	21.03	0.05	0.001
15.57	1.96	107.52	1.28	137.50	28	1128	0.55	0.097	0.06	21.03	0.05	0.001
15.64	1.98	101.16	1.29	130.68	27	1088	0.55	0.108	0.08	21.03	0.06	0.001
15.68	1.99	96.87	1.30	125.74	26	1054	0.55	0.119	0.09	21.03	0.07	0.001
15.75	1.99	93.93	1.30	122.20	25	1029	0.55	0.129	0.10	21.03	0.08	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.82	1.99	91.82	1.30	119.35	25	1007	0.55	0.139	0.11	21.03	0.09	0.001
15.89	1.99	90.75	1.30	117.54	24	991	0.55	0.148	0.12	21.03	0.10	0.002
15.96	1.98	90.49	1.29	116.61	24	980	0.55	0.154	0.12	21.03	0.11	0.002
16.01	1.97	90.55	1.28	116.21	24	974	0.55	0.158	0.13	21.03	0.11	0.001
16.09	1.97	90.80	1.28	116.29	24	975	0.55	0.159	0.13	21.03	0.11	0.002
16.16	1.96	91.29	1.28	116.70	24	980	0.55	0.159	0.13	21.03	0.11	0.002
16.21	1.96	92.42	1.27	117.75	24	986	0.55	0.156	0.12	21.03	0.11	0.001
16.28	1.95	93.79	1.27	118.96	24	993	0.55	0.154	0.12	21.03	0.10	0.002
16.35	1.94	95.50	1.26	120.59	25	1003	0.55	0.150	0.12	21.03	0.10	0.002
16.42	1.93	96.94	1.26	122.08	25	1015	0.55	0.146	0.11	21.03	0.09	0.002
16.47	1.93	98.67	1.26	123.88	25	1027	0.55	0.142	0.11	21.03	0.09	0.001
16.54	1.92	100.98	1.25	126.19	25	1042	0.55	0.136	0.10	21.03	0.09	0.001
16.62	1.90	104.64	1.24	129.71	26	1062	0.54	0.130	0.09	21.03	0.08	0.001
16.69	1.88	107.63	1.22	131.85	26	1067	0.54	0.129	0.09	21.03	0.08	0.001
16.74	1.83	110.44	1.18	130.39	25	1023	0.54	0.148	0.11	21.03	0.09	0.001
16.81	1.78	112.86	1.12	126.86	24	984	0.54	0.169	0.13	21.03	0.11	0.002
16.88	1.74	115.95	1.07	123.89	23	969	0.54	0.179	0.15	21.03	0.12	0.002
16.93	1.75	119.94	1.09	130.39	25	1018	0.54	0.153	0.12	21.03	0.10	0.001
17.01	1.76	124.02	1.10	136.33	26	1065	0.54	0.134	0.10	21.03	0.08	0.001
17.08	1.77	126.38	1.12	141.28	27	1106	0.54	0.121	0.08	21.03	0.07	0.001
17.13	1.77	130.20	1.12	146.05	28	1145	0.54	0.110	0.07	21.03	0.06	0.001
17.20	1.78	134.52	1.12	151.17	29	1188	0.54	0.100	0.06	21.03	0.05	0.001
17.27	1.77	141.48	1.12	157.92	30	1244	0.54	0.090	0.05	21.03	0.04	0.001
17.34	1.77	146.15	1.12	163.25	31	1289	0.54	0.083	0.05	21.03	0.04	0.001
17.39	1.77	149.65	1.12	167.17	32	1322	0.54	0.078	0.04	21.03	0.04	0.000
17.46	1.77	151.98	1.11	169.33	32	1342	0.54	0.076	0.04	21.03	0.03	0.001
17.52	1.77	153.75	1.11	170.96	33	1358	0.54	0.074	0.04	21.03	0.03	0.001
17.60	1.77	154.84	1.11	172.41	33	1373	0.54	0.073	0.04	21.03	0.03	0.001
17.67	1.77	155.35	1.12	173.42	33	1384	0.54	0.072	0.04	21.03	0.03	0.001
17.72	1.77	155.67	1.12	173.92	33	1390	0.54	0.071	0.04	21.03	0.03	0.000
17.79	1.77	155.58	1.11	173.19	33	1387	0.54	0.072	0.04	21.03	0.03	0.001
17.86	1.76	155.61	1.10	171.61	33	1378	0.54	0.074	0.04	21.03	0.03	0.001
17.93	1.76	155.45	1.09	169.99	32	1370	0.54	0.075	0.04	21.03	0.03	0.001
17.98	1.76	154.00	1.10	168.88	32	1362	0.54	0.077	0.04	21.03	0.04	0.000
18.05	1.76	152.74	1.10	168.15	32	1359	0.54	0.078	0.04	21.03	0.04	0.001
18.11	1.76	152.12	1.11	168.46	32	1364	0.54	0.077	0.04	21.03	0.04	0.001
18.19	1.76	153.31	1.10	169.27	32	1374	0.54	0.077	0.04	21.03	0.03	0.001
18.26	1.76	154.41	1.11	170.70	33	1388	0.55	0.075	0.04	21.03	0.03	0.001
18.33	1.76	155.25	1.11	171.59	33	1399	0.55	0.074	0.04	21.03	0.03	0.001
18.38	1.76	156.18	1.10	172.41	33	1408	0.55	0.074	0.04	21.03	0.03	0.000
18.45	1.76	157.19	1.10	172.77	33	1414	0.55	0.073	0.04	21.03	0.03	0.001
18.52	1.75	158.23	1.09	172.70	33	1418	0.55	0.073	0.04	21.03	0.03	0.001
18.57	1.75	159.30	1.08	172.07	33	1417	0.55	0.074	0.04	21.03	0.03	0.000
18.64	1.74	160.21	1.07	170.98	32	1414	0.55	0.075	0.04	21.03	0.03	0.001
18.71	1.73	161.20	1.05	169.19	32	1409	0.55	0.076	0.04	21.03	0.03	0.001
18.79	1.72	162.16	1.03	166.91	31	1402	0.55	0.077	0.04	21.03	0.04	0.001
18.84	1.71	163.72	1.00	163.72	31	1392	0.55	0.079	0.05	21.03	0.04	0.000
18.91	1.70	164.97	1.00	164.97	31	1387	0.55	0.080	0.05	21.03	0.04	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.98	1.69	166.20	1.00	166.20	31	1385	0.55	0.081	0.05	21.03	0.04	0.001
19.05	1.68	166.21	1.00	166.21	31	1381	0.55	0.082	0.05	21.03	0.04	0.001
19.10	1.67	165.42	1.00	165.42	31	1352	0.55	0.086	0.05	21.03	0.04	0.001
19.18	1.66	164.08	1.00	164.08	30	1320	0.55	0.092	0.06	21.03	0.04	0.001
19.25	1.64	162.35	1.00	162.35	30	1289	0.55	0.099	0.06	21.03	0.05	0.001
19.30	1.65	158.48	1.00	158.48	29	1263	0.55	0.105	0.07	21.03	0.05	0.001
19.37	1.65	151.39	1.00	151.39	28	1223	0.55	0.115	0.08	21.03	0.06	0.001
19.44	1.66	144.11	1.00	144.11	27	1180	0.55	0.128	0.09	21.03	0.07	0.001
19.51	1.69	136.57	1.00	136.57	25	1154	0.55	0.137	0.10	21.03	0.08	0.001
19.56	1.72	130.00	1.02	132.58	25	1142	0.55	0.142	0.11	21.03	0.09	0.001
19.63	1.75	123.30	1.08	133.14	25	1131	0.55	0.148	0.11	21.03	0.09	0.001
19.70	1.76	120.00	1.10	132.20	25	1123	0.55	0.152	0.12	21.03	0.09	0.002
19.75	1.76	120.52	1.09	131.69	25	1121	0.55	0.154	0.12	21.03	0.09	0.001
19.83	1.74	122.96	1.08	132.20	25	1130	0.55	0.151	0.12	21.03	0.09	0.002
19.90	1.74	126.90	1.06	134.45	25	1155	0.55	0.142	0.11	21.03	0.08	0.001
19.95	1.73	131.43	1.06	138.96	26	1196	0.55	0.129	0.09	21.03	0.07	0.001
20.02	1.72	138.52	1.04	143.54	27	1245	0.55	0.116	0.08	21.03	0.06	0.001
20.10	1.73	141.16	1.05	147.56	28	1279	0.55	0.108	0.07	21.03	0.06	0.001
20.15	1.71	149.32	1.00	149.32	28	1317	0.55	0.101	0.07	21.03	0.05	0.001
20.23	1.68	156.79	1.00	156.79	29	1346	0.55	0.096	0.06	21.03	0.05	0.001
20.29	1.65	169.03	1.00	169.03	31	1383	0.55	0.090	0.05	21.03	0.04	0.001
20.34	1.62	177.43	1.00	177.43	32	1405	0.55	0.087	0.05	21.03	0.04	0.000
20.41	1.61	184.48	1.00	184.48	33	1438	0.56	0.083	0.04	21.03	0.03	0.001
20.49	1.59	191.92	1.00	191.92	34	1467	0.56	0.080	0.04	21.03	0.03	0.001
20.56	1.57	199.26	1.00	199.26	36	1486	0.56	0.078	0.04	21.03	0.03	0.000
20.61	1.53	209.36	1.00	209.36	37	1490	0.56	0.078	0.04	21.03	0.03	0.000
20.68	1.51	219.12	1.00	219.12	38	1518	0.56	0.075	0.03	21.03	0.03	0.000
20.75	1.51	221.84	1.00	221.84	39	1552	0.56	0.072	0.03	21.03	0.02	0.000
20.81	1.54	213.35	1.00	213.35	38	1538	0.56	0.073	0.03	21.03	0.03	0.000
20.87	1.54	207.97	1.00	207.97	37	1519	0.56	0.076	0.04	21.03	0.03	0.000
20.94	1.56	202.44	1.00	202.44	36	1511	0.56	0.077	0.04	21.03	0.03	0.001
21.01	1.62	194.13	1.00	194.13	35	1560	0.56	0.072	0.04	21.03	0.03	0.000
21.07	1.70	175.69	1.00	175.69	33	1583	0.56	0.070	0.04	21.03	0.03	0.000
21.14	1.79	157.73	1.15	180.64	35	1603	0.56	0.069	0.04	21.03	0.03	0.000
21.21	1.84	148.28	1.19	177.16	35	1612	0.56	0.068	0.04	21.03	0.03	0.000
21.28	1.87	142.60	1.22	173.87	35	1619	0.56	0.068	0.04	21.03	0.03	0.000
21.33	1.89	139.13	1.23	170.95	34	1610	0.56	0.069	0.04	21.03	0.03	0.000
21.40	1.89	137.09	1.23	168.90	34	1600	0.56	0.070	0.04	21.03	0.03	0.000
21.47	1.89	135.77	1.23	167.15	33	1585	0.56	0.072	0.04	21.03	0.03	0.001
21.55	1.88	135.26	1.23	165.78	33	1566	0.56	0.075	0.04	21.03	0.03	0.001
21.60	1.87	135.04	1.22	164.30	33	1540	0.56	0.078	0.04	21.03	0.03	0.000
21.67	1.86	134.51	1.21	162.40	32	1512	0.56	0.081	0.05	21.03	0.03	0.001
21.74	1.85	133.57	1.20	160.45	32	1489	0.56	0.085	0.05	21.03	0.04	0.001
21.79	1.86	129.84	1.21	156.89	31	1467	0.56	0.088	0.05	21.03	0.04	0.000
21.86	1.88	123.93	1.22	151.72	30	1444	0.56	0.092	0.06	21.03	0.04	0.001
21.93	1.91	117.40	1.24	145.75	29	1418	0.56	0.097	0.06	21.03	0.04	0.001
21.98	1.93	111.85	1.25	140.36	28	1390	0.56	0.102	0.07	21.03	0.05	0.001
22.06	1.95	106.70	1.27	135.46	28	1368	0.56	0.107	0.07	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
22.13	1.97	100.94	1.28	129.54	27	1331	0.56	0.116	0.08	21.03	0.06	0.001
22.20	1.99	95.07	1.30	123.26	26	1287	0.56	0.128	0.10	21.03	0.07	0.001
22.25	2.02	88.01	1.32	116.20	24	1239	0.56	0.143	0.11	21.03	0.08	0.001
22.32	2.07	80.57	1.37	110.60	24	1216	0.56	0.152	0.12	21.03	0.09	0.002
22.39	2.13	73.25	1.47	107.70	24	1210	0.56	0.154	0.13	21.03	0.09	0.002
22.45	2.20	66.85	1.62	108.41	24	1217	0.56	0.153	0.12	21.03	0.09	0.001
22.52	2.29	59.87	1.88	112.44	26	1223	0.56	0.151	0.11	21.03	0.08	0.001
22.58	2.37	53.36	2.25	119.88	29	1228	0.56	0.150	0.10	21.03	0.07	0.001
22.64	2.46	47.53	2.69	127.99	32	1222	0.56	0.153	0.09	21.03	0.06	0.001
22.71	2.52	42.89	3.12	133.98	35	1205	0.56	0.160	0.08	21.03	0.06	0.001
22.77	2.59	37.84	3.66	138.65	37	1169	0.56	0.177	0.08	21.03	0.06	0.001
22.85	2.66	33.17	4.27	141.68	0	0	0.56	0.000	0.00	0.00	0.00	0.000
22.92	2.71	29.84	4.80	143.14	0	0	0.56	0.000	0.00	0.00	0.00	0.000
22.97	2.72	28.71	4.93	141.48	0	0	0.56	0.000	0.00	0.00	0.00	0.000
23.04	2.73	27.79	5.05	140.21	0	0	0.56	0.000	0.00	0.00	0.00	0.000
23.11	2.71	28.27	4.85	137.26	0	0	0.57	0.000	0.00	0.00	0.00	0.000
23.18	2.70	28.62	4.74	135.72	0	0	0.57	0.000	0.00	0.00	0.00	0.000
23.23	2.66	30.92	4.27	132.12	0	0	0.57	0.000	0.00	0.00	0.00	0.000
23.30	2.61	33.75	3.81	128.60	0	0	0.57	0.000	0.00	0.00	0.00	0.000
23.38	2.54	38.19	3.23	123.51	32	1120	0.57	0.214	0.12	21.03	0.08	0.001
23.45	2.47	42.93	2.76	118.68	30	1152	0.57	0.196	0.12	21.03	0.08	0.001
23.50	2.40	47.73	2.40	114.35	28	1177	0.57	0.184	0.12	21.03	0.09	0.001
23.57	2.37	50.88	2.21	112.30	27	1195	0.57	0.176	0.12	21.03	0.09	0.002
23.65	2.35	52.45	2.13	111.87	27	1208	0.57	0.171	0.12	21.03	0.08	0.002
23.69	2.36	52.35	2.16	112.83	27	1216	0.57	0.169	0.12	21.03	0.08	0.001
23.77	2.37	51.80	2.21	114.42	28	1225	0.57	0.166	0.11	21.03	0.08	0.001
23.84	2.38	51.21	2.28	116.69	28	1238	0.57	0.162	0.11	21.03	0.07	0.001
23.89	2.41	50.08	2.42	121.43	30	1259	0.57	0.154	0.09	21.03	0.07	0.001
23.96	2.45	48.55	2.63	127.70	32	1285	0.57	0.146	0.08	21.03	0.06	0.001
24.03	2.48	46.94	2.86	134.19	34	1309	0.57	0.139	0.07	21.03	0.05	0.001
24.11	2.51	45.67	3.03	138.24	36	1320	0.57	0.137	0.07	21.03	0.05	0.001
24.15	2.52	44.64	3.15	140.41	37	1322	0.57	0.137	0.07	21.03	0.05	0.001
24.23	2.52	45.22	3.10	140.17	36	1331	0.57	0.135	0.07	21.03	0.05	0.001
24.30	2.48	48.22	2.85	137.56	35	1355	0.57	0.129	0.07	21.03	0.04	0.001
24.35	2.41	55.24	2.40	132.59	33	1401	0.57	0.118	0.07	21.03	0.04	0.001
24.42	2.32	64.71	1.99	128.93	31	1460	0.57	0.107	0.06	21.03	0.04	0.001
24.50	2.25	73.96	1.74	128.56	30	1515	0.57	0.098	0.06	21.03	0.04	0.001
24.54	2.20	81.01	1.61	130.05	29	1554	0.57	0.093	0.06	21.03	0.04	0.000
24.62	2.17	84.93	1.54	131.18	29	1575	0.57	0.090	0.06	21.03	0.04	0.001
24.69	2.15	87.12	1.51	131.86	29	1586	0.57	0.089	0.06	21.03	0.04	0.001
24.74	2.15	87.79	1.51	132.18	29	1592	0.57	0.089	0.06	21.03	0.04	0.000
24.81	2.15	88.07	1.50	132.36	29	1597	0.57	0.088	0.06	21.03	0.04	0.001
24.88	2.14	89.21	1.49	132.68	29	1603	0.57	0.088	0.06	21.03	0.04	0.001
24.95	2.13	91.22	1.46	133.17	29	1608	0.57	0.088	0.06	21.03	0.04	0.001
25.00	2.11	93.67	1.43	133.93	29	1612	0.57	0.088	0.06	21.03	0.04	0.000
25.08	2.09	95.77	1.41	134.72	29	1616	0.57	0.088	0.06	21.03	0.04	0.001
25.15	2.08	98.10	1.39	136.00	29	1624	0.57	0.087	0.06	21.03	0.04	0.001
25.20	2.05	102.24	1.36	139.05	30	1645	0.57	0.085	0.05	21.03	0.04	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
25.27	2.02	109.53	1.33	145.44	31	1691	0.57	0.080	0.05	21.03	0.03	0.001
25.34	1.98	121.52	1.29	156.86	32	1769	0.57	0.073	0.04	21.03	0.03	0.000
25.41	1.94	134.46	1.26	169.83	35	1857	0.57	0.066	0.03	21.03	0.02	0.000
25.46	1.92	144.82	1.25	180.63	36	1937	0.57	0.061	0.03	21.03	0.02	0.000
25.54	1.92	148.37	1.25	185.03	37	1988	0.57	0.059	0.03	21.03	0.02	0.000
25.61	1.93	147.00	1.26	184.83	37	2016	0.57	0.057	0.03	21.03	0.02	0.000
25.67	1.95	143.26	1.27	181.49	37	2007	0.57	0.058	0.03	21.03	0.02	0.000
25.74	1.95	139.57	1.27	177.51	36	1979	0.57	0.060	0.03	21.03	0.02	0.000
25.79	1.97	135.16	1.28	173.07	36	1952	0.57	0.062	0.03	21.03	0.02	0.000
25.86	1.99	129.38	1.30	168.20	35	1940	0.57	0.062	0.03	21.03	0.02	0.000
25.94	2.03	122.47	1.33	163.13	34	1936	0.57	0.063	0.03	21.03	0.02	0.000
25.99	2.06	114.81	1.37	157.48	34	1912	0.57	0.065	0.03	21.03	0.02	0.000
26.06	2.11	104.16	1.44	149.96	33	1860	0.57	0.069	0.04	21.03	0.02	0.000
26.13	2.16	93.96	1.52	143.04	32	1791	0.57	0.074	0.04	21.03	0.03	0.000
26.19	2.20	84.53	1.62	137.20	31	1716	0.57	0.082	0.05	21.03	0.03	0.000
26.25	2.24	77.39	1.73	133.77	31	1660	0.57	0.088	0.05	21.03	0.03	0.001
26.33	2.30	69.07	1.92	132.79	31	1608	0.57	0.096	0.06	21.03	0.04	0.001
26.39	2.37	59.71	2.24	133.54	32	1542	0.57	0.106	0.06	21.03	0.04	0.001
26.47	2.44	51.43	2.61	134.08	34	1465	0.57	0.121	0.06	21.03	0.04	0.001
26.51	2.52	43.21	3.13	135.05	35	1376	0.57	0.144	0.07	21.03	0.05	0.001
26.59	2.60	36.27	3.78	137.29	0	0	0.57	0.000	0.00	0.00	0.00	0.000
26.66	2.69	30.40	4.62	140.53	0	0	0.57	0.000	0.00	0.00	0.00	0.000
26.71	2.75	26.96	5.28	142.22	0	0	0.57	0.000	0.00	0.00	0.00	0.000
26.78	2.77	25.93	5.46	141.58	0	0	0.57	0.000	0.00	0.00	0.00	0.000
26.84	2.76	26.20	5.33	139.71	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.91	2.72	27.82	4.91	136.52	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.98	2.66	30.49	4.33	131.94	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.04	2.58	35.08	3.55	124.49	33	1225	0.58	0.210	0.11	21.03	0.07	0.001
27.11	2.48	40.81	2.84	115.92	30	1248	0.58	0.199	0.12	21.03	0.08	0.001
27.17	2.38	47.34	2.29	108.21	26	1267	0.58	0.191	0.14	21.03	0.09	0.001
27.24	2.29	54.53	1.89	103.10	24	1285	0.58	0.183	0.15	21.03	0.09	0.001
27.31	2.21	62.26	1.63	101.66	23	1308	0.58	0.175	0.15	21.03	0.09	0.002
27.36	2.13	70.78	1.47	104.12	23	1340	0.58	0.163	0.14	21.03	0.09	0.001
27.44	2.08	78.61	1.39	109.13	23	1382	0.58	0.150	0.12	21.03	0.08	0.001
27.51	2.04	85.32	1.35	114.98	24	1431	0.58	0.137	0.11	21.03	0.07	0.001
27.56	2.02	90.84	1.33	120.74	25	1487	0.58	0.124	0.09	21.03	0.06	0.001
27.64	2.01	96.00	1.32	126.38	26	1543	0.58	0.113	0.08	21.03	0.05	0.001
27.71	2.00	101.00	1.30	131.73	27	1594	0.58	0.105	0.07	21.03	0.04	0.001
27.76	1.98	106.27	1.29	137.13	28	1638	0.58	0.099	0.07	21.03	0.04	0.001
27.83	1.96	111.09	1.28	141.99	29	1675	0.58	0.094	0.06	21.03	0.04	0.001
27.89	1.94	116.47	1.27	147.47	30	1715	0.58	0.090	0.05	21.03	0.03	0.000
27.96	1.93	121.42	1.26	152.53	31	1753	0.58	0.086	0.05	21.03	0.03	0.001
28.03	1.92	126.08	1.25	157.27	32	1789	0.58	0.082	0.05	21.03	0.03	0.000
28.09	1.90	130.46	1.24	161.68	32	1822	0.58	0.079	0.04	21.03	0.03	0.000
28.16	1.89	135.01	1.23	166.19	33	1856	0.58	0.077	0.04	21.03	0.03	0.000
28.23	1.88	139.30	1.22	170.42	34	1889	0.58	0.074	0.04	21.03	0.02	0.000
28.28	1.87	143.32	1.22	174.39	35	1920	0.58	0.072	0.04	21.03	0.02	0.000
28.36	1.87	145.94	1.21	177.31	35	1951	0.58	0.070	0.04	21.03	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
28.43	1.87	147.68	1.22	179.70	36	1985	0.58	0.068	0.03	21.03	0.02	0.000
28.48	1.88	148.32	1.22	181.24	36	2016	0.58	0.066	0.03	21.03	0.02	0.000
28.55	1.89	146.98	1.23	180.79	36	2034	0.58	0.065	0.03	21.03	0.02	0.000
28.62	1.90	146.24	1.23	180.50	36	2044	0.58	0.065	0.03	21.03	0.02	0.000
28.68	1.90	145.35	1.24	179.82	36	2047	0.58	0.065	0.03	21.03	0.02	0.000
28.74	1.90	145.32	1.24	179.97	36	2055	0.58	0.064	0.03	21.03	0.02	0.000
28.81	1.91	143.45	1.25	178.70	36	2064	0.58	0.064	0.03	21.03	0.02	0.000
28.88	1.93	141.05	1.25	176.89	36	2070	0.58	0.064	0.03	21.03	0.02	0.000
28.94	1.94	138.25	1.26	174.39	35	2063	0.58	0.064	0.03	21.03	0.02	0.000
29.01	1.94	135.57	1.27	171.59	35	2045	0.58	0.066	0.03	21.03	0.02	0.000
29.07	1.95	132.01	1.27	167.77	34	2016	0.58	0.068	0.04	21.03	0.02	0.000
29.14	1.96	127.76	1.28	163.18	33	1979	0.58	0.071	0.04	21.03	0.02	0.000
29.21	1.97	122.85	1.29	157.91	33	1938	0.58	0.074	0.04	21.03	0.02	0.000
29.28	1.98	118.38	1.29	153.13	32	1899	0.58	0.077	0.04	21.03	0.03	0.000
29.33	1.99	114.73	1.30	149.19	31	1866	0.58	0.080	0.05	21.03	0.03	0.000
29.42	1.99	113.60	1.30	147.71	31	1851	0.58	0.082	0.05	21.03	0.03	0.001
29.48	1.99	112.78	1.30	146.87	30	1846	0.58	0.083	0.05	21.03	0.03	0.000
29.53	2.00	113.60	1.30	148.08	31	1866	0.58	0.081	0.05	21.03	0.03	0.000
29.60	2.01	113.74	1.31	149.42	31	1904	0.58	0.078	0.05	21.03	0.03	0.000
29.66	2.02	114.89	1.33	152.32	32	1963	0.58	0.073	0.04	21.03	0.02	0.000
29.74	2.04	115.85	1.34	155.31	33	2027	0.58	0.069	0.04	21.03	0.02	0.000
29.80	2.05	116.92	1.35	158.13	34	2082	0.58	0.066	0.04	21.03	0.02	0.000
29.87	2.05	117.95	1.36	160.27	34	2121	0.58	0.064	0.03	21.03	0.02	0.000
29.94	2.06	118.39	1.36	161.36	34	2143	0.58	0.063	0.03	21.03	0.02	0.000
30.01	2.06	118.24	1.37	161.51	34	2152	0.58	0.062	0.03	21.03	0.02	0.000
30.06	2.07	116.97	1.37	160.59	34	2149	0.58	0.063	0.03	21.03	0.02	0.000
30.13	2.08	113.48	1.39	157.98	34	2134	0.58	0.064	0.03	21.03	0.02	0.000
30.19	2.11	107.16	1.43	153.06	33	2093	0.58	0.066	0.04	21.03	0.02	0.000
30.26	2.11	99.99	1.43	143.43	31	1967	0.58	0.075	0.04	21.03	0.02	0.000
30.33	2.08	94.38	1.39	131.13	28	1778	0.58	0.093	0.06	21.03	0.04	0.001
30.40	2.03	90.34	1.34	120.85	25	1597	0.58	0.120	0.09	21.03	0.05	0.001
30.45	2.01	89.27	1.32	117.71	25	1534	0.58	0.134	0.10	21.03	0.06	0.001
30.52	2.04	87.08	1.35	117.36	25	1565	0.58	0.127	0.10	21.03	0.06	0.001
30.59	2.06	87.77	1.37	119.90	26	1618	0.58	0.118	0.09	21.03	0.05	0.001
30.65	2.10	84.14	1.42	119.60	26	1649	0.58	0.113	0.08	21.03	0.05	0.001
30.71	2.09	88.04	1.40	123.45	27	1695	0.58	0.106	0.08	21.03	0.04	0.001
30.79	2.07	91.62	1.38	126.53	27	1726	0.58	0.102	0.07	21.03	0.04	0.001
30.84	2.03	99.38	1.33	132.40	28	1759	0.58	0.098	0.07	21.03	0.04	0.000
30.92	2.01	101.69	1.32	134.15	28	1767	0.58	0.097	0.06	21.03	0.04	0.001
30.98	2.00	103.47	1.31	135.16	28	1761	0.58	0.098	0.07	21.03	0.04	0.001
31.04	1.98	104.80	1.29	135.41	28	1741	0.58	0.101	0.07	21.03	0.04	0.001
31.11	1.95	107.29	1.27	136.43	28	1712	0.58	0.105	0.07	21.03	0.04	0.001
31.17	1.92	112.11	1.25	140.35	28	1717	0.58	0.105	0.07	21.03	0.04	0.001
31.25	1.89	117.98	1.23	145.50	29	1738	0.58	0.102	0.07	21.03	0.04	0.001
31.31	1.87	125.17	1.21	151.89	30	1772	0.58	0.098	0.06	21.03	0.03	0.000
31.37	1.84	131.42	1.19	156.72	31	1794	0.58	0.096	0.06	21.03	0.03	0.000
31.45	1.82	136.37	1.18	160.66	31	1821	0.58	0.093	0.05	21.03	0.03	0.001
31.51	1.81	141.35	1.16	164.64	32	1854	0.58	0.089	0.05	21.03	0.03	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
31.57	1.79	146.72	1.15	168.06	32	1879	0.58	0.087	0.05	21.03	0.03	0.000
31.63	1.77	153.43	1.11	170.16	32	1889	0.58	0.086	0.05	21.03	0.03	0.000
31.70	1.74	158.04	1.07	169.76	32	1888	0.58	0.087	0.05	21.03	0.03	0.000
31.77	1.71	162.34	1.00	163.12	31	1845	0.58	0.091	0.06	21.03	0.03	0.000
31.83	1.65	167.49	1.00	167.49	31	1747	0.58	0.103	0.06	21.03	0.03	0.000
31.89	1.59	171.96	1.00	171.96	31	1668	0.58	0.116	0.07	21.03	0.04	0.001
31.96	1.56	174.62	1.00	174.62	31	1631	0.58	0.123	0.07	21.03	0.04	0.001
32.02	1.57	176.97	1.00	176.97	32	1674	0.58	0.115	0.07	21.03	0.04	0.001
32.09	1.59	177.79	1.00	177.79	32	1720	0.58	0.108	0.06	21.03	0.03	0.001
32.16	1.61	178.73	1.00	178.73	32	1786	0.58	0.100	0.06	21.03	0.03	0.000
32.22	1.64	179.67	1.00	179.67	33	1852	0.58	0.092	0.05	21.03	0.03	0.000
32.30	1.66	178.66	1.00	178.66	33	1906	0.58	0.087	0.05	21.03	0.03	0.000
32.36	1.67	178.31	1.00	178.31	33	1948	0.58	0.083	0.05	21.03	0.02	0.000
32.42	1.69	177.41	1.00	177.41	33	1978	0.58	0.081	0.04	21.03	0.02	0.000
32.49	1.69	179.00	1.00	179.00	33	2000	0.58	0.079	0.04	21.03	0.02	0.000
32.55	1.68	180.70	1.00	180.70	34	2002	0.58	0.079	0.04	21.03	0.02	0.000
32.62	1.67	182.20	1.00	182.20	34	1992	0.58	0.080	0.04	21.03	0.02	0.000
32.69	1.66	183.76	1.00	183.76	34	1983	0.58	0.081	0.04	21.03	0.02	0.000
32.75	1.65	186.20	1.00	186.20	34	1985	0.58	0.081	0.04	21.03	0.02	0.000
32.82	1.65	188.40	1.00	188.40	35	1993	0.58	0.081	0.04	21.03	0.02	0.000
32.88	1.65	189.23	1.00	189.23	35	2013	0.58	0.079	0.04	21.03	0.02	0.000
32.95	1.66	187.95	1.00	187.95	35	2042	0.58	0.077	0.04	21.03	0.02	0.000
33.01	1.68	186.63	1.00	186.63	35	2074	0.58	0.075	0.04	21.03	0.02	0.000
33.09	1.69	185.87	1.00	185.87	35	2096	0.58	0.074	0.04	21.03	0.02	0.000
33.16	1.69	185.84	1.00	185.84	35	2116	0.58	0.073	0.04	21.03	0.02	0.000
33.22	1.69	186.78	1.00	186.78	35	2118	0.58	0.073	0.04	21.03	0.02	0.000
33.28	1.68	188.79	1.00	188.79	35	2120	0.58	0.073	0.04	21.03	0.02	0.000
33.34	1.66	193.46	1.00	193.46	36	2116	0.58	0.073	0.04	21.03	0.02	0.000
33.41	1.65	199.31	1.00	199.31	37	2126	0.58	0.073	0.04	21.03	0.02	0.000
33.47	1.64	205.97	1.00	205.97	38	2170	0.58	0.070	0.03	21.03	0.02	0.000
33.53	1.64	210.28	1.00	210.28	38	2235	0.58	0.066	0.03	21.03	0.02	0.000
33.60	1.67	210.24	1.00	210.24	39	2314	0.58	0.062	0.03	21.03	0.01	0.000
33.67	1.70	203.01	1.00	203.01	38	2348	0.58	0.061	0.03	21.03	0.01	0.000
33.73	1.73	194.39	1.05	203.59	38	2353	0.58	0.061	0.03	21.03	0.01	0.000
33.80	1.76	183.11	1.11	202.67	39	2337	0.58	0.062	0.03	21.03	0.01	0.000
33.86	1.79	174.09	1.14	199.03	38	2315	0.58	0.063	0.03	21.03	0.01	0.000
33.93	1.84	162.34	1.19	192.89	38	2304	0.58	0.064	0.03	21.03	0.01	0.000
34.00	1.87	153.43	1.22	186.58	37	2295	0.58	0.064	0.03	21.03	0.02	0.000
34.06	1.92	142.32	1.25	177.87	36	2292	0.58	0.064	0.03	21.03	0.02	0.000
34.13	1.94	137.20	1.26	173.29	35	2279	0.58	0.065	0.03	21.03	0.02	0.000
34.20	1.95	135.65	1.27	172.14	35	2286	0.58	0.065	0.03	21.03	0.02	0.000
34.26	1.93	141.88	1.26	178.34	36	2331	0.58	0.063	0.03	21.03	0.02	0.000
34.33	1.91	151.15	1.24	188.16	38	2419	0.58	0.059	0.03	21.03	0.01	0.000
34.40	1.90	160.83	1.23	198.47	40	2516	0.58	0.055	0.02	21.03	0.01	0.000
34.46	1.87	172.67	1.22	210.32	42	2615	0.58	0.052	0.02	21.03	0.01	0.000
34.52	1.86	182.27	1.21	219.78	43	2697	0.58	0.049	0.02	21.03	0.01	0.000
34.58	1.84	191.26	1.19	227.83	45	2761	0.58	0.048	0.02	21.03	0.01	0.000
34.65	1.82	197.06	1.18	231.96	45	2783	0.58	0.047	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
34.72	1.80	202.12	1.15	232.58	45	2754	0.58	0.048	0.02	21.03	0.01	0.000
34.78	1.76	207.14	1.10	228.82	44	2682	0.58	0.050	0.02	21.03	0.01	0.000
34.84	1.72	212.15	1.04	220.15	41	2597	0.58	0.053	0.02	21.03	0.01	0.000
34.91	1.69	217.23	1.00	217.23	40	2532	0.58	0.056	0.02	21.03	0.01	0.000
34.98	1.68	220.20	1.00	220.20	41	2523	0.58	0.056	0.02	21.03	0.01	0.000
35.04	1.68	223.04	1.00	223.04	41	2577	0.58	0.054	0.02	21.03	0.01	0.000
35.11	1.70	222.01	1.00	222.01	41	2642	0.58	0.052	0.02	21.03	0.01	0.000
35.18	1.71	222.50	1.01	225.41	42	2691	0.58	0.051	0.02	21.03	0.01	0.000
35.24	1.71	223.72	1.01	225.83	42	2702	0.58	0.050	0.02	21.03	0.01	0.000
35.30	1.71	224.12	1.01	225.37	42	2703	0.58	0.050	0.02	21.03	0.01	0.000
35.37	1.71	223.43	1.00	223.60	42	2689	0.58	0.051	0.02	21.03	0.01	0.000
35.44	1.70	220.75	1.00	220.75	41	2644	0.58	0.053	0.02	21.03	0.01	0.000
35.50	1.68	221.44	1.00	221.44	41	2563	0.58	0.055	0.02	21.03	0.01	0.000
35.57	1.64	222.99	1.00	222.99	41	2452	0.58	0.060	0.03	21.03	0.01	0.000
35.63	1.62	220.69	1.00	220.69	40	2353	0.58	0.065	0.03	21.03	0.01	0.000
35.70	1.62	215.97	1.00	215.97	39	2296	0.58	0.068	0.03	21.03	0.01	0.000
35.77	1.63	210.04	1.00	210.04	38	2279	0.58	0.069	0.03	21.03	0.01	0.000
35.83	1.65	204.84	1.00	204.84	38	2284	0.58	0.069	0.03	21.03	0.01	0.000
35.90	1.66	201.25	1.00	201.25	37	2284	0.58	0.069	0.03	21.03	0.01	0.000
35.96	1.67	198.56	1.00	198.56	37	2266	0.58	0.070	0.03	21.03	0.02	0.000
36.03	1.66	196.67	1.00	196.67	36	2237	0.58	0.072	0.04	21.03	0.02	0.000
36.09	1.66	193.59	1.00	193.59	36	2212	0.58	0.073	0.04	21.03	0.02	0.000
36.16	1.68	187.77	1.00	187.77	35	2198	0.58	0.074	0.04	21.03	0.02	0.000
36.22	1.70	181.28	1.00	181.28	34	2204	0.58	0.074	0.04	21.03	0.02	0.000
36.29	1.73	175.97	1.05	185.29	35	2231	0.58	0.073	0.04	21.03	0.02	0.000
36.36	1.75	174.05	1.09	189.79	36	2281	0.58	0.070	0.03	21.03	0.02	0.000
36.43	1.78	172.31	1.13	193.91	37	2343	0.58	0.067	0.03	21.03	0.01	0.000
36.49	1.80	171.72	1.15	197.38	38	2406	0.58	0.064	0.03	21.03	0.01	0.000
36.55	1.81	172.15	1.17	200.79	39	2471	0.58	0.061	0.03	21.03	0.01	0.000
36.63	1.82	173.11	1.18	203.69	40	2526	0.58	0.059	0.03	21.03	0.01	0.000
36.68	1.83	174.96	1.18	206.76	40	2576	0.58	0.057	0.02	21.03	0.01	0.000
36.76	1.83	175.82	1.19	208.39	41	2607	0.58	0.056	0.02	21.03	0.01	0.000
36.81	1.83	176.95	1.19	209.73	41	2626	0.58	0.055	0.02	21.03	0.01	0.000
36.88	1.83	176.59	1.19	209.49	41	2629	0.58	0.055	0.02	21.03	0.01	0.000
36.95	1.83	175.58	1.19	208.55	41	2623	0.58	0.055	0.02	21.03	0.01	0.000
37.01	1.84	174.54	1.19	207.50	41	2615	0.58	0.056	0.02	21.03	0.01	0.000
37.08	1.84	173.67	1.19	206.62	40	2608	0.58	0.056	0.02	21.03	0.01	0.000
37.14	1.84	173.25	1.19	206.03	40	2602	0.58	0.056	0.02	21.03	0.01	0.000
37.21	1.83	173.16	1.19	205.61	40	2596	0.58	0.057	0.02	21.03	0.01	0.000
37.27	1.83	173.11	1.19	205.34	40	2593	0.58	0.057	0.02	21.03	0.01	0.000
37.34	1.83	173.25	1.19	205.42	40	2595	0.58	0.057	0.02	21.03	0.01	0.000
37.41	1.83	173.21	1.19	205.63	40	2604	0.58	0.057	0.02	21.03	0.01	0.000
37.47	1.84	172.96	1.19	205.55	40	2609	0.58	0.057	0.02	21.03	0.01	0.000
37.54	1.84	172.45	1.19	205.35	40	2614	0.58	0.057	0.02	21.03	0.01	0.000
37.61	1.84	171.91	1.20	205.56	40	2632	0.58	0.056	0.02	21.03	0.01	0.000
37.66	1.85	171.50	1.20	206.48	41	2668	0.58	0.055	0.02	21.03	0.01	0.000
37.74	1.87	171.37	1.21	207.78	41	2714	0.58	0.053	0.02	21.03	0.01	0.000
37.81	1.87	171.96	1.22	209.30	42	2753	0.58	0.052	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
37.86	1.87	172.67	1.22	210.61	42	2781	0.58	0.052	0.02	21.03	0.01	0.000
37.93	1.88	173.04	1.22	211.32	42	2799	0.58	0.051	0.02	21.03	0.01	0.000
38.00	1.88	173.90	1.22	212.29	42	2813	0.58	0.051	0.02	21.03	0.01	0.000
38.06	1.87	174.67	1.22	213.02	42	2821	0.57	0.051	0.02	21.03	0.01	0.000
38.13	1.87	176.18	1.22	214.37	43	2833	0.57	0.050	0.02	21.03	0.01	0.000
38.19	1.87	176.89	1.22	214.99	43	2839	0.57	0.050	0.02	21.03	0.01	0.000
38.26	1.86	178.34	1.21	215.97	43	2840	0.57	0.050	0.02	21.03	0.01	0.000
38.32	1.85	180.24	1.20	216.88	43	2830	0.57	0.051	0.02	21.03	0.01	0.000
38.39	1.84	183.11	1.19	218.11	43	2816	0.57	0.051	0.02	21.03	0.01	0.000
38.45	1.82	187.16	1.18	219.96	43	2807	0.57	0.051	0.02	21.03	0.01	0.000
38.52	1.81	191.71	1.16	222.09	43	2808	0.57	0.052	0.02	21.03	0.01	0.000
38.59	1.79	197.05	1.14	224.63	43	2820	0.57	0.051	0.02	21.03	0.01	0.000
38.65	1.77	202.26	1.12	226.91	43	2836	0.57	0.051	0.02	21.03	0.01	0.000
38.72	1.76	207.08	1.10	228.35	44	2849	0.57	0.051	0.02	21.03	0.01	0.000
38.79	1.75	209.54	1.09	228.79	44	2855	0.57	0.050	0.02	21.03	0.01	0.000
38.86	1.75	209.29	1.09	228.43	43	2854	0.57	0.051	0.02	21.03	0.01	0.000
38.91	1.76	206.81	1.10	227.56	43	2847	0.57	0.051	0.02	21.03	0.01	0.000
38.98	1.76	204.78	1.10	226.13	43	2833	0.57	0.051	0.02	21.03	0.01	0.000
39.04	1.76	203.39	1.10	224.07	43	2809	0.57	0.052	0.02	21.03	0.01	0.000
39.11	1.75	203.71	1.09	222.15	42	2786	0.57	0.053	0.02	21.03	0.01	0.000
39.18	1.75	203.62	1.08	219.90	42	2760	0.57	0.054	0.02	21.03	0.01	0.000
39.24	1.74	203.45	1.07	216.82	41	2726	0.57	0.055	0.02	21.03	0.01	0.000
39.31	1.73	201.87	1.05	212.22	40	2675	0.57	0.057	0.02	21.03	0.01	0.000
39.38	1.72	200.53	1.03	207.05	39	2622	0.57	0.059	0.03	21.03	0.01	0.000
39.44	1.71	199.60	1.01	200.79	38	2563	0.57	0.061	0.03	21.03	0.01	0.000
39.51	1.70	197.81	1.00	197.81	37	2499	0.57	0.064	0.03	21.03	0.01	0.000
39.57	1.69	193.72	1.00	193.72	36	2425	0.57	0.068	0.03	21.03	0.01	0.000
39.63	1.68	187.85	1.00	187.85	35	2308	0.57	0.074	0.04	21.03	0.01	0.000
39.70	1.66	180.48	1.00	180.48	33	2165	0.57	0.084	0.05	21.03	0.02	0.000
39.77	1.64	170.91	1.00	170.91	31	1999	0.57	0.099	0.06	21.03	0.02	0.000
39.83	1.67	152.26	1.00	152.26	28	1840	0.57	0.119	0.08	21.03	0.03	0.000
39.90	1.73	122.56	1.06	129.42	24	1644	0.57	0.157	0.12	21.03	0.05	0.001
39.97	1.85	88.54	1.20	106.24	21	1417	0.57	0.237	0.23	21.03	0.08	0.001
40.03	2.00	58.98	1.31	77.02	16	1186	0.57	0.431	0.56	21.03	0.21	0.003
40.09	2.17	38.83	1.54	59.77	13	1011	0.57	0.822	1.34	21.03	0.50	0.007
40.16	2.34	26.58	2.09	55.61	13	903	0.57	1.393	2.27	21.03	0.84	0.013
40.23	2.42	21.92	2.51	54.94	14	846	0.57	1.942	3.07	21.03	1.14	0.020
40.30	2.44	22.31	2.57	57.36	14	877	0.57	1.614	2.41	21.03	0.89	0.014
40.36	2.43	25.34	2.52	63.83	16	984	0.57	0.933	1.23	21.03	0.45	0.007
40.43	2.47	28.39	2.79	79.15	20	1181	0.57	0.441	0.44	21.03	0.16	0.003
40.49	2.49	32.20	2.91	93.64	24	1379	0.57	0.260	0.21	21.03	0.08	0.001
40.56	2.51	34.64	3.03	105.09	27	1528	0.57	0.193	0.13	21.03	0.05	0.001
40.63	2.56	32.97	3.45	113.74	30	1585	0.57	0.175	0.11	21.03	0.04	0.001
40.69	2.67	27.37	4.42	121.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.76	2.80	21.46	5.81	124.63	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.81	2.71	20.42	4.83	98.57	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.89	2.37	27.31	2.23	61.03	15	985	0.57	0.936	1.34	21.03	0.48	0.008
40.95	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
41.01	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
41.08	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
41.15	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
41.21	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000

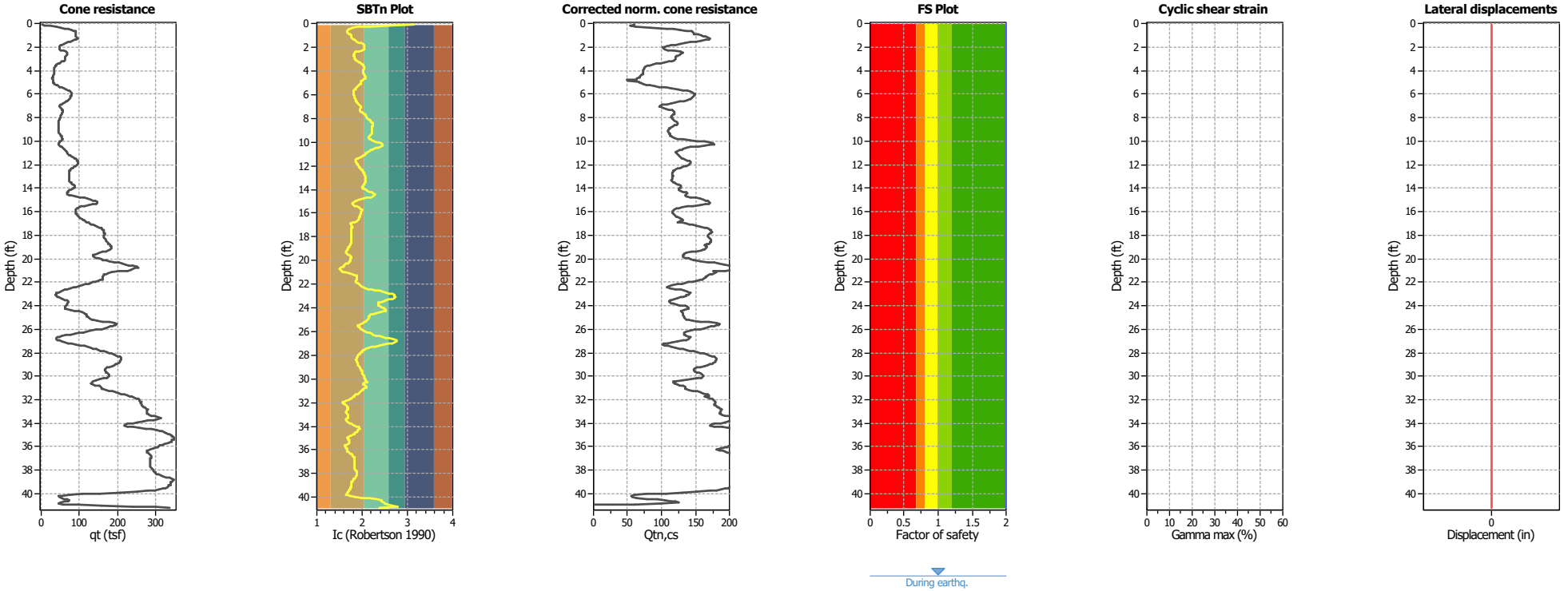
Total estimated settlement: 0.82

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

Estimation of post-earthquake lateral Displacements

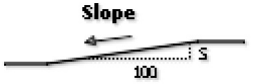
Geometric parameters: Gently sloping ground without free face (Slope 1.00 %)



Abbreviations

q_t: Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c: Soil Behaviour Type Index
$Q_{tn,cs}$: Equivalent clean sand normalized CPT total cone resistance
F.S.: Factor of safety
γ_{max}: Maximum cyclic shear strain
LDI: Lateral displacement index

Surface condition



:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.07	3.27	5.25	11.63	61.06	3.15	19.45	74.53
0.14	9.16	14.71	3.78	55.57	2.60	0.08	0.64
0.20	21.69	34.83	1.56	54.24	2.18	0.07	0.64
0.26	38.54	61.90	1.00	61.90	1.91	0.13	0.66
0.33	52.15	83.77	1.00	83.77	1.80	0.72	0.72
0.40	62.47	100.33	1.08	108.52	1.75	0.76	0.76
0.47	70.50	113.23	1.03	116.86	1.72	0.78	0.78
0.53	78.88	126.69	1.00	126.69	1.69	0.79	0.79
0.60	85.20	136.84	1.00	136.84	1.67	0.81	0.81
0.66	89.47	143.69	1.00	143.69	1.67	0.82	0.82
0.72	91.25	146.54	1.00	146.54	1.68	0.82	0.82
0.79	91.71	147.28	1.00	147.28	1.69	0.82	0.82
0.85	91.53	146.98	1.00	146.98	1.71	0.82	0.82
0.93	91.39	146.75	1.04	153.27	1.73	0.83	0.83
0.99	90.27	144.94	1.09	158.31	1.75	0.84	0.84
1.05	89.96	144.43	1.12	161.16	1.77	0.84	0.84
1.12	91.47	146.85	1.12	164.37	1.77	0.85	0.85
1.18	94.71	152.06	1.11	168.23	1.76	0.85	0.85
1.25	94.96	152.45	1.12	170.94	1.77	0.85	0.85
1.32	91.97	147.64	1.15	170.14	1.80	0.85	0.85
1.38	86.49	138.83	1.19	164.96	1.84	0.85	0.85
1.45	81.56	130.91	1.21	158.32	1.86	0.84	0.84
1.51	76.80	123.25	1.23	151.15	1.88	0.83	0.83
1.58	71.22	114.28	1.25	142.92	1.92	0.82	0.82
1.64	65.40	104.91	1.28	134.49	1.97	0.81	0.81
1.71	59.63	95.65	1.32	126.47	2.02	0.79	0.79
1.78	55.30	88.68	1.35	119.96	2.05	0.78	0.78
1.84	52.12	83.57	1.36	113.56	2.05	0.77	0.77
1.91	49.60	79.52	1.35	107.64	2.05	0.76	0.76
1.98	47.95	76.86	1.35	103.55	2.04	0.75	0.75
2.04	46.99	75.30	1.36	102.17	2.05	0.75	0.75
2.11	47.39	75.94	1.35	102.88	2.05	0.75	0.75
2.17	48.42	77.58	1.35	104.39	2.04	0.76	0.76
2.24	52.47	84.09	1.30	109.39	1.99	0.77	0.77
2.31	58.60	93.94	1.25	117.68	1.92	0.78	0.78
2.37	66.52	106.65	1.20	128.09	1.85	0.80	0.80
2.44	68.67	110.09	1.19	130.87	1.84	0.80	0.80
2.50	68.98	110.59	1.19	131.24	1.83	0.80	0.80
2.56	67.05	107.48	1.19	128.04	1.84	0.80	0.80
2.63	67.39	108.03	1.17	126.44	1.82	0.79	0.79
2.69	66.08	105.92	1.17	123.54	1.81	0.79	0.79
2.76	64.52	103.41	1.18	121.56	1.82	0.79	0.79
2.83	63.34	101.50	1.19	120.45	1.83	0.78	0.78
2.89	63.12	101.15	1.19	120.52	1.84	0.78	0.78
2.96	63.22	101.29	1.19	120.87	1.84	0.78	0.78
3.02	62.84	100.68	1.20	120.84	1.85	0.78	0.78
3.09	61.41	98.37	1.21	119.40	1.87	0.78	0.78
3.15	58.73	94.06	1.23	115.91	1.89	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.22	55.36	88.65	1.25	110.88	1.92	0.77	0.77
3.28	51.69	82.74	1.27	104.90	1.95	0.76	0.76
3.35	47.98	76.77	1.28	98.61	1.97	0.75	0.75
3.42	44.52	71.21	1.30	92.72	1.99	0.73	0.73
3.48	41.31	66.05	1.32	87.23	2.02	0.72	0.72
3.55	38.88	62.14	1.33	82.94	2.03	0.71	0.71
3.61	36.95	59.03	1.34	79.32	2.04	0.55	0.71
3.68	35.77	57.12	1.35	76.91	2.04	0.45	0.70
3.74	35.08	56.02	1.34	75.32	2.04	0.40	0.70
3.81	34.80	55.56	1.34	74.47	2.04	0.37	0.69
3.88	34.71	55.41	1.34	74.02	2.03	0.36	0.69
3.94	34.68	55.35	1.33	73.77	2.03	0.35	0.69
4.00	34.64	55.29	1.33	73.60	2.03	0.34	0.69
4.08	34.61	55.24	1.33	73.52	2.03	0.34	0.69
4.14	34.46	54.98	1.33	73.35	2.03	0.34	0.69
4.21	34.24	54.63	1.34	73.11	2.03	0.33	0.69
4.26	33.75	53.83	1.35	72.48	2.04	0.31	0.69
4.33	33.03	52.67	1.36	71.47	2.05	0.29	0.69
4.41	32.09	51.16	1.37	70.11	2.06	0.26	0.68
4.46	31.19	49.70	1.38	68.74	2.07	0.23	0.68
4.54	30.44	48.49	1.39	67.56	2.08	0.21	0.68
4.60	29.94	47.69	1.38	66.02	2.08	0.18	0.67
4.67	29.79	47.43	1.35	64.24	2.05	0.16	0.67
4.73	30.10	47.93	1.32	63.35	2.02	0.15	0.67
4.80	30.78	49.02	1.00	49.02	1.99	0.05	0.62
4.86	31.75	50.56	1.00	50.56	1.99	0.05	0.63
4.93	32.71	52.11	1.29	67.32	1.98	0.20	0.68
4.99	32.84	52.31	1.30	67.76	1.99	0.21	0.68
5.05	33.99	54.16	1.28	69.52	1.97	0.24	0.68
5.12	35.68	56.85	1.27	72.26	1.95	0.31	0.69
5.19	38.79	61.85	1.25	77.50	1.92	0.47	0.70
5.25	41.66	66.45	1.25	82.88	1.92	0.71	0.71
5.32	45.43	72.50	1.24	89.93	1.91	0.73	0.73
5.39	49.70	79.36	1.23	97.57	1.89	0.74	0.74
5.45	54.74	87.46	1.22	106.29	1.87	0.76	0.76
5.52	59.98	95.86	1.20	114.84	1.85	0.77	0.77
5.59	65.71	105.06	1.18	123.91	1.83	0.79	0.79
5.66	70.72	113.11	1.16	131.70	1.81	0.80	0.80
5.73	74.83	119.71	1.16	138.43	1.80	0.81	0.81
5.79	77.61	124.16	1.15	143.32	1.80	0.82	0.82
5.86	79.32	126.91	1.15	146.54	1.80	0.82	0.82
5.93	79.88	127.81	1.16	148.11	1.81	0.82	0.82
5.99	79.63	127.40	1.17	148.57	1.81	0.83	0.83
6.04	78.98	126.34	1.18	148.47	1.82	0.82	0.82
6.11	78.26	125.18	1.18	148.05	1.83	0.82	0.82
6.17	77.54	124.02	1.19	147.33	1.84	0.82	0.82
6.24	76.79	122.81	1.19	146.34	1.84	0.82	0.82
6.30	75.89	121.36	1.19	145.01	1.84	0.82	0.82

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.38	74.84	119.65	1.20	143.35	1.85	0.82	0.82
6.44	73.37	117.30	1.20	140.98	1.85	0.81	0.81
6.51	71.29	113.94	1.21	137.63	1.86	0.81	0.81
6.58	68.54	109.53	1.22	133.23	1.87	0.80	0.80
6.64	65.21	104.16	1.23	127.73	1.88	0.79	0.79
6.71	61.44	98.10	1.24	121.28	1.90	0.78	0.78
6.78	57.39	91.58	1.25	114.19	1.92	0.77	0.77
6.84	53.43	85.22	1.26	107.27	1.93	0.76	0.76
6.91	50.13	79.91	1.27	101.60	1.95	0.75	0.75
6.98	48.17	76.75	1.28	98.27	1.97	0.74	0.74
7.02	47.39	75.49	1.28	97.00	1.97	0.74	0.74
7.09	48.23	76.84	1.28	98.36	1.96	0.75	0.75
7.16	50.10	79.83	1.27	101.70	1.96	0.75	0.75
7.23	52.87	84.28	1.27	106.83	1.95	0.76	0.76
7.29	55.30	88.18	1.27	111.86	1.95	0.77	0.77
7.36	56.80	90.58	1.28	115.62	1.96	0.78	0.78
7.43	57.21	91.23	1.29	117.79	1.98	0.78	0.78
7.50	56.74	90.47	1.31	118.63	2.00	0.78	0.78
7.56	55.86	89.06	1.33	118.78	2.03	0.78	0.78
7.61	54.74	87.25	1.36	118.63	2.05	0.78	0.78
7.68	53.65	85.49	1.38	118.26	2.07	0.78	0.78
7.75	52.61	83.82	1.39	116.87	2.08	0.78	0.78
7.81	51.80	82.51	1.40	115.43	2.09	0.78	0.78
7.88	51.12	81.40	1.41	114.39	2.09	0.77	0.77
7.95	50.46	80.35	1.43	114.84	2.11	0.77	0.77
8.02	49.84	79.34	1.46	115.75	2.13	0.78	0.78
8.09	49.03	78.02	1.49	116.61	2.15	0.78	0.78
8.14	48.03	76.42	1.54	117.31	2.17	0.78	0.78
8.20	47.19	75.07	1.57	118.02	2.18	0.78	0.78
8.28	46.64	74.17	1.61	119.51	2.20	0.78	0.78
8.35	46.33	73.66	1.65	121.47	2.21	0.79	0.79
8.42	45.98	73.10	1.69	123.24	2.23	0.79	0.79
8.46	45.69	72.64	1.71	124.01	2.23	0.79	0.79
8.54	45.57	72.01	1.71	123.14	2.24	0.79	0.79
8.61	45.50	71.43	1.70	121.61	2.23	0.79	0.79
8.66	45.50	71.01	1.68	119.38	2.23	0.78	0.78
8.73	45.53	70.50	1.66	116.96	2.22	0.78	0.78
8.80	45.50	69.92	1.64	114.40	2.21	0.77	0.77
8.88	45.35	69.21	1.62	112.37	2.20	0.77	0.77
8.93	44.98	68.38	1.62	111.08	2.20	0.77	0.77
9.00	44.82	67.79	1.63	110.42	2.21	0.77	0.77
9.07	44.58	67.11	1.64	110.12	2.21	0.77	0.77
9.13	44.70	67.02	1.64	110.11	2.21	0.77	0.77
9.20	45.01	67.13	1.64	110.29	2.21	0.77	0.77
9.27	46.07	68.25	1.62	110.83	2.20	0.77	0.77
9.34	47.38	69.71	1.60	111.54	2.19	0.77	0.77
9.39	48.97	71.61	1.57	112.33	2.18	0.77	0.77
9.46	50.63	73.43	1.54	112.79	2.17	0.77	0.77

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.53	52.15	75.04	1.51	113.17	2.15	0.77	0.77
9.58	53.46	76.53	1.49	114.03	2.14	0.77	0.77
9.65	54.49	77.66	1.49	116.03	2.14	0.78	0.78
9.73	55.37	78.68	1.51	119.18	2.16	0.78	0.78
9.78	55.83	79.41	1.57	124.33	2.18	0.79	0.79
9.85	55.55	79.16	1.66	131.36	2.22	0.80	0.80
9.92	54.24	77.65	1.82	141.17	2.27	0.81	0.81
9.99	52.22	75.06	2.02	151.87	2.33	0.83	0.83
10.04	49.73	71.87	2.27	163.24	2.38	0.84	0.84
10.12	47.73	69.07	2.49	171.95	2.42	0.85	0.85
10.19	46.79	67.56	2.62	176.79	2.44	0.86	0.86
10.24	46.07	66.36	2.67	177.34	2.45	0.86	0.86
10.31	46.39	66.31	2.60	172.66	2.44	0.86	0.86
10.38	47.51	67.21	2.44	164.14	2.41	0.85	0.85
10.46	50.24	70.14	2.19	153.35	2.36	0.83	0.83
10.51	53.41	73.66	1.95	143.51	2.31	0.82	0.82
10.58	56.37	76.77	1.78	136.39	2.26	0.81	0.81
10.65	59.00	79.46	1.66	131.82	2.22	0.80	0.80
10.70	61.30	81.97	1.59	130.32	2.19	0.80	0.80
10.77	63.36	83.91	1.52	127.51	2.16	0.79	0.79
10.84	65.32	85.59	1.45	123.91	2.12	0.79	0.79
10.91	66.72	86.59	1.40	120.85	2.08	0.78	0.78
10.96	67.90	87.67	1.38	120.64	2.07	0.78	0.78
11.04	69.49	89.26	1.37	122.26	2.06	0.79	0.79
11.11	71.89	91.77	1.35	124.16	2.05	0.79	0.79
11.16	73.42	93.27	1.34	124.82	2.03	0.79	0.79
11.22	76.33	96.17	1.31	125.71	2.00	0.79	0.79
11.29	79.39	99.07	1.28	126.39	1.96	0.79	0.79
11.36	83.87	103.54	1.24	128.56	1.91	0.80	0.80
11.43	86.83	106.37	1.22	129.92	1.88	0.80	0.80
11.49	89.67	109.33	1.21	132.30	1.86	0.80	0.80
11.56	92.25	112.04	1.21	135.30	1.86	0.81	0.81
11.63	94.43	114.31	1.21	138.24	1.86	0.81	0.81
11.68	95.84	115.84	1.22	140.76	1.87	0.81	0.81
11.76	96.39	116.24	1.22	142.17	1.88	0.82	0.82
11.83	96.46	116.07	1.23	142.91	1.89	0.82	0.82
11.88	95.96	115.32	1.24	142.79	1.90	0.82	0.82
11.95	95.00	113.86	1.24	141.66	1.91	0.82	0.82
12.03	93.41	111.65	1.25	139.63	1.92	0.81	0.81
12.10	91.35	108.94	1.26	137.02	1.93	0.81	0.81
12.14	88.64	105.59	1.27	133.83	1.95	0.80	0.80
12.22	85.65	101.82	1.28	130.19	1.96	0.80	0.80
12.29	82.66	98.04	1.29	126.51	1.98	0.79	0.79
12.34	80.04	94.82	1.30	123.42	1.99	0.79	0.79
12.41	77.82	91.98	1.31	120.83	2.01	0.78	0.78
12.49	76.08	89.70	1.33	118.89	2.02	0.78	0.78
12.54	74.90	88.17	1.33	117.69	2.03	0.78	0.78
12.61	74.15	87.04	1.34	116.89	2.04	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.68	73.66	86.20	1.35	116.44	2.05	0.78	0.78
12.73	73.41	85.74	1.36	116.45	2.05	0.78	0.78
12.80	73.38	85.44	1.36	116.56	2.06	0.78	0.78
12.87	73.38	85.17	1.37	116.64	2.06	0.78	0.78
12.95	73.50	85.02	1.37	116.66	2.07	0.78	0.78
12.99	73.66	84.99	1.37	116.73	2.07	0.78	0.78
13.07	73.75	84.78	1.37	116.53	2.07	0.78	0.78
13.14	73.72	84.44	1.38	116.15	2.07	0.78	0.78
13.19	73.53	84.03	1.38	115.66	2.07	0.78	0.78
13.26	73.41	83.59	1.38	115.16	2.07	0.77	0.77
13.34	73.50	83.38	1.38	114.90	2.07	0.77	0.77
13.39	74.28	84.03	1.37	115.37	2.07	0.78	0.78
13.46	76.06	85.69	1.36	116.76	2.06	0.78	0.78
13.54	78.20	87.72	1.35	118.59	2.05	0.78	0.78
13.59	80.73	90.30	1.34	121.18	2.04	0.78	0.78
13.66	83.31	92.81	1.33	123.54	2.03	0.79	0.79
13.73	85.96	95.35	1.32	125.81	2.01	0.79	0.79
13.78	88.21	97.56	1.31	127.82	2.00	0.80	0.80
13.86	88.92	98.03	1.31	128.61	2.01	0.80	0.80
13.93	88.23	97.03	1.32	128.38	2.02	0.80	0.80
13.98	85.62	94.11	1.35	127.02	2.05	0.79	0.79
14.05	81.47	89.48	1.40	125.15	2.09	0.79	0.79
14.11	77.33	84.92	1.47	124.67	2.13	0.79	0.79
14.18	73.94	81.12	1.55	125.63	2.17	0.79	0.79
14.25	71.85	78.72	1.63	128.47	2.21	0.80	0.80
14.32	69.82	76.38	1.73	132.09	2.24	0.80	0.80
14.37	67.92	74.26	1.83	136.15	2.27	0.81	0.81
14.44	67.61	73.69	1.87	137.69	2.28	0.81	0.81
14.51	69.48	75.40	1.82	137.20	2.27	0.81	0.81
14.59	73.55	79.39	1.71	135.64	2.24	0.81	0.81
14.64	80.25	86.19	1.57	135.02	2.18	0.81	0.81
14.71	90.19	96.17	1.42	136.77	2.10	0.81	0.81
14.78	101.84	107.82	1.32	142.48	2.02	0.82	0.82
14.83	113.22	119.16	1.26	150.41	1.94	0.83	0.83
14.91	121.82	127.46	1.23	156.57	1.89	0.84	0.84
14.97	129.08	134.50	1.20	161.61	1.85	0.84	0.84
15.03	135.31	140.47	1.18	165.36	1.82	0.85	0.85
15.10	141.35	146.20	1.15	168.08	1.80	0.85	0.85
15.17	146.05	150.56	1.13	169.93	1.78	0.85	0.85
15.23	147.36	151.54	1.13	171.25	1.78	0.85	0.85
15.30	143.75	147.57	1.16	170.51	1.80	0.85	0.85
15.37	135.37	138.81	1.19	165.67	1.84	0.85	0.85
15.44	124.56	127.59	1.23	156.82	1.89	0.84	0.84
15.51	113.97	116.57	1.26	146.64	1.93	0.82	0.82
15.57	105.34	107.52	1.28	137.50	1.96	0.81	0.81
15.64	99.36	101.16	1.29	130.68	1.98	0.80	0.80
15.68	95.31	96.87	1.30	125.74	1.99	0.79	0.79
15.75	92.69	93.93	1.30	122.20	1.99	0.79	0.79

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.82	90.88	91.82	1.30	119.35	1.99	0.78	0.78
15.89	90.10	90.75	1.30	117.54	1.99	0.78	0.78
15.96	90.14	90.49	1.29	116.61	1.98	0.78	0.78
16.01	90.38	90.55	1.28	116.21	1.97	0.78	0.78
16.09	90.91	90.80	1.28	116.29	1.97	0.78	0.78
16.16	91.66	91.29	1.28	116.70	1.96	0.78	0.78
16.21	92.97	92.42	1.27	117.75	1.96	0.78	0.78
16.28	94.62	93.79	1.27	118.96	1.95	0.78	0.78
16.35	96.61	95.50	1.26	120.59	1.94	0.78	0.78
16.42	98.33	96.94	1.26	122.08	1.93	0.79	0.79
16.47	100.26	98.67	1.26	123.88	1.93	0.79	0.79
16.54	102.88	100.98	1.25	126.19	1.92	0.79	0.79
16.62	106.90	104.64	1.24	129.71	1.90	0.80	0.80
16.69	110.26	107.63	1.22	131.85	1.88	0.80	0.80
16.74	113.44	110.44	1.18	130.39	1.83	0.80	0.80
16.81	116.30	112.86	1.12	126.86	1.78	0.79	0.79
16.88	119.82	115.95	1.07	123.89	1.74	0.79	0.79
16.93	124.09	119.94	1.09	130.39	1.75	0.80	0.80
17.01	128.58	124.02	1.10	136.33	1.76	0.81	0.81
17.08	131.29	126.38	1.12	141.28	1.77	0.81	0.81
17.13	135.43	130.20	1.12	146.05	1.77	0.82	0.82
17.20	140.23	134.52	1.12	151.17	1.78	0.83	0.83
17.27	147.80	141.48	1.12	157.92	1.77	0.84	0.84
17.34	153.00	146.15	1.12	163.25	1.77	0.84	0.84
17.39	156.90	149.65	1.12	167.17	1.77	0.85	0.85
17.46	159.67	151.98	1.11	169.33	1.77	0.85	0.85
17.52	161.88	153.75	1.11	170.96	1.77	0.85	0.85
17.60	163.41	154.84	1.11	172.41	1.77	0.86	0.86
17.67	164.34	155.35	1.12	173.42	1.77	0.86	0.86
17.72	164.93	155.67	1.12	173.92	1.77	0.86	0.86
17.79	165.21	155.58	1.11	173.19	1.77	0.86	0.86
17.86	165.62	155.61	1.10	171.61	1.76	0.85	0.85
17.93	165.84	155.45	1.09	169.99	1.76	0.85	0.85
17.98	164.56	154.00	1.10	168.88	1.76	0.85	0.85
18.05	163.59	152.74	1.10	168.15	1.76	0.85	0.85
18.11	163.25	152.12	1.11	168.46	1.76	0.85	0.85
18.19	164.93	153.31	1.10	169.27	1.76	0.85	0.85
18.26	166.46	154.41	1.11	170.70	1.76	0.85	0.85
18.33	167.74	155.25	1.11	171.59	1.76	0.85	0.85
18.38	168.98	156.18	1.10	172.41	1.76	0.86	0.86
18.45	170.45	157.19	1.10	172.77	1.76	0.86	0.86
18.52	171.94	158.23	1.09	172.70	1.75	0.86	0.86
18.57	173.34	159.30	1.08	172.07	1.75	0.86	0.86
18.64	174.68	160.21	1.07	170.98	1.74	0.85	0.85
18.71	176.12	161.20	1.05	169.19	1.73	0.85	0.85
18.79	177.52	162.16	1.03	166.91	1.72	0.85	0.85
18.84	179.45	163.72	1.00	163.72	1.71	0.84	0.84
18.91	181.16	164.97	1.00	164.97	1.70	0.85	0.85

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.98	182.85	166.20	1.00	166.20	1.69	0.85	0.85
19.05	183.22	166.21	1.00	166.21	1.68	0.85	0.85
19.10	182.57	165.42	1.00	165.42	1.67	0.85	0.85
19.18	181.41	164.08	1.00	164.08	1.66	0.85	0.85
19.25	179.82	162.35	1.00	162.35	1.64	0.84	0.84
19.30	175.80	158.48	1.00	158.48	1.65	0.84	0.84
19.37	168.36	151.39	1.00	151.39	1.65	0.83	0.83
19.44	160.67	144.11	1.00	144.11	1.66	0.82	0.82
19.51	152.72	136.57	1.00	136.57	1.69	0.81	0.81
19.56	145.74	130.00	1.02	132.58	1.72	0.80	0.80
19.63	138.70	123.30	1.08	133.14	1.75	0.80	0.80
19.70	135.34	120.00	1.10	132.20	1.76	0.80	0.80
19.75	136.09	120.52	1.09	131.69	1.76	0.80	0.80
19.83	139.05	122.96	1.08	132.20	1.74	0.80	0.80
19.90	143.72	126.90	1.06	134.45	1.74	0.81	0.81
19.95	149.02	131.43	1.06	138.96	1.73	0.81	0.81
20.02	157.24	138.52	1.04	143.54	1.72	0.82	0.82
20.10	160.57	141.16	1.05	147.56	1.73	0.82	0.82
20.15	169.89	149.32	1.00	149.32	1.71	0.83	0.83
20.23	178.55	156.79	1.00	156.79	1.68	0.84	0.84
20.29	192.44	169.03	1.00	169.03	1.65	0.85	0.85
20.34	202.16	177.43	1.00	177.43	1.62	0.86	0.86
20.41	210.54	184.48	1.00	184.48	1.61	0.87	0.87
20.49	219.38	191.92	1.00	191.92	1.59	0.88	0.88
20.56	228.14	199.26	1.00	199.26	1.57	0.89	0.89
20.61	239.95	209.36	1.00	209.36	1.53	0.90	0.90
20.68	251.57	219.12	1.00	219.12	1.51	0.91	0.91
20.75	255.15	221.84	1.00	221.84	1.51	0.91	0.91
20.81	245.77	213.35	1.00	213.35	1.54	0.90	0.90
20.87	239.98	207.97	1.00	207.97	1.54	0.90	0.90
20.94	234.09	202.44	1.00	202.44	1.56	0.89	0.89
21.01	224.93	194.13	1.00	194.13	1.62	0.88	0.88
21.07	204.68	175.69	1.00	175.69	1.70	0.86	0.86
21.14	185.05	157.73	1.15	180.64	1.79	0.87	0.87
21.21	174.87	148.28	1.19	177.16	1.84	0.86	0.86
21.28	168.85	142.60	1.22	173.87	1.87	0.86	0.86
21.33	165.12	139.13	1.23	170.95	1.89	0.85	0.85
21.40	163.09	137.09	1.23	168.90	1.89	0.85	0.85
21.47	161.88	135.77	1.23	167.15	1.89	0.85	0.85
21.55	161.54	135.26	1.23	165.78	1.88	0.85	0.85
21.60	161.38	135.04	1.22	164.30	1.87	0.85	0.85
21.67	160.97	134.51	1.21	162.40	1.86	0.84	0.84
21.74	160.10	133.57	1.20	160.45	1.85	0.84	0.84
21.79	155.96	129.84	1.21	156.89	1.86	0.84	0.84
21.86	149.42	123.93	1.22	151.72	1.88	0.83	0.83
21.93	142.13	117.40	1.24	145.75	1.91	0.82	0.82
21.98	135.84	111.85	1.25	140.36	1.93	0.81	0.81
22.06	130.10	106.70	1.27	135.46	1.95	0.81	0.81

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.13	123.56	100.94	1.28	129.54	1.97	0.80	0.80
22.20	116.83	95.07	1.30	123.26	1.99	0.79	0.79
22.25	108.61	88.01	1.32	116.20	2.02	0.78	0.78
22.32	100.10	80.57	1.37	110.60	2.07	0.77	0.77
22.39	91.76	73.25	1.47	107.70	2.13	0.76	0.76
22.45	84.40	66.85	1.62	108.41	2.20	0.76	0.76
22.52	76.37	59.87	1.88	112.44	2.29	0.77	0.77
22.58	68.76	53.36	2.25	119.88	2.37	0.78	0.78
22.64	61.91	47.53	2.69	127.99	2.46	0.80	0.80
22.71	56.39	42.89	3.12	133.98	2.52	0.80	0.80
22.77	50.29	37.84	3.66	138.65	2.59	0.81	0.81
22.85	44.59	33.17	4.27	141.68	2.66	0.82	0.82
22.92	40.51	29.84	4.80	143.14	2.71	0.82	0.82
22.97	39.14	28.71	4.93	141.48	2.72	0.82	0.82
23.04	38.05	27.79	5.05	140.21	2.73	0.81	0.81
23.11	38.75	28.27	4.85	137.26	2.71	0.81	0.81
23.18	39.28	28.62	4.74	135.72	2.70	0.81	0.81
23.23	42.23	30.92	4.27	132.12	2.66	0.80	0.80
23.30	45.90	33.75	3.81	128.60	2.61	0.80	0.80
23.38	51.59	38.19	3.23	123.51	2.54	0.79	0.79
23.45	57.64	42.93	2.76	118.68	2.47	0.78	0.78
23.50	63.67	47.73	2.40	114.35	2.40	0.77	0.77
23.57	67.73	50.88	2.21	112.30	2.37	0.77	0.77
23.65	69.84	52.45	2.13	111.87	2.35	0.77	0.77
23.69	69.85	52.35	2.16	112.83	2.36	0.77	0.77
23.77	69.36	51.80	2.21	114.42	2.37	0.77	0.77
23.84	68.82	51.21	2.28	116.69	2.38	0.78	0.78
23.89	67.61	50.08	2.42	121.43	2.41	0.79	0.79
23.96	65.96	48.55	2.63	127.70	2.45	0.79	0.79
24.03	64.18	46.94	2.86	134.19	2.48	0.80	0.80
24.11	62.78	45.67	3.03	138.24	2.51	0.81	0.81
24.15	61.59	44.64	3.15	140.41	2.52	0.81	0.81
24.23	62.49	45.22	3.10	140.17	2.52	0.81	0.81
24.30	66.47	48.22	2.85	137.56	2.48	0.81	0.81
24.35	75.51	55.24	2.40	132.59	2.41	0.80	0.80
24.42	87.66	64.71	1.99	128.93	2.32	0.80	0.80
24.50	99.50	73.96	1.74	128.56	2.25	0.80	0.80
24.54	108.48	81.01	1.61	130.05	2.20	0.80	0.80
24.62	113.59	84.93	1.54	131.18	2.17	0.80	0.80
24.69	116.55	87.12	1.51	131.86	2.15	0.80	0.80
24.74	117.55	87.79	1.51	132.18	2.15	0.80	0.80
24.81	118.14	88.07	1.50	132.36	2.15	0.80	0.80
24.88	119.79	89.21	1.49	132.68	2.14	0.80	0.80
24.95	122.50	91.22	1.46	133.17	2.13	0.80	0.80
25.00	125.68	93.67	1.43	133.93	2.11	0.80	0.80
25.08	128.51	95.77	1.41	134.72	2.09	0.81	0.81
25.15	131.66	98.10	1.39	136.00	2.08	0.81	0.81
25.20	137.01	102.24	1.36	139.05	2.05	0.81	0.81

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.27	146.45	109.53	1.33	145.44	2.02	0.82	0.82
25.34	161.84	121.52	1.29	156.86	1.98	0.84	0.84
25.41	178.48	134.46	1.26	169.83	1.94	0.85	0.85
25.46	191.84	144.82	1.25	180.63	1.92	0.87	0.87
25.54	196.86	148.37	1.25	185.03	1.92	0.87	0.87
25.61	195.74	147.00	1.26	184.83	1.93	0.87	0.87
25.67	191.41	143.26	1.27	181.49	1.95	0.87	0.87
25.74	187.02	139.57	1.27	177.51	1.95	0.86	0.86
25.79	181.63	135.16	1.28	173.07	1.97	0.86	0.86
25.86	174.78	129.38	1.30	168.20	1.99	0.85	0.85
25.94	166.55	122.47	1.33	163.13	2.03	0.84	0.84
25.99	157.11	114.81	1.37	157.48	2.06	0.84	0.84
26.06	143.78	104.16	1.44	149.96	2.11	0.83	0.83
26.13	130.79	93.96	1.52	143.04	2.16	0.82	0.82
26.19	118.64	84.53	1.62	137.20	2.20	0.81	0.81
26.25	109.45	77.39	1.73	133.77	2.24	0.80	0.80
26.33	98.73	69.07	1.92	132.79	2.30	0.80	0.80
26.39	86.49	59.71	2.24	133.54	2.37	0.80	0.80
26.47	75.52	51.43	2.61	134.08	2.44	0.80	0.80
26.51	64.40	43.21	3.13	135.05	2.52	0.81	0.81
26.59	54.99	36.27	3.78	137.29	2.60	0.81	0.81
26.66	46.96	30.40	4.62	140.53	2.69	0.81	0.81
26.71	42.19	26.96	5.28	142.22	2.75	0.82	0.82
26.78	40.82	25.93	5.46	141.58	2.77	0.82	0.82
26.84	41.25	26.20	5.33	139.71	2.76	0.81	0.81
26.91	43.59	27.82	4.91	136.52	2.72	0.81	0.81
26.98	47.39	30.49	4.33	131.94	2.66	0.80	0.80
27.04	53.78	35.08	3.55	124.49	2.58	0.79	0.79
27.11	61.65	40.81	2.84	115.92	2.48	0.78	0.78
27.17	70.51	47.34	2.29	108.21	2.38	0.76	0.76
27.24	80.15	54.53	1.89	103.10	2.29	0.75	0.75
27.31	90.45	62.26	1.63	101.66	2.21	0.75	0.75
27.36	101.73	70.78	1.47	104.12	2.13	0.76	0.76
27.44	112.18	78.61	1.39	109.13	2.08	0.76	0.76
27.51	121.26	85.32	1.35	114.98	2.04	0.77	0.77
27.56	128.84	90.84	1.33	120.74	2.02	0.78	0.78
27.64	136.05	96.00	1.32	126.38	2.01	0.79	0.79
27.71	143.00	101.00	1.30	131.73	2.00	0.80	0.80
27.76	150.19	106.27	1.29	137.13	1.98	0.81	0.81
27.83	156.83	111.09	1.28	141.99	1.96	0.82	0.82
27.89	164.15	116.47	1.27	147.47	1.94	0.82	0.82
27.96	170.97	121.42	1.26	152.53	1.93	0.83	0.83
28.03	177.42	126.08	1.25	157.27	1.92	0.84	0.84
28.09	183.43	130.46	1.24	161.68	1.90	0.84	0.84
28.16	189.73	135.01	1.23	166.19	1.89	0.85	0.85
28.23	195.71	139.30	1.22	170.42	1.88	0.85	0.85
28.28	201.29	143.32	1.22	174.39	1.87	0.86	0.86
28.36	205.18	145.94	1.21	177.31	1.87	0.86	0.86

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.43	208.01	147.68	1.22	179.70	1.87	0.86	0.86
28.48	209.38	148.32	1.22	181.24	1.88	0.87	0.87
28.55	208.17	146.98	1.23	180.79	1.89	0.87	0.87
28.62	207.61	146.24	1.23	180.50	1.90	0.87	0.87
28.68	206.80	145.35	1.24	179.82	1.90	0.86	0.86
28.74	207.08	145.32	1.24	179.97	1.90	0.86	0.86
28.81	205.09	143.45	1.25	178.70	1.91	0.86	0.86
28.88	202.38	141.05	1.25	176.89	1.93	0.86	0.86
28.94	198.98	138.25	1.26	174.39	1.94	0.86	0.86
29.01	195.65	135.57	1.27	171.59	1.94	0.85	0.85
29.07	191.04	132.01	1.27	167.77	1.95	0.85	0.85
29.14	185.49	127.76	1.28	163.18	1.96	0.84	0.84
29.21	179.01	122.85	1.29	157.91	1.97	0.84	0.84
29.28	173.13	118.38	1.29	153.13	1.98	0.83	0.83
29.33	168.27	114.73	1.30	149.19	1.99	0.83	0.83
29.42	166.93	113.60	1.30	147.71	1.99	0.82	0.82
29.48	166.05	112.78	1.30	146.87	1.99	0.82	0.82
29.53	167.45	113.60	1.30	148.08	2.00	0.82	0.82
29.60	168.23	113.74	1.31	149.42	2.01	0.83	0.83
29.66	170.53	114.89	1.33	152.32	2.02	0.83	0.83
29.74	172.65	115.85	1.34	155.31	2.04	0.83	0.83
29.80	174.80	116.92	1.35	158.13	2.05	0.84	0.84
29.87	176.76	117.95	1.36	160.27	2.05	0.84	0.84
29.94	177.79	118.39	1.36	161.36	2.06	0.84	0.84
30.01	177.92	118.24	1.37	161.51	2.06	0.84	0.84
30.06	176.40	116.97	1.37	160.59	2.07	0.84	0.84
30.13	171.88	113.48	1.39	157.98	2.08	0.84	0.84
30.19	163.34	107.16	1.43	153.06	2.11	0.83	0.83
30.26	152.88	99.99	1.43	143.43	2.11	0.82	0.82
30.33	143.87	94.38	1.39	131.13	2.08	0.80	0.80
30.40	136.99	90.34	1.34	120.85	2.03	0.78	0.78
30.45	135.06	89.27	1.32	117.71	2.01	0.78	0.78
30.52	132.66	87.08	1.35	117.36	2.04	0.78	0.78
30.59	134.24	87.77	1.37	119.90	2.06	0.78	0.78
30.65	129.88	84.14	1.42	119.60	2.10	0.78	0.78
30.71	135.67	88.04	1.40	123.45	2.09	0.79	0.79
30.79	140.96	91.62	1.38	126.53	2.07	0.79	0.79
30.84	151.77	99.38	1.33	132.40	2.03	0.80	0.80
30.92	155.14	101.69	1.32	134.15	2.01	0.80	0.80
30.98	157.60	103.47	1.31	135.16	2.00	0.81	0.81
31.04	159.32	104.80	1.29	135.41	1.98	0.81	0.81
31.11	162.47	107.29	1.27	136.43	1.95	0.81	0.81
31.17	169.04	112.11	1.25	140.35	1.92	0.81	0.81
31.25	177.20	117.98	1.23	145.50	1.89	0.82	0.82
31.31	187.17	125.17	1.21	151.89	1.87	0.83	0.83
31.37	195.74	131.42	1.19	156.72	1.84	0.84	0.84
31.45	202.78	136.37	1.18	160.66	1.82	0.84	0.84
31.51	209.85	141.35	1.16	164.64	1.81	0.85	0.85

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.57	217.33	146.72	1.15	168.06	1.79	0.85	0.85
31.63	226.31	153.43	1.11	170.16	1.77	0.85	0.85
31.70	232.41	158.04	1.07	169.76	1.74	0.85	0.85
31.77	237.46	162.34	1.00	163.12	1.71	0.84	0.84
31.83	242.53	167.49	1.00	167.49	1.65	0.85	0.85
31.89	248.83	171.96	1.00	171.96	1.59	0.85	0.85
31.96	252.91	174.62	1.00	174.62	1.56	0.86	0.86
32.02	256.55	176.97	1.00	176.97	1.57	0.86	0.86
32.09	258.02	177.79	1.00	177.79	1.59	0.86	0.86
32.16	259.67	178.73	1.00	178.73	1.61	0.86	0.86
32.22	261.29	179.67	1.00	179.67	1.64	0.86	0.86
32.30	261.10	178.66	1.00	178.66	1.66	0.86	0.86
32.36	261.63	178.31	1.00	178.31	1.67	0.86	0.86
32.42	261.22	177.41	1.00	177.41	1.69	0.86	0.86
32.49	263.87	179.00	1.00	179.00	1.69	0.86	0.86
32.55	266.33	180.70	1.00	180.70	1.68	0.87	0.87
32.62	268.33	182.20	1.00	182.20	1.67	0.87	0.87
32.69	270.42	183.76	1.00	183.76	1.66	0.87	0.87
32.75	273.81	186.20	1.00	186.20	1.65	0.87	0.87
32.82	277.02	188.40	1.00	188.40	1.65	0.87	0.87
32.88	278.64	189.23	1.00	189.23	1.65	0.88	0.88
32.95	277.83	187.95	1.00	187.95	1.66	0.87	0.87
33.01	276.99	186.63	1.00	186.63	1.68	0.87	0.87
33.09	276.71	185.87	1.00	185.87	1.69	0.87	0.87
33.16	277.27	185.84	1.00	185.84	1.69	0.87	0.87
33.22	278.76	186.78	1.00	186.78	1.69	0.87	0.87
33.28	281.63	188.79	1.00	188.79	1.68	0.87	0.87
33.34	287.80	193.46	1.00	193.46	1.66	0.88	0.88
33.41	295.71	199.31	1.00	199.31	1.65	0.89	0.89
33.47	305.43	205.97	1.00	205.97	1.64	0.89	0.89
33.53	312.25	210.28	1.00	210.28	1.64	0.90	0.90
33.60	313.97	210.24	1.00	210.24	1.67	0.90	0.90
33.67	305.59	203.01	1.00	203.01	1.70	0.89	0.89
33.73	294.81	194.39	1.05	203.59	1.73	0.89	0.89
33.80	280.07	183.11	1.11	202.67	1.76	0.89	0.89
33.86	268.17	174.09	1.14	199.03	1.79	0.89	0.89
33.93	252.69	162.34	1.19	192.89	1.84	0.88	0.88
34.00	240.91	153.43	1.22	186.58	1.87	0.87	0.87
34.06	226.15	142.32	1.25	177.87	1.92	0.86	0.86
34.13	219.23	137.20	1.26	173.29	1.94	0.86	0.86
34.20	217.45	135.65	1.27	172.14	1.95	0.86	0.86
34.26	226.80	141.88	1.26	178.34	1.93	0.86	0.86
34.33	240.85	151.15	1.24	188.16	1.91	0.87	0.87
34.40	255.62	160.83	1.23	198.47	1.90	0.89	0.89
34.46	273.28	172.67	1.22	210.32	1.87	0.90	0.90
34.52	287.70	182.27	1.21	219.78	1.86	0.91	0.91
34.58	301.04	191.26	1.19	227.83	1.84	0.92	0.92
34.65	309.48	197.06	1.18	231.96	1.82	0.92	0.92

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.72	316.09	202.12	1.15	232.58	1.80	0.92	0.92
34.78	321.88	207.14	1.10	228.82	1.76	0.92	0.92
34.84	327.27	212.15	1.04	220.15	1.72	0.91	0.91
34.91	333.03	217.23	1.00	217.23	1.69	0.90	0.90
34.98	337.05	220.20	1.00	220.20	1.68	0.91	0.91
35.04	342.07	223.04	1.00	223.04	1.68	0.91	0.91
35.11	342.28	222.01	1.00	222.01	1.70	0.91	0.91
35.18	344.15	222.50	1.01	225.41	1.71	0.91	0.91
35.24	346.27	223.72	1.01	225.83	1.71	0.91	0.91
35.30	347.11	224.12	1.01	225.37	1.71	0.91	0.91
35.37	346.24	223.43	1.00	223.60	1.71	0.91	0.91
35.44	342.24	220.75	1.00	220.75	1.70	0.91	0.91
35.50	341.88	221.44	1.00	221.44	1.68	0.91	0.91
35.57	341.97	222.99	1.00	222.99	1.64	0.91	0.91
35.63	338.50	220.69	1.00	220.69	1.62	0.91	0.91
35.70	331.63	215.97	1.00	215.97	1.62	0.90	0.90
35.77	322.94	210.04	1.00	210.04	1.63	0.90	0.90
35.83	316.05	204.84	1.00	204.84	1.65	0.89	0.89
35.90	311.63	201.25	1.00	201.25	1.66	0.89	0.89
35.96	308.01	198.56	1.00	198.56	1.67	0.89	0.89
36.03	305.21	196.67	1.00	196.67	1.66	0.88	0.88
36.09	300.91	193.59	1.00	193.59	1.66	0.88	0.88
36.16	293.22	187.77	1.00	187.77	1.68	0.87	0.87
36.22	285.02	181.28	1.00	181.28	1.70	0.87	0.87
36.29	278.73	175.97	1.05	185.29	1.73	0.87	0.87
36.36	277.34	174.05	1.09	189.79	1.75	0.88	0.88
36.43	276.35	172.31	1.13	193.91	1.78	0.88	0.88
36.49	276.91	171.72	1.15	197.38	1.80	0.88	0.88
36.55	278.83	172.15	1.17	200.79	1.81	0.89	0.89
36.63	281.38	173.11	1.18	203.69	1.82	0.89	0.89
36.68	284.96	174.96	1.18	206.76	1.83	0.89	0.89
36.76	286.95	175.82	1.19	208.39	1.83	0.90	0.90
36.81	289.07	176.95	1.19	209.73	1.83	0.90	0.90
36.88	288.88	176.59	1.19	209.49	1.83	0.90	0.90
36.95	287.67	175.58	1.19	208.55	1.83	0.90	0.90
37.01	286.36	174.54	1.19	207.50	1.84	0.89	0.89
37.08	285.32	173.67	1.19	206.62	1.84	0.89	0.89
37.14	284.88	173.25	1.19	206.03	1.84	0.89	0.89
37.21	284.91	173.16	1.19	205.61	1.83	0.89	0.89
37.27	285.05	173.11	1.19	205.34	1.83	0.89	0.89
37.34	285.58	173.25	1.19	205.42	1.83	0.89	0.89
37.41	285.95	173.21	1.19	205.63	1.83	0.89	0.89
37.47	285.89	172.96	1.19	205.55	1.84	0.89	0.89
37.54	285.55	172.45	1.19	205.35	1.84	0.89	0.89
37.61	285.40	171.91	1.20	205.56	1.84	0.89	0.89
37.66	285.64	171.50	1.20	206.48	1.85	0.89	0.89
37.74	286.51	171.37	1.21	207.78	1.87	0.90	0.90
37.81	288.26	171.96	1.22	209.30	1.87	0.90	0.90

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
37.86	289.94	172.67	1.22	210.61	1.87	0.90	0.90
37.93	291.03	173.04	1.22	211.32	1.88	0.90	0.90
38.00	292.75	173.90	1.22	212.29	1.88	0.90	0.90
38.06	294.21	174.67	1.22	213.02	1.87	0.90	0.90
38.13	296.80	176.18	1.22	214.37	1.87	0.90	0.90
38.19	298.17	176.89	1.22	214.99	1.87	0.90	0.90
38.26	300.50	178.34	1.21	215.97	1.86	0.90	0.90
38.32	303.25	180.24	1.20	216.88	1.85	0.90	0.90
38.39	307.30	183.11	1.19	218.11	1.84	0.91	0.91
38.45	313.06	187.16	1.18	219.96	1.82	0.91	0.91
38.52	319.69	191.71	1.16	222.09	1.81	0.91	0.91
38.59	327.57	197.05	1.14	224.63	1.79	0.91	0.91
38.65	335.36	202.26	1.12	226.91	1.77	0.91	0.91
38.72	342.53	207.08	1.10	228.35	1.76	0.92	0.92
38.79	346.33	209.54	1.09	228.79	1.75	0.92	0.92
38.86	346.27	209.29	1.09	228.43	1.75	0.92	0.92
38.91	342.97	206.81	1.10	227.56	1.76	0.91	0.91
38.98	340.18	204.78	1.10	226.13	1.76	0.91	0.91
39.04	338.06	203.39	1.10	224.07	1.76	0.91	0.91
39.11	338.34	203.71	1.09	222.15	1.75	0.91	0.91
39.18	337.98	203.62	1.08	219.90	1.75	0.91	0.91
39.24	337.36	203.45	1.07	216.82	1.74	0.90	0.90
39.31	334.40	201.87	1.05	212.22	1.73	0.90	0.90
39.38	331.75	200.53	1.03	207.05	1.72	0.89	0.89
39.44	329.47	199.60	1.01	200.79	1.71	0.89	0.89
39.51	325.95	197.81	1.00	197.81	1.70	0.88	0.88
39.57	319.00	193.72	1.00	193.72	1.69	0.88	0.88
39.63	308.69	187.85	1.00	187.85	1.68	0.87	0.87
39.70	295.73	180.48	1.00	180.48	1.66	0.87	0.87
39.77	279.22	170.91	1.00	170.91	1.64	0.85	0.85
39.83	250.56	152.26	1.00	152.26	1.67	0.83	0.83
39.90	205.86	122.56	1.06	129.42	1.73	0.80	0.80
39.97	153.96	88.54	1.20	106.24	1.85	0.76	0.76
40.03	107.42	58.98	1.31	77.02	2.00	0.46	0.70
40.09	74.71	38.83	1.54	59.77	2.17	0.11	0.66
40.16	54.24	26.58	2.09	55.61	2.34	0.08	0.64
40.23	46.14	21.92	2.51	54.94	2.42	0.08	0.64
40.30	47.10	22.31	2.57	57.36	2.44	0.09	0.65
40.36	53.09	25.34	2.52	63.83	2.43	0.15	0.67
40.43	59.91	28.39	2.79	79.15	2.47	0.54	0.71
40.49	68.01	32.20	2.91	93.64	2.49	0.74	0.74
40.56	73.40	34.64	3.03	105.09	2.51	0.76	0.76
40.63	71.06	32.97	3.45	113.74	2.56	0.77	0.77
40.69	61.12	27.37	4.42	121.00	2.67	0.78	0.78
40.76	50.06	21.46	5.81	124.63	2.80	0.79	0.79
40.81	46.83	20.42	4.83	98.57	2.71	0.75	0.75
40.89	56.80	27.31	2.23	61.03	2.37	0.12	0.66
40.95	97.01	-1.00	1.00	-1.00	-1.00	0.00	0.00

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
41.01	157.17	-1.00	1.00	-1.00	-1.00	0.00	0.00
41.08	239.94	-1.00	1.00	-1.00	-1.00	0.00	0.00
41.15	298.91	-1.00	1.00	-1.00	-1.00	0.00	0.00
41.21	335.52	-1.00	1.00	-1.00	-1.00	0.00	0.00

Abbreviations

q_t: Total cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Adjusted and corrected cone resistance due to fines
I_c: Soil behavior type index
$S_{u(liq)}/\sigma'_v$: Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$: Calculated peak undrained strength ratio

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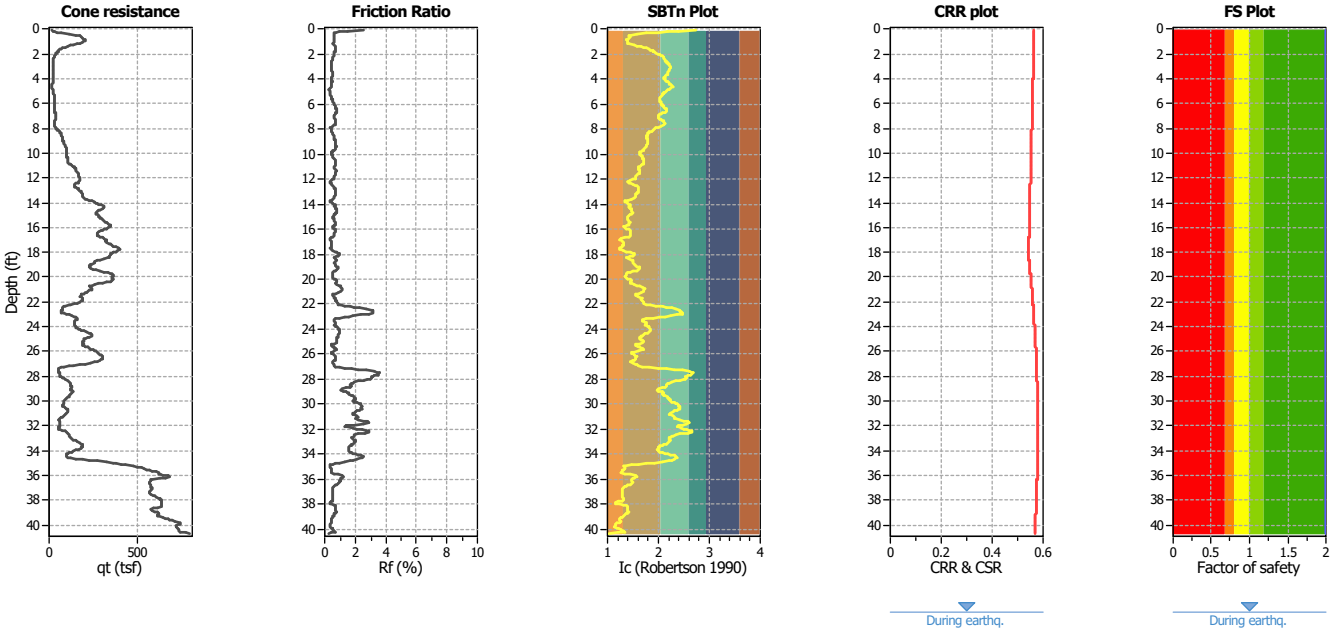
LIQUEFACTION ANALYSIS REPORT

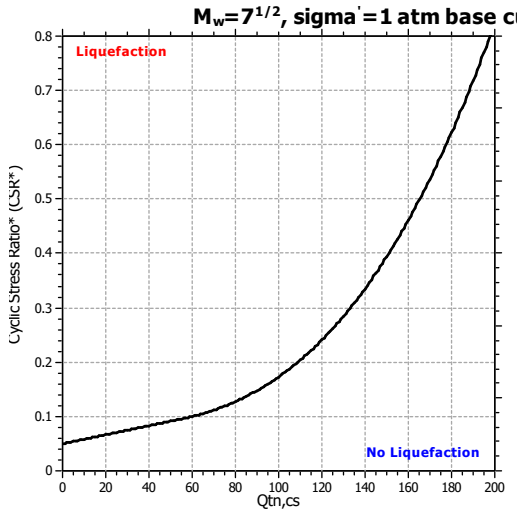
Project title : **Location :**

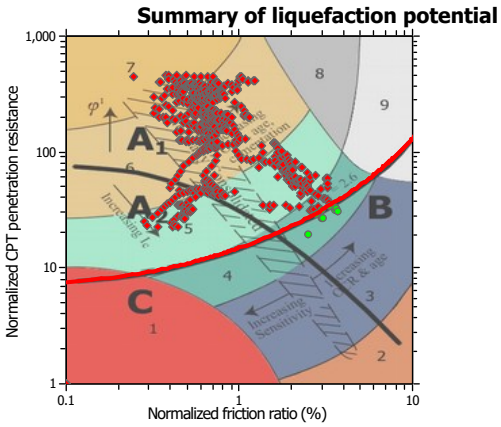
CPT file : CPT-3

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	47.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	47.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	8.07	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.72	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

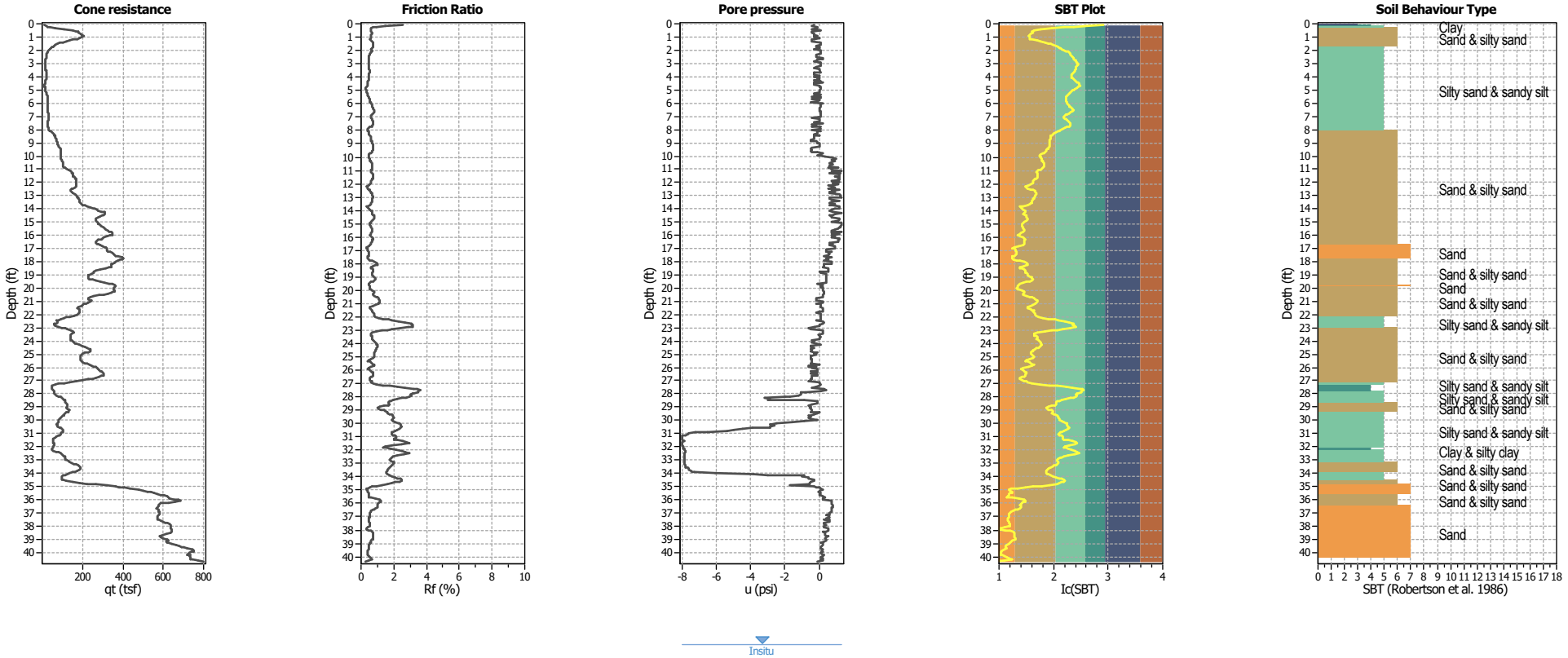






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



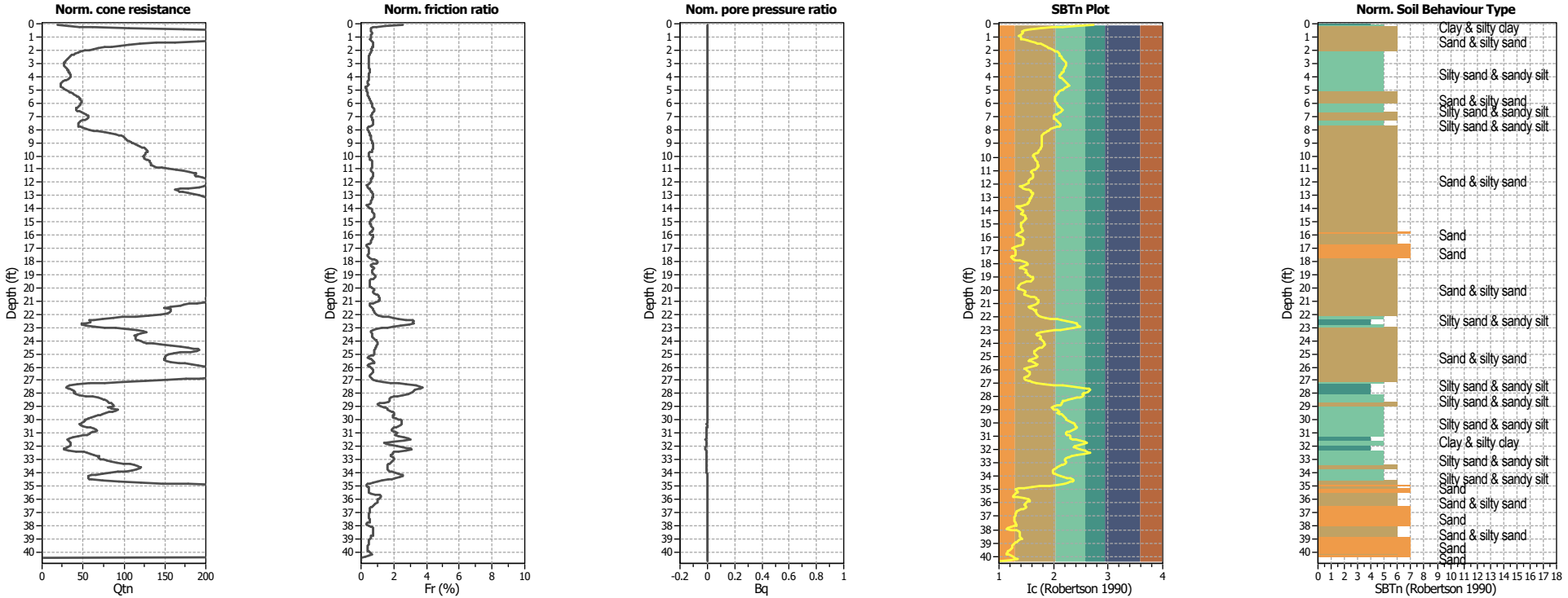
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



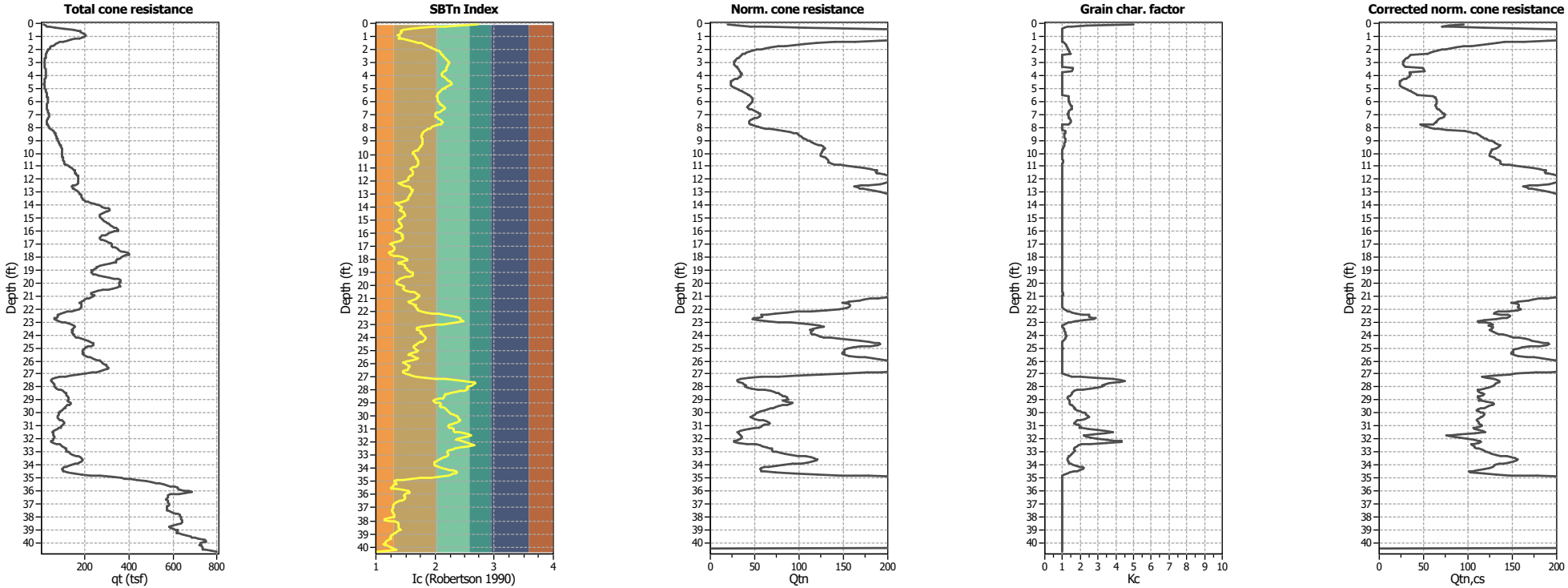
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

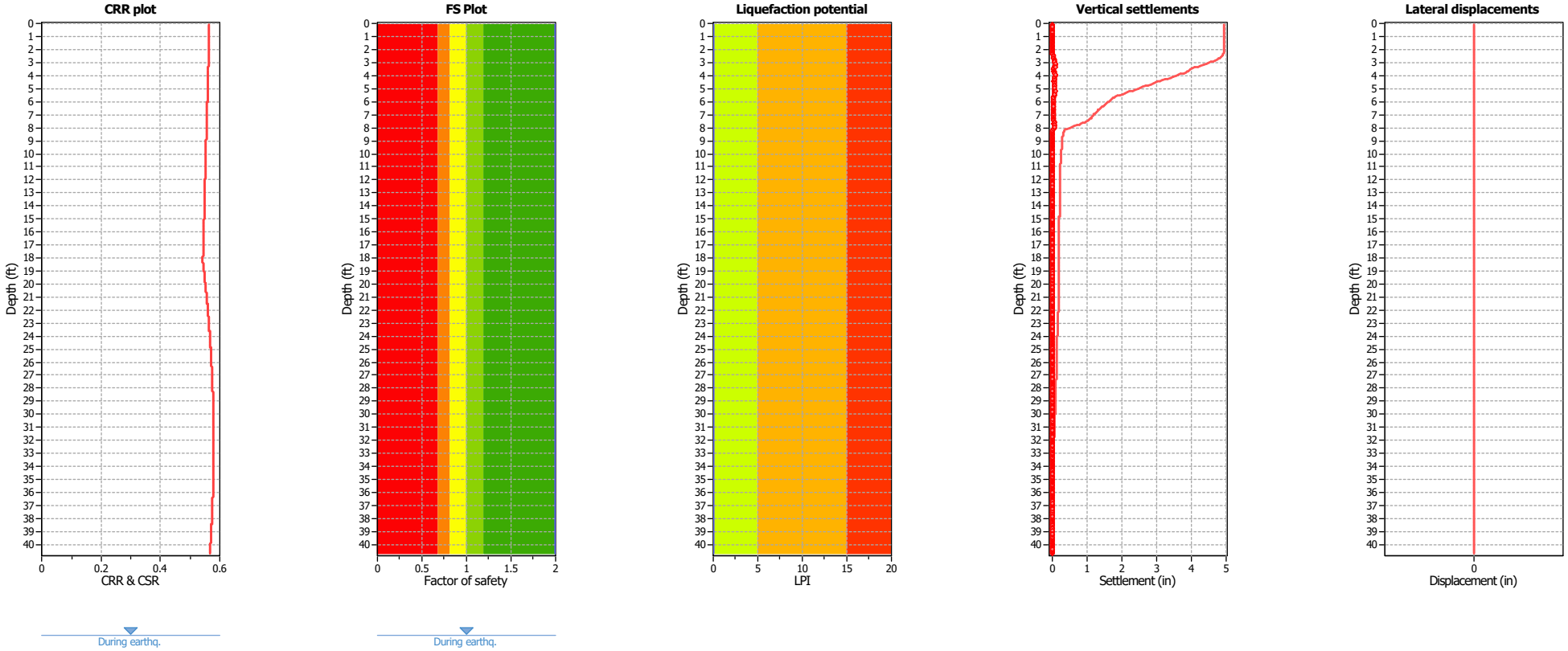
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

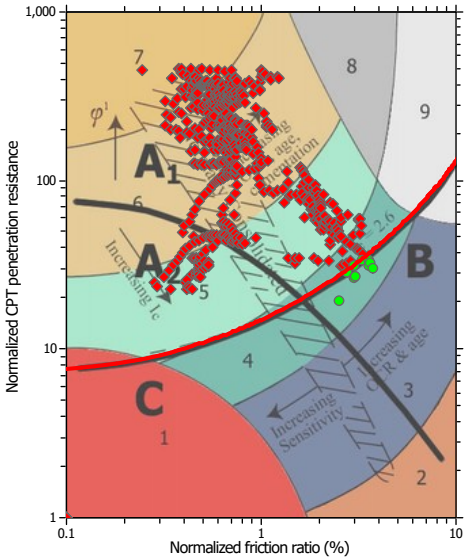
F.S. color scheme

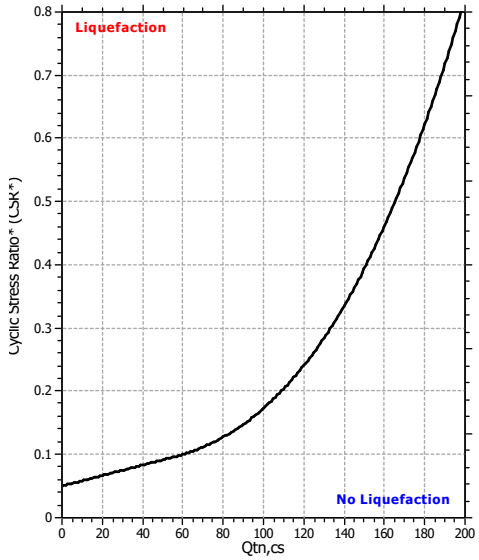
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

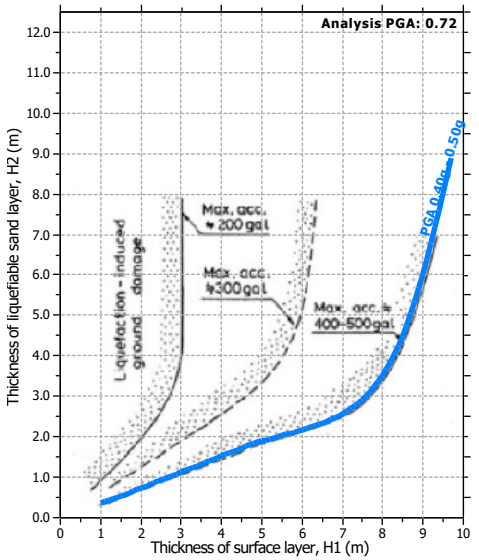
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



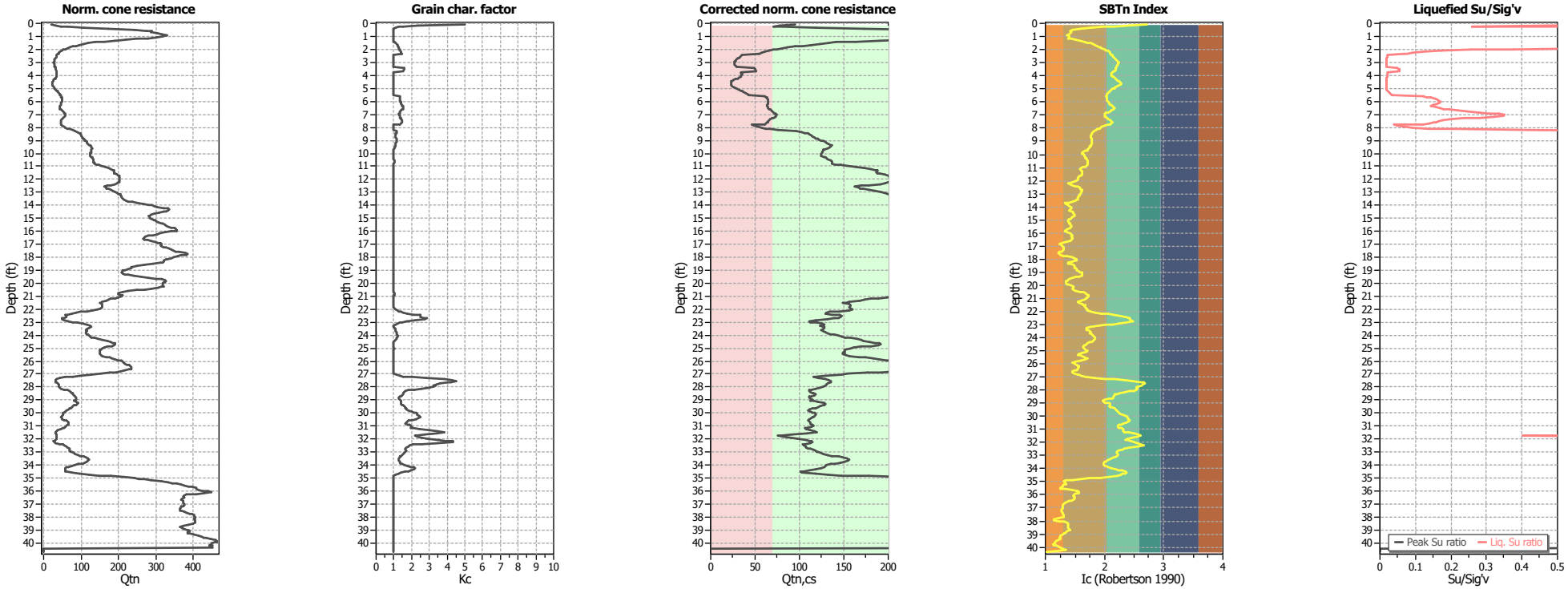




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	47.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	47.00 ft	Fill height:	N/A	Limit depth:	N/A

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.07	7.47	0.30	-0.30	41.85	107.54
2	0.14	20.74	0.31	-0.40	26.66	108.73
3	0.20	31.96	0.29	-0.10	18.06	108.75
4	0.28	32.05	0.20	-0.10	12.79	109.86
5	0.33	52.04	0.35	-0.10	7.39	114.07
6	0.40	114.74	0.69	-0.40	4.13	118.46
7	0.47	155.76	0.89	0.10	2.29	121.49
8	0.54	183.79	1.02	-0.40	1.85	122.83
9	0.59	174.63	1.09	-0.40	1.84	123.66
10	0.66	182.06	1.20	-0.40	2.12	124.07
11	0.72	180.33	1.22	-0.30	1.84	124.42
12	0.79	202.94	1.20	-0.30	1.49	124.50
13	0.87	207.15	1.18	-0.10	1.19	124.65
14	0.93	207.52	1.24	-0.30	1.37	124.92
15	1.00	199.11	1.34	-0.30	1.52	124.67
16	1.06	188.18	1.09	0.00	1.46	123.58
17	1.13	174.35	0.80	-0.30	1.44	122.14
18	1.19	155.85	0.84	-0.40	1.94	121.22
19	1.26	134.74	0.86	-0.40	3.07	120.99
20	1.32	117.82	0.83	-0.40	4.18	120.36
21	1.39	103.62	0.74	0.10	5.34	119.28
22	1.45	83.25	0.64	0.10	6.36	117.88
23	1.52	74.28	0.54	0.10	7.47	116.43
24	1.58	65.78	0.48	0.10	8.25	115.18
25	1.65	58.40	0.44	-0.20	9.22	114.20
26	1.71	53.07	0.41	-0.20	10.05	113.01
27	1.78	47.09	0.32	0.00	10.53	111.54
28	1.84	43.17	0.26	0.00	11.07	109.97
29	1.92	38.59	0.24	-0.30	11.80	108.90
30	1.98	35.79	0.23	0.10	12.90	108.21
31	2.04	32.70	0.21	0.10	13.76	107.40
32	2.11	30.09	0.19	0.10	14.74	106.35
33	2.17	26.54	0.16	0.10	15.33	105.08
34	2.25	25.41	0.14	0.10	15.77	103.86
35	2.30	24.20	0.12	-0.20	15.96	102.82
36	2.37	22.70	0.11	-0.20	16.29	102.13
37	2.43	22.24	0.11	-0.20	5.00	101.47
38	2.52	21.02	0.10	-0.20	5.00	101.00
39	2.58	20.37	0.10	0.20	5.00	100.59
40	2.65	19.81	0.10	0.20	5.00	100.29
41	2.71	19.06	0.09	-0.10	5.00	99.93
42	2.77	18.50	0.09	-0.10	5.00	99.58
43	2.83	17.94	0.09	-0.30	5.00	99.27
44	2.90	17.38	0.08	0.00	5.00	98.99
45	2.96	16.82	0.08	0.10	5.00	98.82
46	3.02	16.63	0.08	0.10	5.00	98.69
47	3.10	16.63	0.08	0.10	5.00	98.64
48	3.17	17.10	0.08	0.10	5.00	98.62

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.22	17.57	0.08	-0.20	5.00	98.90
50	3.31	18.41	0.09	-0.30	5.00	99.44
51	3.38	18.87	0.09	-0.30	5.00	100.07
52	3.44	19.25	0.10	0.00	18.81	100.55
53	3.48	19.53	0.10	0.00	18.73	100.92
54	3.54	19.90	0.11	0.00	18.44	101.20
55	3.64	20.74	0.11	0.10	18.09	101.40
56	3.68	21.02	0.11	-0.30	17.57	101.37
57	3.75	21.40	0.10	-0.30	5.00	101.16
58	3.81	21.77	0.10	-0.30	5.00	100.88
59	3.88	22.05	0.10	-0.30	5.00	100.72
60	3.95	21.77	0.10	0.00	5.00	100.67
61	4.02	21.86	0.10	-0.30	5.00	100.86
62	4.09	21.21	0.10	0.00	5.00	100.92
63	4.16	20.28	0.10	-0.10	5.00	100.61
64	4.22	18.87	0.09	0.00	5.00	99.69
65	4.29	17.38	0.08	-0.30	5.00	98.45
66	4.36	16.35	0.06	0.10	5.00	97.34
67	4.43	15.42	0.06	-0.30	5.00	96.70
68	4.46	15.04	0.06	0.20	5.00	96.52
69	4.53	14.58	0.06	-0.30	5.00	96.47
70	4.60	14.30	0.06	-0.30	5.00	96.45
71	4.67	14.30	0.06	0.00	5.00	95.93
72	4.73	14.30	0.05	0.00	5.00	94.61
73	4.80	14.67	0.03	0.10	5.00	93.78
74	4.87	15.60	0.05	0.10	5.00	94.08
75	4.94	17.01	0.05	0.10	5.00	95.73
76	5.01	18.50	0.06	0.02	5.00	97.00
77	5.07	20.00	0.07	0.00	5.00	98.12
78	5.14	21.49	0.08	0.00	5.00	99.05
79	5.21	22.24	0.09	0.00	5.00	99.76
80	5.28	23.36	0.09	-0.30	5.00	100.47
81	5.34	24.48	0.10	0.10	5.00	101.21
82	5.41	26.07	0.11	-0.30	5.00	102.05
83	5.47	27.10	0.12	0.10	5.00	102.91
84	5.55	28.22	0.14	-0.40	5.00	103.59
85	5.58	28.50	0.14	0.10	13.87	104.19
86	5.65	29.06	0.15	-0.40	13.91	104.63
87	5.72	29.62	0.16	-0.40	13.94	105.04
88	5.78	29.90	0.16	0.00	13.95	105.36
89	5.85	30.18	0.17	-0.10	14.06	105.64
90	5.91	30.18	0.18	-0.50	14.27	105.91
91	5.98	29.99	0.18	0.20	14.57	106.15
92	6.05	29.71	0.19	0.10	14.93	106.37
93	6.12	29.34	0.20	0.10	15.30	106.48
94	6.18	28.78	0.19	0.10	15.66	106.42
95	6.26	27.94	0.19	0.10	16.13	106.27
96	6.33	26.82	0.19	0.00	16.63	106.22

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.37	26.63	0.20	0.00	17.32	106.47
98	6.43	26.26	0.21	0.00	17.79	106.81
99	6.50	26.35	0.22	0.00	17.93	107.13
100	6.57	27.28	0.22	0.00	17.45	107.34
101	6.63	28.78	0.22	0.10	16.53	107.50
102	6.70	30.65	0.22	0.10	15.51	107.64
103	6.77	32.24	0.22	0.10	14.58	107.71
104	6.84	33.45	0.22	0.10	13.85	107.77
105	6.90	34.66	0.22	0.10	13.22	107.73
106	6.97	35.51	0.21	0.10	12.93	107.86
107	7.04	35.69	0.23	0.10	12.94	108.02
108	7.11	35.41	0.23	-0.40	13.29	108.22
109	7.17	34.48	0.23	0.00	13.74	108.21
110	7.24	33.17	0.23	0.00	14.26	108.02
111	7.31	31.77	0.22	0.00	14.91	107.73
112	7.38	29.99	0.22	0.00	15.65	107.38
113	7.44	28.31	0.21	-0.30	16.29	107.07
114	7.51	27.84	0.21	0.20	16.58	106.82
115	7.58	27.84	0.20	-0.40	16.52	106.63
116	7.64	27.84	0.20	-0.40	16.36	106.45
117	7.68	27.84	0.19	-0.20	15.80	105.91
118	7.75	28.12	0.16	-0.40	14.54	104.70
119	7.82	28.87	0.11	0.10	5.00	103.56
120	7.88	30.74	0.12	0.00	5.00	103.23
121	7.96	33.73	0.13	0.10	5.00	104.28
122	8.03	37.65	0.15	-0.40	5.00	105.31
123	8.08	37.28	0.17	0.10	5.00	106.51
124	8.15	44.38	0.20	-0.13	5.00	107.60
125	8.20	48.68	0.22	-0.13	5.00	109.15
126	8.29	55.59	0.28	-0.10	8.25	110.59
127	8.35	59.80	0.32	-0.30	7.96	111.90
128	8.42	63.07	0.36	0.00	7.79	112.72
129	8.48	65.50	0.38	-0.30	7.67	113.27
130	8.55	67.09	0.39	-0.30	7.60	113.66
131	8.62	68.21	0.41	-0.30	7.60	114.00
132	8.69	69.33	0.42	-0.30	7.62	114.36
133	8.76	70.92	0.45	-0.50	7.67	114.78
134	8.83	72.32	0.47	-0.50	7.71	115.15
135	8.86	73.16	0.49	-0.20	7.73	115.52
136	8.93	74.84	0.51	-0.10	7.75	115.85
137	8.99	76.15	0.53	-0.10	7.77	116.24
138	9.06	77.83	0.56	0.00	7.79	116.63
139	9.13	79.61	0.58	0.00	7.77	117.00
140	9.20	81.57	0.60	0.00	7.68	117.33
141	9.27	84.19	0.62	0.00	7.55	117.65
142	9.34	86.71	0.65	-0.40	7.39	117.98
143	9.41	89.42	0.67	-0.40	7.20	118.18
144	9.47	91.47	0.66	-0.50	6.96	118.25

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.54	93.25	0.65	-0.40	6.70	118.17
146	9.61	94.37	0.64	-0.50	6.48	118.03
147	9.67	94.93	0.62	-0.40	6.22	117.64
148	9.72	93.90	0.55	-0.10	5.68	116.76
149	9.78	95.02	0.43	0.20	5.00	115.82
150	9.86	95.12	0.42	0.10	4.78	115.16
151	9.92	95.21	0.43	-0.10	4.86	115.22
152	9.99	94.37	0.44	0.00	4.98	115.42
153	10.05	95.31	0.46	0.37	5.00	115.67
154	10.12	92.69	0.48	0.80	5.39	116.03
155	10.19	95.77	0.51	1.00	5.60	116.50
156	10.26	97.45	0.55	0.70	5.71	117.11
157	10.32	99.32	0.60	0.70	5.89	117.71
158	10.39	100.63	0.64	0.90	6.08	118.25
159	10.46	101.57	0.68	0.70	6.24	118.67
160	10.53	102.50	0.71	0.60	6.38	118.99
161	10.60	103.06	0.73	0.80	6.44	119.17
162	10.67	103.43	0.72	0.60	6.43	119.22
163	10.71	104.09	0.72	0.60	6.36	119.27
164	10.78	106.14	0.74	0.60	6.20	119.38
165	10.85	109.60	0.74	1.10	5.97	119.61
166	10.91	114.74	0.76	0.50	5.56	119.85
167	10.98	122.31	0.78	0.70	4.98	120.05
168	11.05	131.75	0.76	0.70	4.43	120.41
169	11.12	140.25	0.83	1.30	4.24	121.18
170	11.19	146.23	0.98	0.70	4.48	122.33
171	11.26	150.15	1.15	1.25	4.76	123.24
172	11.33	153.05	1.19	0.60	4.81	123.61
173	11.37	154.26	1.13	1.20	4.75	123.58
174	11.44	152.11	1.14	1.20	4.73	123.49
175	11.51	152.21	1.14	1.20	4.71	123.51
176	11.58	156.60	1.14	0.90	4.46	123.50
177	11.65	162.21	1.11	1.15	4.08	123.41
178	11.72	166.41	1.07	1.10	3.76	123.28
179	11.76	167.44	1.06	1.20	3.58	123.18
180	11.82	167.90	1.05	1.20	3.55	123.14
181	11.90	167.81	1.05	0.70	3.53	123.13
182	11.97	168.75	1.05	1.15	3.48	123.14
183	12.04	171.18	1.04	0.80	3.00	122.37
184	12.11	170.89	0.73	1.10	2.26	120.93
185	12.18	170.15	0.55	0.80	1.57	119.26
186	12.22	169.40	0.57	0.50	1.43	118.79
187	12.29	168.56	0.62	0.70	1.75	119.30
188	12.36	163.79	0.68	0.90	2.18	119.82
189	12.43	159.03	0.72	0.50	3.01	120.07
190	12.48	133.89	0.74	0.60	3.57	120.20
191	12.56	143.24	0.75	1.20	4.13	120.45
192	12.64	143.24	0.83	0.70	4.24	121.12

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.71	145.29	0.94	0.90	4.55	121.79
194	12.74	147.63	0.99	0.60	4.66	122.47
195	12.81	155.38	1.07	0.60	4.60	123.06
196	12.88	163.23	1.15	1.20	4.49	123.65
197	12.96	168.00	1.21	1.25	4.39	124.09
198	13.03	172.48	1.24	1.25	4.26	124.36
199	13.10	177.34	1.25	1.30	4.10	124.48
200	13.13	179.77	1.24	0.60	3.90	124.52
201	13.20	183.14	1.24	0.60	3.78	124.50
202	13.27	183.79	1.22	0.70	3.65	124.47
203	13.34	185.66	1.21	0.70	3.54	124.37
204	13.41	186.41	1.18	1.20	3.42	124.24
205	13.48	186.69	1.15	0.70	3.28	124.11
206	13.55	190.14	1.14	0.60	3.08	124.03
207	13.62	195.75	1.13	0.90	2.30	123.14
208	13.69	204.63	0.73	0.60	1.46	121.92
209	13.73	210.04	0.65	0.80	0.74	121.00
210	13.80	224.43	0.80	1.20	0.90	122.50
211	13.87	241.07	1.17	1.20	1.24	124.56
212	13.95	257.14	1.43	1.20	1.51	126.18
213	14.00	269.38	1.56	0.90	1.93	127.50
214	14.06	263.49	1.94	0.70	2.12	128.28
215	14.12	279.37	1.93	0.60	2.07	128.68
216	14.19	293.95	1.81	0.80	1.69	128.87
217	14.26	310.21	1.99	0.80	1.64	129.50
218	14.33	319.08	2.35	1.30	1.99	130.31
219	14.40	305.82	2.50	0.90	2.34	130.76
220	14.45	303.76	2.44	0.80	2.47	130.70
221	14.51	303.39	2.33	0.60	2.50	130.46
222	14.58	290.40	2.31	0.70	2.64	130.12
223	14.64	273.67	2.20	0.70	2.80	129.69
224	14.71	268.72	2.03	1.20	2.71	129.00
225	14.78	263.77	1.78	1.15	2.31	128.20
226	14.84	269.00	1.59	1.15	1.99	127.52
227	14.91	264.52	1.56	1.10	1.72	127.10
228	14.97	269.28	1.49	0.70	1.59	127.00
229	15.04	277.41	1.51	1.30	1.44	127.03
230	15.11	280.50	1.55	1.30	1.44	127.29
231	15.17	282.83	1.63	1.30	1.54	127.70
232	15.24	288.25	1.76	1.30	1.61	128.13
233	15.30	296.38	1.82	1.25	1.67	128.56
234	15.37	300.21	1.91	1.25	1.73	129.08
235	15.44	311.05	2.12	1.20	1.90	129.63
236	15.50	309.65	2.24	1.10	1.99	130.05
237	15.56	316.75	2.24	0.90	1.93	130.18
238	15.63	325.06	2.21	0.70	1.73	130.18
239	15.70	331.89	2.18	0.70	1.39	129.93
240	15.76	340.76	1.97	1.30	0.96	129.47

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.82	350.20	1.77	0.70	0.68	129.14
242	15.89	349.45	1.89	1.20	0.75	129.44
243	15.96	350.67	2.18	0.80	1.16	130.29
244	16.02	351.13	2.49	0.70	1.79	130.74
245	16.09	305.16	2.42	0.90	2.11	130.59
246	16.15	308.53	2.13	0.70	2.23	130.05
247	16.23	308.81	2.08	1.20	2.07	129.43
248	16.28	287.60	1.92	1.15	2.08	128.89
249	16.35	279.37	1.76	1.10	2.17	128.32
250	16.43	272.65	1.72	1.10	2.14	127.84
251	16.49	268.26	1.62	1.10	2.12	127.54
252	16.55	267.13	1.58	0.60	2.07	127.39
253	16.62	271.43	1.63	0.80	1.77	126.99
254	16.68	277.04	1.34	0.60	0.90	125.61
255	16.75	290.03	0.76	0.60	0.13	124.31
256	16.82	303.11	0.98	0.90	0.00	123.91
257	16.88	310.21	1.14	0.90	0.02	125.34
258	16.95	321.51	1.34	0.90	0.23	126.28
259	17.01	323.57	1.43	0.90	0.38	126.82
260	17.07	319.88	1.43	0.40	0.50	127.04
261	17.14	318.24	1.48	0.40	0.52	127.19
262	17.21	329.64	1.51	0.40	0.49	127.42
263	17.28	337.96	1.54	0.70	0.49	127.89
264	17.34	345.71	1.74	0.50	0.40	128.09
265	17.41	354.78	1.60	0.60	0.18	127.86
266	17.47	356.65	1.36	0.50	0.00	127.30
267	17.54	362.81	1.37	0.30	0.00	127.16
268	17.60	375.43	1.49	0.30	0.00	127.98
269	17.66	393.09	1.81	0.70	0.00	129.24
270	17.73	419.34	2.16	0.40	0.52	130.79
271	17.80	391.87	2.75	0.40	1.22	132.13
272	17.86	387.48	3.17	0.50	2.17	133.17
273	17.93	373.18	3.51	0.30	2.76	133.81
274	17.99	372.06	3.67	0.70	3.20	134.01
275	18.06	355.43	3.57	0.70	3.30	133.83
276	18.13	350.67	3.31	0.70	3.02	133.00
277	18.19	344.59	2.63	0.30	2.21	131.46
278	18.25	339.64	1.79	0.30	1.44	129.84
279	18.32	338.52	1.81	0.30	1.26	129.51
280	18.39	346.56	2.35	0.30	1.79	130.46
281	18.45	336.74	2.63	0.20	2.45	131.22
282	18.52	314.69	2.60	0.50	2.77	130.73
283	18.59	288.06	2.00	0.50	2.75	129.31
284	18.65	262.37	1.53	0.50	2.74	128.03
285	18.71	253.77	1.75	0.50	2.93	127.57
286	18.78	253.03	1.75	0.00	3.17	127.81
287	18.84	255.73	1.71	0.10	3.20	127.83
288	18.91	253.49	1.76	0.40	3.73	127.93

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.97	221.72	1.90	0.40	4.21	128.15
290	19.04	234.62	1.93	0.40	4.68	128.26
291	19.10	231.07	1.91	0.40	4.74	128.46
292	19.18	226.86	2.04	0.40	4.84	128.44
293	19.25	228.73	1.93	0.40	4.59	128.25
294	19.31	238.08	1.73	0.40	3.96	127.73
295	19.37	244.24	1.60	0.40	3.00	126.97
296	19.44	262.46	1.34	0.40	2.21	126.63
297	19.51	286.20	1.42	0.40	1.54	126.72
298	19.57	310.77	1.54	0.40	1.23	127.55
299	19.64	336.28	1.73	-0.10	1.13	128.51
300	19.70	351.13	1.96	-0.10	1.01	129.13
301	19.77	363.09	1.91	0.20	0.98	129.49
302	19.83	363.37	1.96	0.10	0.89	129.48
303	19.90	363.65	1.94	0.20	1.02	129.57
304	19.96	352.07	2.00	0.10	1.32	130.05
305	20.03	355.81	2.38	0.20	1.97	131.14
306	20.09	356.13	2.96	0.20	2.54	132.16
307	20.16	356.46	3.09	0.20	2.62	132.35
308	20.22	360.48	2.58	0.30	2.27	131.91
309	20.29	365.52	2.44	0.30	2.22	131.50
310	20.36	336.56	2.70	0.30	2.37	131.31
311	20.42	332.17	2.45	0.30	3.12	131.65
312	20.49	312.82	2.94	0.20	4.05	131.88
313	20.55	270.97	3.15	0.20	4.95	131.77
314	20.62	260.97	2.56	0.20	5.68	131.20
315	20.69	239.57	2.53	0.20	5.96	130.49
316	20.75	223.69	2.54	-0.20	6.67	130.42
317	20.81	222.57	2.63	-0.20	6.73	130.57
318	20.89	243.21	2.67	-0.20	6.46	130.76
319	20.95	246.02	2.67	-0.20	6.14	130.77
320	21.02	240.22	2.58	0.20	6.07	130.40
321	21.08	231.25	2.32	0.20	5.35	128.79
322	21.16	217.15	1.25	-0.20	4.44	126.65
323	21.22	208.18	1.09	0.10	3.52	124.19
324	21.28	199.49	1.05	0.10	3.58	123.61
325	21.35	195.47	1.03	0.10	3.80	123.49
326	21.42	192.95	1.07	0.10	4.65	123.50
327	21.48	158.09	1.13	0.20	5.19	123.82
328	21.55	180.71	1.20	0.20	5.67	124.21
329	21.62	184.26	1.28	0.20	5.47	124.81
330	21.69	184.35	1.38	0.20	5.70	125.25
331	21.73	184.63	1.43	0.20	5.96	125.63
332	21.80	185.00	1.49	0.00	6.12	125.85
333	21.87	184.91	1.50	-0.20	6.28	125.95
334	21.94	182.01	1.51	0.10	6.54	125.94
335	22.01	174.63	1.51	0.10	7.33	126.05
336	22.08	159.68	1.65	0.10	9.22	126.41

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.15	133.43	1.91	0.10	11.78	126.80
338	22.19	121.09	2.00	0.10	14.84	126.97
339	22.26	105.02	2.05	0.10	17.21	126.91
340	22.33	96.52	2.07	0.10	20.92	126.66
341	22.40	72.60	2.13	0.10	24.62	126.61
342	22.47	70.17	2.30	-0.20	27.44	126.79
343	22.55	77.65	2.42	0.20	27.37	127.16
344	22.58	78.02	2.42	0.30	27.21	127.03
345	22.65	69.80	2.18	0.20	28.63	126.39
346	22.72	60.08	2.01	0.20	29.90	125.42
347	22.79	59.52	1.79	0.00	29.19	124.64
348	22.86	65.78	1.61	0.00	25.19	124.20
349	22.93	80.92	1.52	-0.30	20.32	124.23
350	23.00	100.16	1.52	-0.60	16.79	124.52
351	23.04	109.13	1.55	-0.60	13.50	124.47
352	23.11	127.82	1.26	-0.50	10.21	123.47
353	23.18	143.61	0.82	0.20	7.45	122.27
354	23.25	153.14	0.88	0.20	6.04	121.57
355	23.33	156.97	0.94	0.20	5.99	122.09
356	23.40	157.35	0.98	0.20	6.11	122.38
357	23.43	156.51	0.99	0.20	6.86	122.33
358	23.51	131.18	0.97	-0.05	7.19	122.15
359	23.58	143.61	0.94	0.00	7.45	121.88
360	23.63	143.71	0.92	0.00	7.04	121.84
361	23.70	142.30	0.93	0.10	7.34	122.09
362	23.77	140.72	1.04	0.00	7.80	122.59
363	23.84	141.93	1.12	0.00	8.28	123.27
364	23.91	144.36	1.23	-0.40	8.61	123.96
365	23.98	147.72	1.36	-0.40	8.87	124.66
366	24.05	151.55	1.47	-0.30	9.03	125.29
367	24.12	155.85	1.56	-0.40	9.03	125.75
368	24.16	159.87	1.60	-0.20	8.79	126.17
369	24.23	169.59	1.68	-0.20	8.35	126.62
370	24.30	182.39	1.78	0.10	7.73	127.17
371	24.37	197.52	1.86	-0.50	7.03	127.70
372	24.44	213.31	1.93	-0.50	6.39	128.15
373	24.51	226.21	2.00	-0.30	5.89	128.50
374	24.58	234.71	2.03	-0.50	5.57	128.71
375	24.62	238.17	2.03	-0.40	5.27	128.73
376	24.69	243.21	1.97	-0.40	5.06	128.57
377	24.76	240.13	1.89	-0.50	5.05	128.30
378	24.83	228.45	1.84	-0.30	5.34	127.94
379	24.90	213.88	1.77	-0.10	5.78	127.49
380	24.98	202.01	1.66	-0.30	6.14	127.04
381	25.01	196.87	1.61	-0.20	6.38	126.69
382	25.08	191.73	1.59	-0.40	5.99	125.81
383	25.15	190.61	1.14	-0.50	4.86	124.00
384	25.23	192.48	0.67	-0.50	3.80	122.10

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.30	190.80	0.82	-0.50	3.62	121.66
386	25.37	189.02	0.99	-0.50	4.25	122.77
387	25.41	190.98	1.08	-0.40	4.72	123.77
388	25.48	196.22	1.22	-0.40	5.38	124.59
389	25.54	183.42	1.39	-0.40	5.86	125.75
390	25.61	206.21	1.67	-0.40	6.21	126.78
391	25.67	215.09	1.82	-0.50	5.65	127.19
392	25.73	223.22	1.57	-0.50	4.37	126.06
393	25.80	233.59	0.89	0.00	3.07	124.66
394	25.87	246.86	1.02	-0.60	2.34	124.03
395	25.94	254.80	1.23	-0.60	2.55	125.27
396	25.99	265.08	1.42	-0.20	2.85	126.62
397	26.07	278.44	1.70	-0.41	3.30	127.72
398	26.14	269.19	1.91	-0.10	3.64	128.65
399	26.19	281.62	2.06	-0.10	3.85	129.25
400	26.27	291.61	2.15	-0.10	3.71	129.58
401	26.32	296.57	2.13	-0.50	3.64	129.82
402	26.39	300.21	2.22	-0.10	3.57	129.90
403	26.46	301.99	2.20	-0.50	3.30	129.67
404	26.52	307.13	1.90	-0.10	2.78	128.92
405	26.59	307.97	1.59	-0.10	2.26	127.82
406	26.66	295.91	1.42	-0.40	2.27	127.39
407	26.73	285.26	1.66	-0.40	2.71	127.46
408	26.80	272.74	1.70	-0.40	3.45	127.75
409	26.85	250.32	1.71	-0.40	3.85	127.28
410	26.91	236.11	1.44	-0.50	4.30	126.36
411	26.99	208.18	1.26	-0.50	5.69	125.94
412	27.05	163.89	1.65	-0.60	8.57	126.26
413	27.12	137.91	1.91	0.00	13.17	126.75
414	27.18	106.52	1.99	0.00	17.79	126.52
415	27.24	83.44	1.88	0.00	23.54	125.63
416	27.31	61.20	1.72	0.10	29.47	124.55
417	27.38	50.83	1.65	0.00	35.92	123.67
418	27.44	43.35	1.65	-0.20	38.14	123.50
419	27.53	51.20	1.71	-0.40	39.39	123.60
420	27.59	47.28	1.76	0.30	37.94	123.94
421	27.67	51.58	1.80	0.30	37.15	124.18
422	27.70	56.44	1.82	0.40	34.39	124.55
423	27.78	62.60	1.86	0.10	33.36	124.73
424	27.85	58.49	1.87	-0.80	32.45	124.85
425	27.92	62.42	1.85	-1.10	32.93	124.73
426	27.99	59.15	1.81	-1.10	32.10	124.66
427	28.03	62.23	1.77	-1.10	30.57	124.62
428	28.10	70.45	1.75	-1.20	27.73	124.84
429	28.18	79.14	1.79	-1.70	24.23	125.19
430	28.25	92.78	1.79	-2.00	21.33	125.56
431	28.32	102.50	1.80	-3.19	19.31	125.83
432	28.36	105.68	1.82	-2.89	18.26	126.09

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.43	110.35	1.88	-2.99	17.78	126.35
434	28.50	113.62	1.93	-0.90	17.46	126.63
435	28.58	115.58	1.99	-0.10	17.36	126.91
436	28.65	117.45	2.07	-0.10	16.78	126.75
437	28.69	119.13	1.77	-0.10	15.02	125.70
438	28.76	122.40	1.18	-0.10	13.14	124.42
439	28.83	124.92	1.24	-0.40	12.11	123.75
440	28.91	125.48	1.38	-0.60	12.53	124.32
441	28.95	125.95	1.47	-0.50	13.16	125.06
442	29.02	128.19	1.66	-0.55	15.06	125.58
443	29.08	103.25	1.81	-0.50	15.47	126.36
444	29.15	135.02	1.98	-0.50	15.81	127.07
445	29.22	137.54	2.16	-0.45	14.99	127.86
446	29.27	135.11	2.31	-0.40	15.98	128.32
447	29.36	128.29	2.44	-0.50	17.07	128.46
448	29.41	122.96	2.39	0.00	18.11	128.31
449	29.50	115.95	2.28	-0.10	18.78	127.97
450	29.55	111.84	2.22	-0.30	19.38	127.61
451	29.61	108.20	2.16	-0.50	19.79	127.25
452	29.67	104.37	2.04	-0.60	19.89	126.68
453	29.73	100.63	1.80	-0.50	20.30	126.11
454	29.82	94.00	1.80	-0.60	21.28	125.72
455	29.89	87.74	1.84	-0.50	23.11	125.69
456	29.95	82.50	1.90	-0.20	24.60	125.80
457	30.01	82.60	1.97	-0.10	25.51	125.97
458	30.07	82.69	2.02	-0.90	25.75	126.04
459	30.13	81.76	1.97	-1.58	26.15	125.87
460	30.21	77.37	1.87	-2.49	27.00	125.49
461	30.28	71.57	1.81	-2.79	27.10	125.20
462	30.35	77.60	1.78	-2.89	27.45	125.00
463	30.42	72.69	1.77	-2.59	26.62	125.02
464	30.46	77.83	1.77	-2.89	25.49	125.16
465	30.53	88.02	1.80	-2.89	23.47	125.51
466	30.60	94.65	1.87	-3.89	21.80	125.91
467	30.68	99.98	1.92	-4.49	20.66	126.25
468	30.75	105.96	1.95	-4.99	19.92	126.46
469	30.79	106.98	1.96	-5.38	19.79	126.57
470	30.86	103.53	1.99	-6.48	20.63	126.62
471	30.93	97.36	2.05	-7.18	21.90	126.64
472	31.01	93.44	2.06	-7.58	22.95	126.58
473	31.05	92.13	2.02	-7.68	23.09	126.19
474	31.12	90.26	1.78	-7.78	23.06	125.57
475	31.19	84.65	1.64	-7.98	24.08	124.85
476	31.26	73.35	1.63	-7.98	26.81	124.30
477	31.33	62.60	1.61	-7.98	30.67	123.90
478	31.41	56.25	1.59	-7.98	33.91	123.57
479	31.44	53.73	1.59	-7.98	35.77	123.37
480	31.52	52.60	1.57	-7.98	35.80	123.19

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.59	54.75	1.49	-7.88	33.38	122.35
482	31.66	57.28	1.06	-7.98	29.13	120.63
483	31.70	58.40	0.67	-7.98	25.71	118.84
484	31.77	58.02	0.77	-7.98	24.80	118.30
485	31.85	58.12	0.88	-7.98	26.03	119.40
486	31.92	60.83	1.03	-7.98	27.98	120.71
487	31.99	58.77	1.29	-7.91	30.45	121.75
488	32.05	54.57	1.39	-7.91	33.58	122.22
489	32.12	50.18	1.37	-7.91	36.16	122.09
490	32.19	47.00	1.32	-7.88	38.40	121.99
491	32.26	45.50	1.42	-7.88	38.47	122.20
492	32.30	51.67	1.48	-7.78	33.81	123.02
493	32.37	72.79	1.57	-7.78	27.61	123.97
494	32.44	89.51	1.66	-7.78	23.71	124.86
495	32.52	92.69	1.79	-7.88	22.24	125.43
496	32.56	94.65	1.83	-7.88	21.49	125.84
497	32.63	103.53	1.87	-7.88	20.16	126.17
498	32.70	113.06	1.91	-7.88	19.18	126.60
499	32.77	114.46	2.05	-7.88	19.14	127.07
500	32.85	113.06	2.20	-7.88	19.75	127.48
501	32.89	113.06	2.26	-7.88	20.10	127.82
502	32.96	116.61	2.34	-7.88	19.79	128.09
503	33.03	122.50	2.39	-7.88	19.08	128.41
504	33.10	129.78	2.47	-7.88	18.20	128.78
505	33.18	137.82	2.57	-7.88	17.37	129.14
506	33.22	144.36	2.63	-7.88	16.27	129.56
507	33.29	159.50	2.73	-7.88	15.11	129.97
508	33.36	172.11	2.83	-7.88	14.03	130.42
509	33.44	181.45	2.93	-7.78	13.39	130.74
510	33.47	185.38	2.97	-7.78	12.98	130.97
511	33.55	190.42	3.01	-7.78	12.73	131.08
512	33.62	192.10	3.00	-7.68	12.58	131.10
513	33.69	190.52	2.97	-7.58	12.68	131.02
514	33.76	185.28	2.93	-7.58	13.10	130.84
515	33.84	175.47	2.88	-7.48	13.75	130.66
516	33.87	168.56	2.87	-7.38	14.88	130.46
517	33.95	153.14	2.87	-7.28	16.43	130.23
518	34.02	137.54	2.84	-6.08	18.57	129.91
519	34.09	122.96	2.79	-3.79	20.59	129.59
520	34.13	115.77	2.76	-2.99	22.64	129.21
521	34.21	103.53	2.68	-0.90	24.24	128.76
522	34.28	96.89	2.51	-1.00	24.97	128.13
523	34.35	97.55	2.25	-0.60	24.35	127.46
524	34.39	98.76	2.07	-0.60	22.80	126.67
525	34.47	99.60	1.79	-0.30	21.49	125.96
526	34.54	100.07	1.67	-0.30	19.57	125.40
527	34.61	111.47	1.59	-0.30	15.39	125.27
528	34.69	154.82	1.43	-0.50	11.03	125.33

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.73	187.06	1.38	-0.55	7.16	124.99
530	34.79	216.87	1.11	-0.55	4.35	124.32
531	34.85	262.28	0.89	-0.55	2.31	124.11
532	34.92	326.00	1.08	-1.70	0.98	124.58
533	34.99	376.92	1.12	-0.30	0.48	125.93
534	35.06	398.04	1.35	-0.20	0.72	127.36
535	35.12	368.89	1.80	0.00	0.94	129.09
536	35.18	451.95	2.15	0.10	0.95	130.32
537	35.25	481.01	2.19	0.20	0.57	131.18
538	35.31	501.38	2.34	0.00	0.38	131.57
539	35.38	523.71	2.41	0.00	0.28	131.98
540	35.45	537.82	2.49	-0.02	0.03	131.94
541	35.51	556.41	2.23	0.10	0.00	132.33
542	35.58	576.03	2.72	0.01	0.80	134.70
543	35.64	582.86	5.24	0.00	2.22	137.28
544	35.71	603.60	7.24	0.10	3.43	137.28
545	35.78	627.89	7.89	0.19	3.86	137.28
546	35.84	626.96	7.78	0.31	3.70	137.28
547	35.91	612.76	6.77	0.20	3.27	137.28
548	35.97	653.77	6.67	0.20	2.82	137.28
549	36.03	682.36	6.94	0.20	2.55	137.28
550	36.10	683.11	6.89	0.70	2.42	137.28
551	36.17	696.38	6.83	0.70	2.62	137.28
552	36.23	593.79	6.26	0.70	2.68	137.28
553	36.30	591.45	5.52	0.70	2.84	137.28
554	36.37	577.90	5.41	0.70	2.49	137.28
555	36.43	569.59	4.66	0.80	2.13	137.16
556	36.49	579.87	4.15	0.80	1.52	136.14
557	36.56	581.55	3.55	0.80	1.10	135.20
558	36.63	554.73	3.20	0.70	0.73	134.40
559	36.70	574.63	3.03	0.70	0.55	133.93
560	36.76	574.45	2.96	0.70	0.38	133.77
561	36.83	579.40	2.96	0.70	0.36	133.72
562	36.89	574.17	2.97	0.70	0.36	133.74
563	36.96	576.60	2.98	0.70	0.33	133.75
564	37.02	588.46	2.96	0.60	0.29	133.75
565	37.08	584.07	2.95	0.60	0.25	133.66
566	37.15	579.02	2.86	0.40	0.22	133.42
567	37.21	571.18	2.71	0.60	0.20	133.25
568	37.28	570.62	2.77	0.50	0.22	133.20
569	37.35	570.62	2.83	0.60	0.26	133.28
570	37.41	570.05	2.80	0.40	0.32	133.40
571	37.48	570.71	2.91	0.60	0.39	133.56
572	37.54	571.36	3.01	0.30	0.50	133.98
573	37.62	585.66	3.28	0.60	0.54	134.41
574	37.68	609.11	3.40	0.60	0.56	134.73
575	37.74	602.29	3.39	0.30	0.25	134.37
576	37.81	620.51	2.74	0.30	0.00	133.04

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	37.87	641.63	1.77	0.30	0.00	131.75
578	37.94	632.38	2.07	0.40	0.00	131.72
579	38.00	627.05	2.71	0.30	0.00	133.74
580	38.07	648.26	3.84	0.30	0.56	135.65
581	38.13	630.83	4.66	0.30	1.13	136.86
582	38.20	634.62	4.69	0.50	1.41	137.28
583	38.27	642.19	4.71	0.50	1.39	137.28
584	38.33	640.51	4.72	0.50	1.36	137.28
585	38.40	642.75	4.68	0.40	1.36	137.28
586	38.46	638.45	4.66	0.20	1.34	137.28
587	38.54	641.53	4.65	0.33	1.40	137.26
588	38.59	626.12	4.64	0.33	1.61	137.14
589	38.67	578.84	4.57	0.33	1.72	136.81
590	38.73	581.27	4.18	0.40	1.54	136.08
591	38.80	582.95	3.48	0.50	1.08	135.25
592	38.86	582.86	3.25	0.40	0.82	134.87
593	38.93	598.83	3.60	0.35	0.67	134.87
594	38.99	617.05	3.42	0.40	0.53	134.92
595	39.05	623.50	3.25	0.40	0.31	134.61
596	39.12	619.67	3.13	0.40	0.04	134.06
597	39.19	625.70	2.69	0.30	0.00	133.50
598	39.25	603.04	2.61	0.10	0.00	133.25
599	39.31	627.89	2.83	0.20	0.00	133.71
600	39.38	642.09	3.19	0.20	0.00	134.26
601	39.45	660.31	3.20	0.20	0.00	134.23
602	39.52	686.38	2.71	0.15	0.00	133.80
603	39.58	691.71	2.59	0.10	0.00	133.47
604	39.64	685.64	2.80	0.10	0.00	133.59
605	39.71	727.03	2.79	0.10	0.00	133.83
606	39.78	737.21	2.80	0.20	0.00	133.93
607	39.84	768.61	2.81	0.12	0.00	134.24
608	39.91	737.59	3.14	0.15	0.00	135.02
609	39.98	739.27	3.78	0.18	0.00	135.80
610	40.04	737.96	3.96	0.10	0.01	136.42
611	40.10	700.59	4.16	0.14	0.29	137.02
612	40.17	736.89	4.81	0.20	0.64	137.28
613	40.23	720.77	5.10	0.30	0.85	137.28
614	40.30	735.81	5.38	0.20	0.00	135.51
615	40.37	735.44	0.00	0.10	0.00	130.65
616	40.44	734.32	0.00	0.20	N/A	87.36
617	40.50	733.19	0.00	0.20	N/A	87.36
618	40.57	739.55	0.00	0.10	N/A	87.36
619	40.63	765.99	0.00	0.20	N/A	87.36
620	40.70	815.14	0.00	-0.10	N/A	87.36

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.07	0.00	0.00	0.00	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
2	0.14	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
3	0.20	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
4	0.28	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
5	0.33	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
6	0.40	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
7	0.47	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
8	0.54	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
9	0.59	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
10	0.66	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
11	0.72	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
12	0.79	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
13	0.87	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
14	0.93	0.06	0.00	0.06	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
15	1.00	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
16	1.06	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
17	1.13	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
18	1.19	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
19	1.26	0.08	0.00	0.08	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
20	1.32	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
21	1.39	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
22	1.45	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
23	1.52	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
24	1.58	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
25	1.65	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
26	1.71	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
27	1.78	0.11	0.00	0.11	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
28	1.84	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
29	1.92	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
30	1.98	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
31	2.04	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
32	2.11	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
33	2.17	0.13	0.00	0.13	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
34	2.25	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
35	2.30	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
36	2.37	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
37	2.43	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
38	2.52	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
39	2.58	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
40	2.65	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
41	2.71	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
42	2.77	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
43	2.83	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
44	2.90	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
45	2.96	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
46	3.02	0.17	0.00	0.17	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
47	3.10	0.17	0.00	0.17	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
48	3.17	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.22	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
50	3.31	0.18	0.00	0.18	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
51	3.38	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
52	3.44	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
53	3.48	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
54	3.54	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
55	3.64	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
56	3.68	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
57	3.75	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
58	3.81	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
59	3.88	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
60	3.95	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
61	4.02	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
62	4.09	0.22	0.00	0.22	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
63	4.16	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
64	4.22	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
65	4.29	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
66	4.36	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
67	4.43	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
68	4.46	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
69	4.53	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
70	4.60	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
71	4.67	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
72	4.73	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
73	4.80	0.26	0.00	0.26	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
74	4.87	0.26	0.00	0.26	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
75	4.94	0.26	0.00	0.26	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
76	5.01	0.27	0.00	0.27	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
77	5.07	0.27	0.00	0.27	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
78	5.14	0.27	0.00	0.27	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
79	5.21	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
80	5.28	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
81	5.34	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
82	5.41	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
83	5.47	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
84	5.55	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
85	5.58	0.30	0.00	0.30	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
86	5.65	0.30	0.00	0.30	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
87	5.72	0.30	0.00	0.30	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
88	5.78	0.31	0.00	0.31	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
89	5.85	0.31	0.00	0.31	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
90	5.91	0.31	0.00	0.31	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
91	5.98	0.32	0.00	0.32	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
92	6.05	0.32	0.00	0.32	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
93	6.12	0.32	0.00	0.32	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
94	6.18	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
95	6.26	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
96	6.33	0.34	0.00	0.34	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.37	0.34	0.00	0.34	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
98	6.43	0.34	0.00	0.34	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
99	6.50	0.34	0.00	0.34	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
100	6.57	0.35	0.00	0.35	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
101	6.63	0.35	0.00	0.35	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
102	6.70	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
103	6.77	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
104	6.84	0.36	0.00	0.36	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
105	6.90	0.37	0.00	0.37	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
106	6.97	0.37	0.00	0.37	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
107	7.04	0.37	0.00	0.37	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
108	7.11	0.38	0.00	0.38	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
109	7.17	0.38	0.00	0.38	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
110	7.24	0.38	0.00	0.38	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
111	7.31	0.39	0.00	0.39	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
112	7.38	0.39	0.00	0.39	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
113	7.44	0.40	0.00	0.40	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
114	7.51	0.40	0.00	0.40	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
115	7.58	0.40	0.00	0.40	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
116	7.64	0.41	0.00	0.41	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
117	7.68	0.41	0.00	0.41	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
118	7.75	0.41	0.00	0.41	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
119	7.82	0.42	0.00	0.42	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
120	7.88	0.42	0.00	0.42	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
121	7.96	0.42	0.00	0.42	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
122	8.03	0.43	0.00	0.43	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
123	8.08	0.43	0.00	0.43	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
124	8.15	0.43	0.00	0.43	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
125	8.20	0.44	0.00	0.44	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
126	8.29	0.44	0.00	0.44	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
127	8.35	0.44	0.00	0.44	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
128	8.42	0.45	0.00	0.45	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
129	8.48	0.45	0.00	0.45	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
130	8.55	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
131	8.62	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
132	8.69	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
133	8.76	0.47	0.00	0.47	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
134	8.83	0.47	0.00	0.47	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
135	8.86	0.47	0.00	0.47	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
136	8.93	0.48	0.00	0.48	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
137	8.99	0.48	0.00	0.48	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
138	9.06	0.49	0.00	0.49	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
139	9.13	0.49	0.00	0.49	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
140	9.20	0.49	0.00	0.49	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
141	9.27	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
142	9.34	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
143	9.41	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
144	9.47	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.54	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
146	9.61	0.52	0.00	0.52	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
147	9.67	0.52	0.00	0.52	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
148	9.72	0.52	0.00	0.52	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
149	9.78	0.53	0.00	0.53	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
150	9.86	0.53	0.00	0.53	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
151	9.92	0.54	0.00	0.54	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
152	9.99	0.54	0.00	0.54	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
153	10.05	0.54	0.00	0.54	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
154	10.12	0.55	0.00	0.55	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
155	10.19	0.55	0.00	0.55	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
156	10.26	0.55	0.00	0.55	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
157	10.32	0.56	0.00	0.56	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
158	10.39	0.56	0.00	0.56	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
159	10.46	0.57	0.00	0.57	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
160	10.53	0.57	0.00	0.57	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
161	10.60	0.57	0.00	0.57	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
162	10.67	0.58	0.00	0.58	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
163	10.71	0.58	0.00	0.58	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
164	10.78	0.59	0.00	0.59	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
165	10.85	0.59	0.00	0.59	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
166	10.91	0.59	0.00	0.59	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
167	10.98	0.60	0.00	0.60	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
168	11.05	0.60	0.00	0.60	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
169	11.12	0.61	0.00	0.61	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
170	11.19	0.61	0.00	0.61	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
171	11.26	0.61	0.00	0.61	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
172	11.33	0.62	0.00	0.62	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
173	11.37	0.62	0.00	0.62	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
174	11.44	0.63	0.00	0.63	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
175	11.51	0.63	0.00	0.63	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
176	11.58	0.63	0.00	0.63	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
177	11.65	0.64	0.00	0.64	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
178	11.72	0.64	0.00	0.64	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
179	11.76	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
180	11.82	0.65	0.00	0.65	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
181	11.90	0.65	0.00	0.65	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
182	11.97	0.66	0.00	0.66	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
183	12.04	0.66	0.00	0.66	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
184	12.11	0.67	0.00	0.67	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
185	12.18	0.67	0.00	0.67	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
186	12.22	0.67	0.00	0.67	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
187	12.29	0.68	0.00	0.68	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
188	12.36	0.68	0.00	0.68	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
189	12.43	0.69	0.00	0.69	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
190	12.48	0.69	0.00	0.69	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
191	12.56	0.69	0.00	0.69	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
192	12.64	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.71	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
194	12.74	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
195	12.81	0.71	0.00	0.71	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
196	12.88	0.71	0.00	0.71	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
197	12.96	0.72	0.00	0.72	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
198	13.03	0.72	0.00	0.72	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
199	13.10	0.73	0.00	0.73	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
200	13.13	0.73	0.00	0.73	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
201	13.20	0.73	0.00	0.73	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
202	13.27	0.74	0.00	0.74	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
203	13.34	0.74	0.00	0.74	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
204	13.41	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
205	13.48	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
206	13.55	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
207	13.62	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
208	13.69	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
209	13.73	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
210	13.80	0.77	0.00	0.77	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
211	13.87	0.78	0.00	0.78	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
212	13.95	0.78	0.00	0.78	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
213	14.00	0.78	0.00	0.78	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
214	14.06	0.79	0.00	0.79	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
215	14.12	0.79	0.00	0.79	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
216	14.19	0.80	0.00	0.80	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
217	14.26	0.80	0.00	0.80	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
218	14.33	0.80	0.00	0.80	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
219	14.40	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
220	14.45	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
221	14.51	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
222	14.58	0.82	0.00	0.82	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
223	14.64	0.83	0.00	0.83	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
224	14.71	0.83	0.00	0.83	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
225	14.78	0.83	0.00	0.83	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
226	14.84	0.84	0.00	0.84	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
227	14.91	0.84	0.00	0.84	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
228	14.97	0.85	0.00	0.85	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
229	15.04	0.85	0.00	0.85	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
230	15.11	0.85	0.00	0.85	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
231	15.17	0.86	0.00	0.86	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
232	15.24	0.86	0.00	0.86	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
233	15.30	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
234	15.37	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
235	15.44	0.88	0.00	0.88	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
236	15.50	0.88	0.00	0.88	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
237	15.56	0.88	0.00	0.88	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
238	15.63	0.89	0.00	0.89	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
239	15.70	0.89	0.00	0.89	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
240	15.76	0.90	0.00	0.90	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.82	0.90	0.00	0.90	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
242	15.89	0.91	0.00	0.91	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
243	15.96	0.91	0.00	0.91	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
244	16.02	0.91	0.00	0.91	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
245	16.09	0.92	0.00	0.92	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
246	16.15	0.92	0.00	0.92	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
247	16.23	0.93	0.00	0.93	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
248	16.28	0.93	0.00	0.93	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
249	16.35	0.94	0.00	0.94	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
250	16.43	0.94	0.00	0.94	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
251	16.49	0.94	0.00	0.94	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
252	16.55	0.95	0.00	0.95	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
253	16.62	0.95	0.00	0.95	0.96	0.452	0.83	0.545	1.00	1.00	2.000	No
254	16.68	0.96	0.00	0.96	0.96	0.452	0.83	0.545	1.00	1.00	2.000	No
255	16.75	0.96	0.00	0.96	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
256	16.82	0.96	0.00	0.96	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
257	16.88	0.97	0.00	0.97	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
258	16.95	0.97	0.00	0.97	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
259	17.01	0.98	0.00	0.98	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
260	17.07	0.98	0.00	0.98	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
261	17.14	0.99	0.00	0.99	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
262	17.21	0.99	0.00	0.99	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
263	17.28	0.99	0.00	0.99	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
264	17.34	1.00	0.00	1.00	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
265	17.41	1.00	0.00	1.00	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
266	17.47	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
267	17.54	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
268	17.60	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
269	17.66	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
270	17.73	1.02	0.00	1.02	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
271	17.80	1.03	0.00	1.03	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
272	17.86	1.03	0.00	1.03	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
273	17.93	1.04	0.00	1.04	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
274	17.99	1.04	0.00	1.04	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
275	18.06	1.04	0.00	1.04	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
276	18.13	1.05	0.00	1.05	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
277	18.19	1.05	0.00	1.05	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
278	18.25	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
279	18.32	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
280	18.39	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
281	18.45	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
282	18.52	1.07	0.00	1.07	0.96	0.450	0.83	0.542	1.00	1.00	2.000	No
283	18.59	1.08	0.00	1.08	0.96	0.449	0.83	0.542	1.00	1.00	2.000	No
284	18.65	1.08	0.00	1.08	0.96	0.449	0.83	0.542	1.00	1.00	2.000	No
285	18.71	1.09	0.00	1.09	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
286	18.78	1.09	0.00	1.09	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
287	18.84	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
288	18.91	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.97	1.10	0.00	1.10	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
290	19.04	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
291	19.10	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
292	19.18	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
293	19.25	1.12	0.00	1.12	0.96	0.449	0.83	0.541	0.99	1.00	2.000	No
294	19.31	1.13	0.00	1.13	0.96	0.449	0.83	0.541	0.99	1.00	2.000	No
295	19.37	1.13	0.00	1.13	0.96	0.449	0.83	0.541	0.99	1.00	2.000	No
296	19.44	1.13	0.00	1.13	0.96	0.448	0.83	0.541	0.99	1.00	2.000	No
297	19.51	1.14	0.00	1.14	0.96	0.448	0.83	0.541	0.99	1.00	2.000	No
298	19.57	1.14	0.00	1.14	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
299	19.64	1.15	0.00	1.15	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
300	19.70	1.15	0.00	1.15	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
301	19.77	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
302	19.83	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
303	19.90	1.16	0.00	1.16	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
304	19.96	1.17	0.00	1.17	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
305	20.03	1.17	0.00	1.17	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
306	20.09	1.18	0.00	1.18	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
307	20.16	1.18	0.00	1.18	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
308	20.22	1.18	0.00	1.18	0.96	0.448	0.83	0.540	0.98	1.00	2.000	No
309	20.29	1.19	0.00	1.19	0.96	0.447	0.83	0.540	0.98	1.00	2.000	No
310	20.36	1.19	0.00	1.19	0.96	0.447	0.83	0.540	0.98	1.00	2.000	No
311	20.42	1.20	0.00	1.20	0.96	0.447	0.83	0.540	0.98	1.00	2.000	No
312	20.49	1.20	0.00	1.20	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
313	20.55	1.21	0.00	1.21	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
314	20.62	1.21	0.00	1.21	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
315	20.69	1.22	0.00	1.22	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
316	20.75	1.22	0.00	1.22	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
317	20.81	1.22	0.00	1.22	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
318	20.89	1.23	0.00	1.23	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
319	20.95	1.23	0.00	1.23	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
320	21.02	1.24	0.00	1.24	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
321	21.08	1.24	0.00	1.24	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
322	21.16	1.25	0.00	1.25	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
323	21.22	1.25	0.00	1.25	0.95	0.446	0.83	0.539	0.97	1.00	2.000	No
324	21.28	1.25	0.00	1.25	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
325	21.35	1.26	0.00	1.26	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
326	21.42	1.26	0.00	1.26	0.95	0.446	0.83	0.538	0.97	1.00	2.000	No
327	21.48	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
328	21.55	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
329	21.62	1.27	0.00	1.27	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
330	21.69	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
331	21.73	1.28	0.00	1.28	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
332	21.80	1.29	0.00	1.29	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
333	21.87	1.29	0.00	1.29	0.95	0.445	0.83	0.538	0.96	1.00	2.000	No
334	21.94	1.29	0.00	1.29	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
335	22.01	1.30	0.00	1.30	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
336	22.08	1.30	0.00	1.30	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.15	1.31	0.00	1.31	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
338	22.19	1.31	0.00	1.31	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
339	22.26	1.31	0.00	1.31	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
340	22.33	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
341	22.40	1.32	0.00	1.32	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
342	22.47	1.33	0.00	1.33	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
343	22.55	1.33	0.00	1.33	0.95	0.445	0.83	0.536	0.95	1.00	2.000	No
344	22.58	1.33	0.00	1.33	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
345	22.65	1.34	0.00	1.34	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
346	22.72	1.34	0.00	1.34	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
347	22.79	1.35	0.00	1.35	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
348	22.86	1.35	0.00	1.35	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
349	22.93	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
350	23.00	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
351	23.04	1.36	0.00	1.36	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
352	23.11	1.37	0.00	1.37	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
353	23.18	1.37	0.00	1.37	0.95	0.444	0.83	0.535	0.95	1.00	2.000	No
354	23.25	1.38	0.00	1.38	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
355	23.33	1.38	0.00	1.38	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
356	23.40	1.39	0.00	1.39	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
357	23.43	1.39	0.00	1.39	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
358	23.51	1.39	0.00	1.39	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
359	23.58	1.40	0.00	1.40	0.95	0.443	0.83	0.535	0.95	1.00	2.000	No
360	23.63	1.40	0.00	1.40	0.95	0.443	0.83	0.534	0.95	1.00	2.000	No
361	23.70	1.40	0.00	1.40	0.95	0.443	0.83	0.534	0.95	1.00	2.000	No
362	23.77	1.41	0.00	1.41	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
363	23.84	1.41	0.00	1.41	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
364	23.91	1.42	0.00	1.42	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
365	23.98	1.42	0.00	1.42	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
366	24.05	1.43	0.00	1.43	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
367	24.12	1.43	0.00	1.43	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
368	24.16	1.43	0.00	1.43	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
369	24.23	1.44	0.00	1.44	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
370	24.30	1.44	0.00	1.44	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
371	24.37	1.45	0.00	1.45	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
372	24.44	1.45	0.00	1.45	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
373	24.51	1.46	0.00	1.46	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
374	24.58	1.46	0.00	1.46	0.94	0.441	0.83	0.533	0.94	1.00	2.000	No
375	24.62	1.46	0.00	1.46	0.94	0.441	0.83	0.533	0.94	1.00	2.000	No
376	24.69	1.47	0.00	1.47	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
377	24.76	1.47	0.00	1.47	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
378	24.83	1.48	0.00	1.48	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
379	24.90	1.48	0.00	1.48	0.94	0.441	0.83	0.532	0.94	1.00	2.000	No
380	24.98	1.48	0.00	1.48	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
381	25.01	1.49	0.00	1.49	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
382	25.08	1.49	0.00	1.49	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
383	25.15	1.50	0.00	1.50	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
384	25.23	1.50	0.00	1.50	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.30	1.50	0.00	1.50	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
386	25.37	1.51	0.00	1.51	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
387	25.41	1.51	0.00	1.51	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
388	25.48	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
389	25.54	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
390	25.61	1.52	0.00	1.52	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
391	25.67	1.53	0.00	1.53	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
392	25.73	1.53	0.00	1.53	0.94	0.440	0.83	0.530	0.93	1.00	2.000	No
393	25.80	1.54	0.00	1.54	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
394	25.87	1.54	0.00	1.54	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
395	25.94	1.54	0.00	1.54	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
396	25.99	1.55	0.00	1.55	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
397	26.07	1.55	0.00	1.55	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
398	26.14	1.56	0.00	1.56	0.94	0.439	0.83	0.530	0.93	1.00	2.000	No
399	26.19	1.56	0.00	1.56	0.94	0.439	0.83	0.529	0.93	1.00	2.000	No
400	26.27	1.57	0.00	1.57	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
401	26.32	1.57	0.00	1.57	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
402	26.39	1.57	0.00	1.57	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
403	26.46	1.58	0.00	1.58	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
404	26.52	1.58	0.00	1.58	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
405	26.59	1.59	0.00	1.59	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
406	26.66	1.59	0.00	1.59	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
407	26.73	1.60	0.00	1.60	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
408	26.80	1.60	0.00	1.60	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
409	26.85	1.60	0.00	1.60	0.93	0.438	0.83	0.528	0.92	1.00	2.000	No
410	26.91	1.61	0.00	1.61	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
411	26.99	1.61	0.00	1.61	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
412	27.05	1.62	0.00	1.62	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
413	27.12	1.62	0.00	1.62	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
414	27.18	1.62	0.00	1.62	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
415	27.24	1.63	0.00	1.63	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
416	27.31	1.63	0.00	1.63	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
417	27.38	1.64	0.00	1.64	0.93	0.436	0.83	0.527	0.92	1.00	2.000	No
418	27.44	1.64	0.00	1.64	0.93	0.436	0.83	0.527	0.92	1.00	2.000	No
419	27.53	1.65	0.00	1.65	0.93	0.436	0.83	0.526	0.92	1.00	2.000	No
420	27.59	1.65	0.00	1.65	0.93	0.436	0.83	0.526	0.92	1.00	2.000	No
421	27.67	1.65	0.00	1.65	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
422	27.70	1.66	0.00	1.66	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
423	27.78	1.66	0.00	1.66	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
424	27.85	1.67	0.00	1.67	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
425	27.92	1.67	0.00	1.67	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
426	27.99	1.67	0.00	1.67	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
427	28.03	1.68	0.00	1.68	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
428	28.10	1.68	0.00	1.68	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
429	28.18	1.69	0.00	1.69	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
430	28.25	1.69	0.00	1.69	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
431	28.32	1.70	0.00	1.70	0.93	0.435	0.83	0.524	0.91	1.00	2.000	No
432	28.36	1.70	0.00	1.70	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.43	1.70	0.00	1.70	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
434	28.50	1.71	0.00	1.71	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
435	28.58	1.71	0.00	1.71	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
436	28.65	1.72	0.00	1.72	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
437	28.69	1.72	0.00	1.72	0.93	0.434	0.83	0.523	0.91	1.00	2.000	No
438	28.76	1.72	0.00	1.72	0.93	0.434	0.83	0.523	0.91	1.00	2.000	No
439	28.83	1.73	0.00	1.73	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
440	28.91	1.73	0.00	1.73	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
441	28.95	1.73	0.00	1.73	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
442	29.02	1.74	0.00	1.74	0.93	0.433	0.83	0.523	0.91	1.00	2.000	No
443	29.08	1.74	0.00	1.74	0.93	0.433	0.83	0.522	0.91	1.00	2.000	No
444	29.15	1.75	0.00	1.75	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
445	29.22	1.75	0.00	1.75	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
446	29.27	1.76	0.00	1.76	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
447	29.36	1.76	0.00	1.76	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
448	29.41	1.76	0.00	1.76	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
449	29.50	1.77	0.00	1.77	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
450	29.55	1.77	0.00	1.77	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
451	29.61	1.78	0.00	1.78	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
452	29.67	1.78	0.00	1.78	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
453	29.73	1.78	0.00	1.78	0.92	0.431	0.83	0.521	0.90	1.00	2.000	No
454	29.82	1.79	0.00	1.79	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
455	29.89	1.79	0.00	1.79	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
456	29.95	1.80	0.00	1.80	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
457	30.01	1.80	0.00	1.80	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
458	30.07	1.81	0.00	1.81	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
459	30.13	1.81	0.00	1.81	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
460	30.21	1.81	0.00	1.81	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
461	30.28	1.82	0.00	1.82	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
462	30.35	1.82	0.00	1.82	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
463	30.42	1.83	0.00	1.83	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
464	30.46	1.83	0.00	1.83	0.92	0.430	0.83	0.519	0.90	1.00	2.000	No
465	30.53	1.83	0.00	1.83	0.92	0.430	0.83	0.518	0.90	1.00	2.000	No
466	30.60	1.84	0.00	1.84	0.92	0.429	0.83	0.518	0.90	1.00	2.000	No
467	30.68	1.84	0.00	1.84	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
468	30.75	1.85	0.00	1.85	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
469	30.79	1.85	0.00	1.85	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
470	30.86	1.86	0.00	1.86	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
471	30.93	1.86	0.00	1.86	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
472	31.01	1.86	0.00	1.86	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
473	31.05	1.87	0.00	1.87	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
474	31.12	1.87	0.00	1.87	0.91	0.428	0.83	0.517	0.89	1.00	2.000	No
475	31.19	1.88	0.00	1.88	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
476	31.26	1.88	0.00	1.88	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
477	31.33	1.89	0.00	1.89	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
478	31.41	1.89	0.00	1.89	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
479	31.44	1.89	0.00	1.89	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
480	31.52	1.90	0.00	1.90	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.59	1.90	0.00	1.90	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
482	31.66	1.91	0.00	1.91	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
483	31.70	1.91	0.00	1.91	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
484	31.77	1.91	0.00	1.91	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
485	31.85	1.92	0.00	1.92	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
486	31.92	1.92	0.00	1.92	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
487	31.99	1.92	0.00	1.92	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
488	32.05	1.93	0.00	1.93	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
489	32.12	1.93	0.00	1.93	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
490	32.19	1.94	0.00	1.94	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
491	32.26	1.94	0.00	1.94	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
492	32.30	1.94	0.00	1.94	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
493	32.37	1.95	0.00	1.95	0.91	0.425	0.83	0.513	0.89	1.00	2.000	No
494	32.44	1.95	0.00	1.95	0.91	0.425	0.83	0.512	0.88	1.00	2.000	No
495	32.52	1.96	0.00	1.96	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
496	32.56	1.96	0.00	1.96	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
497	32.63	1.96	0.00	1.96	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
498	32.70	1.97	0.00	1.97	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
499	32.77	1.97	0.00	1.97	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
500	32.85	1.98	0.00	1.98	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
501	32.89	1.98	0.00	1.98	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
502	32.96	1.99	0.00	1.99	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
503	33.03	1.99	0.00	1.99	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
504	33.10	1.99	0.00	1.99	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
505	33.18	2.00	0.00	2.00	0.90	0.422	0.83	0.510	0.88	1.00	2.000	No
506	33.22	2.00	0.00	2.00	0.90	0.422	0.83	0.510	0.88	1.00	2.000	No
507	33.29	2.01	0.00	2.01	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
508	33.36	2.01	0.00	2.01	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
509	33.44	2.02	0.00	2.02	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
510	33.47	2.02	0.00	2.02	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
511	33.55	2.02	0.00	2.02	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
512	33.62	2.03	0.00	2.03	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
513	33.69	2.03	0.00	2.03	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
514	33.76	2.04	0.00	2.04	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
515	33.84	2.04	0.00	2.04	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
516	33.87	2.04	0.00	2.04	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
517	33.95	2.05	0.00	2.05	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
518	34.02	2.05	0.00	2.05	0.90	0.420	0.83	0.507	0.88	1.00	2.000	No
519	34.09	2.06	0.00	2.06	0.90	0.420	0.83	0.506	0.88	1.00	2.000	No
520	34.13	2.06	0.00	2.06	0.90	0.420	0.83	0.506	0.88	1.00	2.000	No
521	34.21	2.07	0.00	2.07	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
522	34.28	2.07	0.00	2.07	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
523	34.35	2.08	0.00	2.08	0.90	0.419	0.83	0.505	0.87	1.00	2.000	No
524	34.39	2.08	0.00	2.08	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
525	34.47	2.08	0.00	2.08	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
526	34.54	2.09	0.00	2.09	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
527	34.61	2.09	0.00	2.09	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
528	34.69	2.10	0.00	2.10	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.73	2.10	0.00	2.10	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
530	34.79	2.10	0.00	2.10	0.89	0.417	0.83	0.504	0.87	1.00	2.000	No
531	34.85	2.11	0.00	2.11	0.89	0.417	0.83	0.504	0.87	1.00	2.000	No
532	34.92	2.11	0.00	2.11	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
533	34.99	2.12	0.00	2.12	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
534	35.06	2.12	0.00	2.12	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
535	35.12	2.12	0.00	2.12	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
536	35.18	2.13	0.00	2.13	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
537	35.25	2.13	0.00	2.13	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
538	35.31	2.14	0.00	2.14	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
539	35.38	2.14	0.00	2.14	0.89	0.416	0.83	0.501	0.87	1.00	2.000	No
540	35.45	2.15	0.00	2.15	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
541	35.51	2.15	0.00	2.15	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
542	35.58	2.15	0.00	2.15	0.89	0.415	0.83	0.501	0.87	1.00	2.000	No
543	35.64	2.16	0.00	2.16	0.89	0.415	0.83	0.500	0.87	1.00	2.000	No
544	35.71	2.16	0.00	2.16	0.89	0.414	0.83	0.500	0.87	1.00	2.000	No
545	35.78	2.17	0.00	2.17	0.89	0.414	0.83	0.500	0.87	1.00	2.000	No
546	35.84	2.17	0.00	2.17	0.88	0.414	0.83	0.500	0.87	1.00	2.000	No
547	35.91	2.18	0.00	2.18	0.88	0.414	0.83	0.499	0.87	1.00	2.000	No
548	35.97	2.18	0.00	2.18	0.88	0.414	0.83	0.499	0.87	1.00	2.000	No
549	36.03	2.19	0.00	2.19	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
550	36.10	2.19	0.00	2.19	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
551	36.17	2.19	0.00	2.19	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
552	36.23	2.20	0.00	2.20	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
553	36.30	2.20	0.00	2.20	0.88	0.412	0.83	0.498	0.86	1.00	2.000	No
554	36.37	2.21	0.00	2.21	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
555	36.43	2.21	0.00	2.21	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
556	36.49	2.22	0.00	2.22	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
557	36.56	2.22	0.00	2.22	0.88	0.411	0.83	0.497	0.86	1.00	2.000	No
558	36.63	2.23	0.00	2.23	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
559	36.70	2.23	0.00	2.23	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
560	36.76	2.24	0.00	2.24	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
561	36.83	2.24	0.00	2.24	0.88	0.411	0.83	0.495	0.86	1.00	2.000	No
562	36.89	2.24	0.00	2.24	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
563	36.96	2.25	0.00	2.25	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
564	37.02	2.25	0.00	2.25	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
565	37.08	2.26	0.00	2.26	0.88	0.410	0.83	0.494	0.86	1.00	2.000	No
566	37.15	2.26	0.00	2.26	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
567	37.21	2.27	0.00	2.27	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
568	37.28	2.27	0.00	2.27	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
569	37.35	2.27	0.00	2.27	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
570	37.41	2.28	0.00	2.28	0.87	0.408	0.83	0.493	0.86	1.00	2.000	No
571	37.48	2.28	0.00	2.28	0.87	0.408	0.83	0.493	0.86	1.00	2.000	No
572	37.54	2.29	0.00	2.29	0.87	0.408	0.83	0.492	0.86	1.00	2.000	No
573	37.62	2.29	0.00	2.29	0.87	0.408	0.83	0.492	0.86	1.00	2.000	No
574	37.68	2.30	0.00	2.30	0.87	0.407	0.83	0.492	0.86	1.00	2.000	No
575	37.74	2.30	0.00	2.30	0.87	0.407	0.83	0.491	0.86	1.00	2.000	No
576	37.81	2.30	0.00	2.30	0.87	0.407	0.83	0.491	0.86	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	37.87	2.31	0.00	2.31	0.87	0.407	0.83	0.491	0.86	1.00	2.000	No
578	37.94	2.31	0.00	2.31	0.87	0.406	0.83	0.490	0.86	1.00	2.000	No
579	38.00	2.32	0.00	2.32	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
580	38.07	2.32	0.00	2.32	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
581	38.13	2.33	0.00	2.33	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
582	38.20	2.33	0.00	2.33	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
583	38.27	2.34	0.00	2.34	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
584	38.33	2.34	0.00	2.34	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
585	38.40	2.35	0.00	2.35	0.86	0.405	0.83	0.488	0.85	1.00	2.000	No
586	38.46	2.35	0.00	2.35	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
587	38.54	2.35	0.00	2.35	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
588	38.59	2.36	0.00	2.36	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
589	38.67	2.36	0.00	2.36	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
590	38.73	2.37	0.00	2.37	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
591	38.80	2.37	0.00	2.37	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
592	38.86	2.38	0.00	2.38	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
593	38.93	2.38	0.00	2.38	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
594	38.99	2.39	0.00	2.39	0.86	0.402	0.83	0.486	0.85	1.00	2.000	No
595	39.05	2.39	0.00	2.39	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
596	39.12	2.39	0.00	2.39	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
597	39.19	2.40	0.00	2.40	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
598	39.25	2.40	0.00	2.40	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
599	39.31	2.41	0.00	2.41	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
600	39.38	2.41	0.00	2.41	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
601	39.45	2.42	0.00	2.42	0.86	0.401	0.83	0.483	0.85	1.00	2.000	No
602	39.52	2.42	0.00	2.42	0.86	0.400	0.83	0.483	0.85	1.00	2.000	No
603	39.58	2.42	0.00	2.42	0.85	0.400	0.83	0.483	0.85	1.00	2.000	No
604	39.64	2.43	0.00	2.43	0.85	0.400	0.83	0.482	0.85	1.00	2.000	No
605	39.71	2.43	0.00	2.43	0.85	0.399	0.83	0.482	0.85	1.00	2.000	No
606	39.78	2.44	0.00	2.44	0.85	0.399	0.83	0.482	0.85	1.00	2.000	No
607	39.84	2.44	0.00	2.44	0.85	0.399	0.83	0.481	0.85	1.00	2.000	No
608	39.91	2.45	0.00	2.45	0.85	0.399	0.83	0.481	0.85	1.00	2.000	No
609	39.98	2.45	0.00	2.45	0.85	0.398	0.83	0.481	0.85	1.00	2.000	No
610	40.04	2.46	0.00	2.46	0.85	0.398	0.83	0.480	0.85	1.00	2.000	No
611	40.10	2.46	0.00	2.46	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
612	40.17	2.46	0.00	2.46	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
613	40.23	2.47	0.00	2.47	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
614	40.30	2.47	0.00	2.47	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
615	40.37	2.48	0.00	2.48	0.85	0.397	0.83	0.479	0.84	1.00	2.000	No
616	40.44	2.48	0.00	2.48	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
617	40.50	2.48	0.00	2.48	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
618	40.57	2.49	0.00	2.49	0.85	0.396	0.83	0.478	0.84	1.00	2.000	No
619	40.63	2.49	0.00	2.49	0.85	0.396	0.83	0.477	0.84	1.00	2.000	No
620	40.70	2.49	0.00	2.49	0.84	0.395	0.83	0.477	0.84	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.07	11.89	2.73	2.54	0.83	19.09	4.98	95.18	4.000	No	Yes	2.00
2	0.14	20.05	2.41	1.49	0.73	32.21	2.41	77.49	4.000	No	No	2.00
3	0.20	28.25	2.17	0.94	0.66	45.37	1.55	70.24	4.000	No	No	2.00
4	0.28	38.68	1.99	0.72	0.61	62.12	1.30	80.91	4.000	No	No	2.00
5	0.33	66.27	1.77	0.63	0.54	106.45	1.11	117.95	4.000	No	No	2.00
6	0.40	107.51	1.59	0.60	0.50	172.70	1.00	172.70	4.000	No	No	2.00
7	0.47	151.43	1.46	0.57	0.50	243.25	1.00	243.25	4.000	No	No	2.00
8	0.54	171.39	1.43	0.58	0.50	275.31	1.00	275.31	4.000	No	No	2.00
9	0.59	180.15	1.43	0.61	0.50	289.39	1.00	289.39	4.000	No	No	2.00
10	0.66	179.00	1.45	0.65	0.50	287.53	1.00	287.53	4.000	No	No	2.00
11	0.72	188.44	1.43	0.64	0.50	302.69	1.00	302.69	4.000	No	No	2.00
12	0.79	196.80	1.40	0.61	0.50	316.12	1.00	316.12	4.000	No	No	2.00
13	0.87	205.87	1.37	0.59	0.50	330.67	1.00	330.67	4.000	No	No	2.00
14	0.93	204.59	1.39	0.61	0.50	328.61	1.00	328.61	4.000	No	No	2.00
15	1.00	198.27	1.40	0.62	0.50	318.45	1.00	318.45	4.000	No	No	2.00
16	1.06	187.21	1.39	0.58	0.50	300.68	1.00	300.68	4.000	No	No	2.00
17	1.13	172.79	1.39	0.53	0.50	277.50	1.00	277.50	4.000	No	No	2.00
18	1.19	154.97	1.43	0.54	0.50	248.87	1.00	248.87	4.000	No	No	2.00
19	1.26	136.13	1.52	0.62	0.50	218.59	1.00	218.59	4.000	No	No	2.00
20	1.32	118.72	1.59	0.68	0.50	190.62	1.00	190.62	4.000	No	No	2.00
21	1.39	101.56	1.66	0.72	0.51	163.04	1.00	163.04	4.000	No	No	2.00
22	1.45	87.05	1.71	0.73	0.52	139.72	1.01	141.72	4.000	No	No	2.00
23	1.52	74.44	1.77	0.74	0.54	119.45	1.11	132.98	4.000	No	No	2.00
24	1.58	66.15	1.81	0.73	0.55	106.13	1.16	123.08	4.000	No	No	2.00
25	1.65	59.08	1.85	0.74	0.56	94.77	1.20	113.77	4.000	No	No	2.00
26	1.71	52.85	1.89	0.73	0.57	84.75	1.23	104.01	4.000	No	No	2.00
27	1.78	47.78	1.91	0.69	0.58	76.59	1.24	95.03	4.000	No	No	2.00
28	1.84	42.95	1.93	0.64	0.59	68.83	1.26	86.40	4.000	No	No	2.00
29	1.92	39.18	1.96	0.62	0.59	62.77	1.27	80.00	4.000	No	No	2.00
30	1.98	35.69	2.00	0.64	0.61	57.16	1.31	74.63	4.000	No	No	2.00
31	2.04	32.86	2.03	0.64	0.62	52.60	1.33	70.15	4.000	No	No	2.00
32	2.11	29.78	2.06	0.64	0.63	47.65	1.37	65.31	4.000	No	No	2.00
33	2.17	27.35	2.08	0.60	0.63	43.74	1.40	61.06	4.000	No	No	2.00
34	2.25	25.38	2.10	0.56	0.64	40.57	1.42	57.49	4.000	No	No	2.00
35	2.30	24.10	2.10	0.52	0.64	38.51	1.43	54.91	4.000	No	No	2.00
36	2.37	23.04	2.12	0.50	0.64	36.80	1.44	53.11	4.000	No	No	2.00
37	2.43	21.98	2.13	0.49	0.65	35.10	1.00	35.10	4.000	No	No	2.00
38	2.52	21.21	2.14	0.48	0.65	33.84	1.00	33.84	4.000	No	No	2.00
39	2.58	20.40	2.16	0.48	0.65	32.54	1.00	32.54	4.000	No	No	2.00
40	2.65	19.75	2.17	0.48	0.66	31.49	1.00	31.49	4.000	No	No	2.00
41	2.71	19.12	2.18	0.48	0.66	30.48	1.00	30.48	4.000	No	No	2.00
42	2.77	18.50	2.19	0.48	0.67	29.47	1.00	29.47	4.000	No	No	2.00
43	2.83	17.94	2.21	0.48	0.67	28.56	1.00	28.56	4.000	No	No	2.00
44	2.90	17.38	2.22	0.48	0.67	27.66	1.00	27.66	4.000	No	No	2.00
45	2.96	16.94	2.23	0.49	0.68	26.96	1.00	26.96	4.000	No	No	2.00
46	3.02	16.69	2.24	0.49	0.68	26.55	1.00	26.55	4.000	No	No	2.00
47	3.10	16.79	2.23	0.48	0.68	26.69	1.00	26.69	4.000	No	No	2.00
48	3.17	17.10	2.22	0.47	0.67	27.19	1.00	27.19	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.22	17.69	2.21	0.46	0.67	28.14	1.00	28.14	4.000	No	No	2.00
50	3.31	18.28	2.20	0.48	0.67	29.07	1.00	29.07	4.000	No	No	2.00
51	3.38	18.84	2.19	0.50	0.67	29.97	1.00	29.97	4.000	No	No	2.00
52	3.44	19.22	2.19	0.52	0.67	30.57	1.60	48.92	4.000	No	No	2.00
53	3.48	19.56	2.19	0.53	0.67	31.12	1.60	49.63	4.000	No	No	2.00
54	3.54	20.06	2.18	0.54	0.66	31.91	1.57	50.23	4.000	No	No	2.00
55	3.64	20.55	2.17	0.53	0.66	32.70	1.55	50.70	4.000	No	No	2.00
56	3.68	21.05	2.16	0.51	0.65	33.50	1.52	50.80	4.000	No	No	2.00
57	3.75	21.39	2.14	0.49	0.65	34.04	1.00	34.04	4.000	No	No	2.00
58	3.81	21.74	2.12	0.46	0.65	34.59	1.00	34.59	4.000	No	No	2.00
59	3.88	21.86	2.12	0.45	0.64	34.78	1.00	34.78	4.000	No	No	2.00
60	3.95	21.89	2.11	0.44	0.64	34.82	1.00	34.82	4.000	No	No	2.00
61	4.02	21.61	2.13	0.46	0.65	34.37	1.00	34.37	4.000	No	No	2.00
62	4.09	21.11	2.14	0.48	0.65	33.57	1.00	33.57	4.000	No	No	2.00
63	4.16	20.12	2.17	0.49	0.66	31.96	1.00	31.96	4.000	No	No	2.00
64	4.22	18.84	2.19	0.48	0.66	29.90	1.00	29.90	4.000	No	No	2.00
65	4.29	17.53	2.20	0.44	0.67	27.79	1.00	27.79	4.000	No	No	2.00
66	4.36	16.38	2.22	0.42	0.67	25.94	1.00	25.94	4.000	No	No	2.00
67	4.43	15.60	2.24	0.41	0.68	24.68	1.00	24.68	4.000	No	No	2.00
68	4.46	15.01	2.26	0.42	0.69	23.73	1.00	23.73	4.000	No	No	2.00
69	4.53	14.64	2.27	0.43	0.69	23.13	1.00	23.13	4.000	No	No	2.00
70	4.60	14.39	2.28	0.44	0.69	22.72	1.00	22.72	4.000	No	No	2.00
71	4.67	14.30	2.28	0.41	0.69	22.57	1.00	22.57	4.000	No	No	2.00
72	4.73	14.42	2.24	0.34	0.68	22.77	1.00	22.77	4.000	No	No	2.00
73	4.80	14.86	2.21	0.29	0.67	23.46	1.00	23.46	4.000	No	No	2.00
74	4.87	15.76	2.18	0.28	0.66	24.90	1.00	24.90	4.000	No	No	2.00
75	4.94	17.04	2.16	0.32	0.66	26.95	1.00	26.95	4.000	No	No	2.00
76	5.01	18.50	2.14	0.34	0.65	29.30	1.00	29.30	4.000	No	No	2.00
77	5.07	20.00	2.11	0.35	0.64	31.69	1.00	31.69	4.000	No	No	2.00
78	5.14	21.24	2.10	0.37	0.64	33.69	1.00	33.69	4.000	No	No	2.00
79	5.21	22.36	2.08	0.38	0.63	35.48	1.00	35.48	4.000	No	No	2.00
80	5.28	23.36	2.07	0.40	0.63	37.08	1.00	37.08	4.000	No	No	2.00
81	5.34	24.63	2.05	0.41	0.62	39.12	1.00	39.12	4.000	No	No	2.00
82	5.41	25.88	2.04	0.43	0.62	41.12	1.00	41.12	4.000	No	No	2.00
83	5.47	27.13	2.03	0.45	0.62	43.12	1.00	43.12	4.000	No	No	2.00
84	5.55	27.94	2.03	0.48	0.62	44.42	1.00	44.42	4.000	No	No	2.00
85	5.58	28.59	2.03	0.50	0.62	45.46	1.34	60.80	4.000	No	No	2.00
86	5.65	29.06	2.03	0.52	0.62	46.20	1.34	61.87	4.000	No	No	2.00
87	5.72	29.52	2.04	0.54	0.62	46.95	1.34	62.90	4.000	No	No	2.00
88	5.78	29.90	2.04	0.56	0.62	47.54	1.34	63.72	4.000	No	No	2.00
89	5.85	30.08	2.04	0.57	0.62	47.84	1.34	64.32	4.000	No	No	2.00
90	5.91	30.11	2.05	0.59	0.62	47.88	1.35	64.74	4.000	No	No	2.00
91	5.98	29.96	2.06	0.62	0.63	47.62	1.36	64.95	4.000	No	No	2.00
92	6.05	29.68	2.07	0.65	0.63	47.17	1.38	65.05	4.000	No	No	2.00
93	6.12	29.28	2.08	0.67	0.63	46.52	1.40	64.90	4.000	No	No	2.00
94	6.18	28.69	2.10	0.68	0.64	45.56	1.41	64.32	4.000	No	No	2.00
95	6.26	27.85	2.11	0.69	0.64	44.21	1.43	63.43	4.000	No	No	2.00
96	6.33	27.13	2.13	0.71	0.65	43.05	1.46	62.92	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.37	26.57	2.15	0.76	0.65	42.15	1.50	63.27	4.000	No	No	2.00
98	6.43	26.41	2.16	0.80	0.66	41.89	1.53	64.11	4.000	No	No	2.00
99	6.50	26.63	2.17	0.83	0.66	42.23	1.54	65.02	4.000	No	No	2.00
100	6.57	27.47	2.15	0.82	0.65	43.58	1.51	65.77	4.000	No	No	2.00
101	6.63	28.90	2.12	0.78	0.65	45.87	1.46	66.78	4.000	No	No	2.00
102	6.70	30.56	2.09	0.74	0.63	48.52	1.40	68.14	4.000	No	No	2.00
103	6.77	32.11	2.06	0.70	0.63	51.02	1.36	69.61	4.000	No	No	2.00
104	6.84	33.45	2.03	0.67	0.62	53.16	1.34	71.07	4.000	No	No	2.00
105	6.90	34.54	2.01	0.64	0.61	54.91	1.32	72.25	4.000	No	No	2.00
106	6.97	35.29	2.00	0.63	0.61	56.10	1.31	73.31	4.000	No	No	2.00
107	7.04	35.54	2.00	0.64	0.61	56.49	1.31	73.84	4.000	No	No	2.00
108	7.11	35.19	2.01	0.66	0.61	55.93	1.32	73.72	4.000	No	No	2.00
109	7.17	34.35	2.03	0.68	0.62	54.58	1.33	72.75	4.000	No	No	2.00
110	7.24	33.14	2.05	0.70	0.62	52.63	1.35	71.14	4.000	No	No	2.00
111	7.31	31.64	2.07	0.71	0.63	50.22	1.38	69.19	4.000	No	No	2.00
112	7.38	30.02	2.09	0.73	0.64	47.60	1.41	67.17	4.000	No	No	2.00
113	7.44	28.71	2.12	0.74	0.64	45.50	1.44	65.65	4.000	No	No	2.00
114	7.51	27.99	2.13	0.74	0.65	44.34	1.46	64.67	4.000	No	No	2.00
115	7.58	27.84	2.12	0.73	0.65	44.08	1.46	64.16	4.000	No	No	2.00
116	7.64	27.84	2.12	0.71	0.64	44.07	1.45	63.75	4.000	No	No	2.00
117	7.68	27.93	2.10	0.66	0.64	44.22	1.42	62.71	4.000	No	No	2.00
118	7.75	28.27	2.06	0.55	0.63	44.77	1.36	61.01	4.000	No	No	2.00
119	7.82	29.24	2.00	0.45	0.61	46.31	1.00	46.31	4.000	No	No	2.00
120	7.88	31.11	1.96	0.40	0.59	49.32	1.00	49.32	4.000	No	No	2.00
121	7.96	34.04	1.92	0.40	0.59	54.01	1.00	54.01	4.000	No	No	2.00
122	8.03	36.22	1.91	0.43	0.58	57.39	1.00	57.39	4.000	No	No	2.00
123	8.08	39.77	1.89	0.45	0.57	62.42	1.00	62.42	4.000	No	No	2.00
124	8.15	43.45	1.86	0.46	0.57	67.47	1.00	67.47	4.000	No	No	2.00
125	8.20	49.55	1.83	0.48	0.56	76.00	1.00	76.00	4.000	No	No	2.00
126	8.29	54.69	1.81	0.51	0.55	83.02	1.16	96.25	4.000	No	No	2.00
127	8.35	59.48	1.79	0.54	0.55	89.65	1.14	102.59	4.000	No	No	2.00
128	8.42	62.79	1.78	0.56	0.54	94.04	1.13	106.64	4.000	No	No	2.00
129	8.48	65.22	1.78	0.58	0.54	97.12	1.13	109.40	4.000	No	No	2.00
130	8.55	66.93	1.78	0.59	0.54	99.17	1.12	111.29	4.000	No	No	2.00
131	8.62	68.21	1.78	0.60	0.54	100.60	1.12	112.92	4.000	No	No	2.00
132	8.69	69.48	1.78	0.62	0.54	102.05	1.12	114.67	4.000	No	No	2.00
133	8.76	70.85	1.78	0.64	0.54	103.56	1.13	116.68	4.000	No	No	2.00
134	8.83	72.13	1.78	0.65	0.54	104.99	1.13	118.55	4.000	No	No	2.00
135	8.86	73.44	1.78	0.67	0.54	106.69	1.13	120.61	4.000	No	No	2.00
136	8.93	74.71	1.78	0.69	0.54	108.10	1.13	122.35	4.000	No	No	2.00
137	8.99	76.27	1.78	0.70	0.54	109.91	1.13	124.55	4.000	No	No	2.00
138	9.06	77.86	1.78	0.72	0.54	111.72	1.13	126.73	4.000	No	No	2.00
139	9.13	79.67	1.78	0.74	0.54	113.77	1.13	128.91	4.000	No	No	2.00
140	9.20	81.79	1.78	0.74	0.54	116.18	1.13	130.95	4.000	No	No	2.00
141	9.27	84.15	1.77	0.75	0.54	118.83	1.12	132.94	4.000	No	No	2.00
142	9.34	86.77	1.77	0.75	0.54	121.84	1.11	135.01	4.000	No	No	2.00
143	9.41	89.19	1.76	0.74	0.53	124.45	1.09	136.09	4.000	No	No	2.00
144	9.47	91.37	1.74	0.73	0.53	126.67	1.07	135.97	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.54	93.02	1.73	0.70	0.53	128.05	1.05	134.40	4.000	No	No	2.00
146	9.61	94.18	1.72	0.68	0.52	128.79	1.03	132.28	4.000	No	No	2.00
147	9.67	94.40	1.71	0.64	0.52	128.21	1.00	128.21	4.000	No	No	2.00
148	9.72	94.62	1.68	0.57	0.51	127.39	1.00	127.39	4.000	No	No	2.00
149	9.78	94.68	1.65	0.50	0.50	126.29	1.00	126.29	4.000	No	No	2.00
150	9.86	95.12	1.63	0.45	0.50	126.11	1.00	126.11	4.000	No	No	2.00
151	9.92	94.90	1.63	0.46	0.50	125.41	1.00	125.41	4.000	No	No	2.00
152	9.99	94.96	1.64	0.47	0.50	125.04	1.00	125.04	4.000	No	No	2.00
153	10.05	94.13	1.65	0.49	0.50	123.82	1.00	123.82	4.000	No	No	2.00
154	10.12	94.60	1.66	0.51	0.51	124.22	1.00	124.22	4.000	No	No	2.00
155	10.19	95.32	1.67	0.54	0.51	124.88	1.00	124.88	4.000	No	No	2.00
156	10.26	97.52	1.68	0.57	0.51	127.48	1.00	127.48	4.000	No	No	2.00
157	10.32	99.14	1.69	0.61	0.51	129.41	1.00	129.41	4.000	No	No	2.00
158	10.39	100.52	1.70	0.64	0.52	130.97	1.00	130.97	4.000	No	No	2.00
159	10.46	101.58	1.71	0.67	0.52	132.08	1.00	132.17	4.000	No	No	2.00
160	10.53	102.39	1.71	0.69	0.52	132.80	1.02	134.96	4.000	No	No	2.00
161	10.60	103.01	1.72	0.70	0.52	133.18	1.02	136.25	4.000	No	No	2.00
162	10.67	103.54	1.72	0.70	0.52	133.34	1.02	136.32	4.000	No	No	2.00
163	10.71	104.56	1.71	0.70	0.52	134.31	1.01	136.18	4.000	No	No	2.00
164	10.78	106.62	1.70	0.69	0.52	136.26	1.00	136.26	4.000	No	No	2.00
165	10.85	110.17	1.69	0.68	0.52	139.99	1.00	139.99	4.000	No	No	2.00
166	10.91	115.56	1.67	0.66	0.51	145.83	1.00	145.83	4.000	No	No	2.00
167	10.98	122.94	1.64	0.63	0.50	153.81	1.00	153.81	4.000	No	No	2.00
168	11.05	131.45	1.60	0.60	0.50	163.93	1.00	163.93	4.000	No	No	2.00
169	11.12	139.42	1.59	0.62	0.50	173.31	1.00	173.31	4.000	No	No	2.00
170	11.19	145.56	1.61	0.68	0.50	180.35	1.00	180.35	4.000	No	No	2.00
171	11.26	149.82	1.62	0.74	0.50	184.99	1.00	184.99	4.000	No	No	2.00
172	11.33	152.50	1.63	0.76	0.50	187.65	1.00	187.65	4.000	No	No	2.00
173	11.37	153.15	1.62	0.76	0.50	188.12	1.00	188.12	4.000	No	No	2.00
174	11.44	152.88	1.62	0.75	0.50	187.11	1.00	187.11	4.000	No	No	2.00
175	11.51	153.66	1.62	0.75	0.50	187.40	1.00	187.40	4.000	No	No	2.00
176	11.58	157.02	1.61	0.72	0.50	190.85	1.00	190.85	4.000	No	No	2.00
177	11.65	161.76	1.58	0.69	0.50	195.97	1.00	195.97	4.000	No	No	2.00
178	11.72	165.37	1.56	0.65	0.50	199.68	1.00	199.68	4.000	No	No	2.00
179	11.76	167.27	1.55	0.64	0.50	201.63	1.00	201.63	4.000	No	No	2.00
180	11.82	167.73	1.55	0.63	0.50	201.51	1.00	201.51	4.000	No	No	2.00
181	11.90	168.17	1.55	0.63	0.50	201.35	1.00	201.35	4.000	No	No	2.00
182	11.97	169.26	1.54	0.62	0.50	201.98	1.00	201.98	4.000	No	No	2.00
183	12.04	170.29	1.51	0.56	0.50	202.55	1.00	202.55	4.000	No	No	2.00
184	12.11	170.75	1.46	0.45	0.50	202.44	1.00	202.44	4.000	No	No	2.00
185	12.18	170.16	1.40	0.36	0.50	201.10	1.00	201.10	4.000	No	No	2.00
186	12.22	169.38	1.39	0.34	0.50	199.85	1.00	199.85	4.000	No	No	2.00
187	12.29	167.26	1.42	0.37	0.50	196.70	1.00	196.70	4.000	No	No	2.00
188	12.36	163.80	1.45	0.41	0.50	192.01	1.00	192.01	4.000	No	No	2.00
189	12.43	152.25	1.51	0.47	0.50	177.86	1.00	177.86	4.000	No	No	2.00
190	12.48	145.40	1.55	0.51	0.50	169.41	1.00	169.41	4.000	No	No	2.00
191	12.56	140.14	1.59	0.56	0.50	162.67	1.00	162.67	4.000	No	No	2.00
192	12.64	143.94	1.59	0.59	0.50	166.59	1.00	166.59	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.71	145.40	1.61	0.63	0.50	167.77	1.00	167.77	4.000	No	No	2.00
194	12.74	149.44	1.62	0.67	0.50	172.20	1.00	172.20	4.000	No	No	2.00
195	12.81	155.42	1.61	0.69	0.50	178.56	1.00	178.56	4.000	No	No	2.00
196	12.88	162.22	1.61	0.71	0.50	185.83	1.00	185.83	4.000	No	No	2.00
197	12.96	167.92	1.60	0.72	0.50	191.78	1.00	191.78	4.000	No	No	2.00
198	13.03	172.62	1.59	0.72	0.50	196.57	1.00	196.57	4.000	No	No	2.00
199	13.10	176.55	1.58	0.71	0.50	200.43	1.00	200.43	4.000	No	No	2.00
200	13.13	180.10	1.57	0.69	0.50	204.16	1.00	204.16	4.000	No	No	2.00
201	13.20	182.24	1.56	0.68	0.50	206.00	1.00	206.00	4.000	No	No	2.00
202	13.27	184.21	1.56	0.67	0.50	207.61	1.00	207.61	4.000	No	No	2.00
203	13.34	185.30	1.55	0.65	0.50	208.23	1.00	208.23	4.000	No	No	2.00
204	13.41	186.27	1.54	0.64	0.50	208.72	1.00	208.72	4.000	No	No	2.00
205	13.48	187.76	1.53	0.62	0.50	209.78	1.00	209.78	4.000	No	No	2.00
206	13.55	190.87	1.52	0.60	0.50	212.64	1.00	212.64	4.000	No	No	2.00
207	13.62	196.85	1.46	0.51	0.50	218.71	1.00	218.71	4.000	No	No	2.00
208	13.69	203.48	1.39	0.41	0.50	225.46	1.00	225.46	4.000	No	No	2.00
209	13.73	213.05	1.33	0.34	0.50	235.75	1.00	235.75	4.000	No	No	2.00
210	13.80	225.20	1.35	0.39	0.50	248.52	1.00	248.52	4.000	No	No	2.00
211	13.87	240.90	1.38	0.47	0.50	265.15	1.00	265.15	4.000	No	No	2.00
212	13.95	255.88	1.40	0.54	0.50	280.85	1.00	280.85	4.000	No	No	2.00
213	14.00	263.35	1.43	0.63	0.50	288.41	1.00	288.41	4.000	No	No	2.00
214	14.06	270.76	1.45	0.67	0.50	295.82	1.00	295.82	4.000	No	No	2.00
215	14.12	278.95	1.44	0.68	0.50	304.08	1.00	304.08	4.000	No	No	2.00
216	14.19	294.52	1.41	0.65	0.50	320.22	1.00	320.22	4.000	No	No	2.00
217	14.26	307.76	1.41	0.67	0.50	333.60	1.00	333.60	4.000	No	No	2.00
218	14.33	311.72	1.44	0.73	0.50	336.98	1.00	336.98	4.000	No	No	2.00
219	14.40	309.57	1.46	0.79	0.50	333.68	1.00	333.68	4.000	No	No	2.00
220	14.45	304.33	1.47	0.80	0.50	327.43	1.00	327.43	4.000	No	No	2.00
221	14.51	299.19	1.48	0.79	0.50	321.04	1.00	321.04	4.000	No	No	2.00
222	14.58	289.16	1.49	0.79	0.50	309.41	1.00	309.41	4.000	No	No	2.00
223	14.64	277.61	1.50	0.79	0.50	296.23	1.00	296.23	4.000	No	No	2.00
224	14.71	268.73	1.49	0.75	0.50	286.02	1.00	286.02	4.000	No	No	2.00
225	14.78	267.18	1.46	0.68	0.50	283.63	1.00	283.63	4.000	No	No	2.00
226	14.84	265.78	1.44	0.62	0.50	281.42	1.00	281.42	4.000	No	No	2.00
227	14.91	267.61	1.42	0.58	0.50	282.67	1.00	282.67	4.000	No	No	2.00
228	14.97	270.42	1.41	0.56	0.50	284.93	1.00	284.93	4.000	No	No	2.00
229	15.04	275.75	1.39	0.55	0.50	289.82	1.00	289.82	4.000	No	No	2.00
230	15.11	280.27	1.39	0.56	0.50	293.83	1.00	293.83	4.000	No	No	2.00
231	15.17	283.88	1.40	0.58	0.50	296.91	1.00	296.91	4.000	No	No	2.00
232	15.24	289.17	1.41	0.60	0.50	301.73	1.00	301.73	4.000	No	No	2.00
233	15.30	294.96	1.41	0.62	0.50	307.03	1.00	307.03	4.000	No	No	2.00
234	15.37	302.56	1.42	0.65	0.50	314.21	1.00	314.21	4.000	No	No	2.00
235	15.44	306.99	1.43	0.68	0.50	318.02	1.00	318.02	4.000	No	No	2.00
236	15.50	312.50	1.44	0.71	0.50	322.94	1.00	322.94	4.000	No	No	2.00
237	15.56	317.17	1.43	0.70	0.50	327.02	1.00	327.02	4.000	No	No	2.00
238	15.63	324.58	1.42	0.68	0.50	333.93	1.00	333.93	4.000	No	No	2.00
239	15.70	332.58	1.39	0.64	0.50	341.24	1.00	341.24	4.000	No	No	2.00
240	15.76	340.96	1.35	0.58	0.50	349.07	1.00	349.07	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.82	346.82	1.33	0.54	0.50	354.29	1.00	354.29	4.000	No	No	2.00
242	15.89	350.12	1.33	0.56	0.50	356.81	1.00	356.81	4.000	No	No	2.00
243	15.96	350.43	1.37	0.63	0.50	356.30	1.00	356.30	4.000	No	No	2.00
244	16.02	335.66	1.42	0.71	0.50	340.43	1.00	340.43	4.000	No	No	2.00
245	16.09	321.62	1.45	0.73	0.50	325.37	1.00	325.37	4.000	No	No	2.00
246	16.15	307.51	1.46	0.72	0.50	310.36	1.00	310.36	4.000	No	No	2.00
247	16.23	301.66	1.44	0.68	0.50	303.66	1.00	303.66	4.000	No	No	2.00
248	16.28	291.94	1.44	0.66	0.50	293.25	1.00	293.25	4.000	No	No	2.00
249	16.35	279.89	1.45	0.65	0.50	280.45	1.00	280.45	4.000	No	No	2.00
250	16.43	273.44	1.45	0.62	0.50	273.26	1.00	273.26	4.000	No	No	2.00
251	16.49	269.36	1.45	0.61	0.50	268.54	1.00	268.54	4.000	No	No	2.00
252	16.55	268.95	1.44	0.60	0.50	267.64	1.00	267.64	4.000	No	No	2.00
253	16.62	271.88	1.42	0.56	0.50	269.90	1.00	269.90	4.000	No	No	2.00
254	16.68	279.51	1.35	0.45	0.50	277.00	1.00	277.00	4.000	No	No	2.00
255	16.75	290.07	1.27	0.36	0.50	286.82	1.00	286.82	4.000	No	No	2.00
256	16.82	301.13	1.23	0.32	0.50	297.08	1.00	297.08	4.000	No	No	2.00
257	16.88	311.62	1.26	0.37	0.50	306.89	1.00	306.89	4.000	No	No	2.00
258	16.95	318.44	1.28	0.41	0.50	312.93	1.00	312.93	4.000	No	No	2.00
259	17.01	321.66	1.30	0.44	0.50	315.45	1.00	315.45	4.000	No	No	2.00
260	17.07	320.57	1.31	0.45	0.50	313.74	1.00	313.74	4.000	No	No	2.00
261	17.14	322.59	1.31	0.46	0.50	315.02	1.00	315.02	4.000	No	No	2.00
262	17.21	328.62	1.31	0.46	0.50	320.17	1.00	320.17	4.000	No	No	2.00
263	17.28	337.78	1.31	0.47	0.50	328.44	1.00	328.44	4.000	No	No	2.00
264	17.34	346.16	1.30	0.47	0.50	335.93	1.00	335.93	4.000	No	No	2.00
265	17.41	352.39	1.28	0.45	0.50	341.22	1.00	341.22	4.000	No	No	2.00
266	17.47	358.09	1.24	0.40	0.50	346.15	1.00	346.15	4.000	No	No	2.00
267	17.54	364.97	1.23	0.39	0.50	352.01	1.00	352.01	4.000	No	No	2.00
268	17.60	377.12	1.24	0.41	0.50	363.09	1.00	363.09	4.000	No	No	2.00
269	17.66	395.96	1.25	0.46	0.50	380.47	1.00	380.47	4.000	No	No	2.00
270	17.73	401.44	1.31	0.56	0.50	384.95	1.00	384.95	4.000	No	No	2.00
271	17.80	399.57	1.37	0.68	0.50	382.32	1.00	382.32	4.000	No	No	2.00
272	17.86	384.18	1.45	0.82	0.50	366.74	1.00	366.74	4.000	No	No	2.00
273	17.93	377.58	1.49	0.92	0.50	359.64	1.00	359.64	4.000	No	No	2.00
274	17.99	366.90	1.53	0.98	0.50	348.75	1.00	348.75	4.000	No	No	2.00
275	18.06	359.40	1.53	0.98	0.50	340.85	1.00	340.85	4.000	No	No	2.00
276	18.13	350.24	1.51	0.91	0.50	331.41	1.00	331.41	4.000	No	No	2.00
277	18.19	344.97	1.45	0.75	0.50	325.81	1.00	325.81	4.000	No	No	2.00
278	18.25	340.92	1.39	0.61	0.50	321.29	1.00	321.29	4.000	No	No	2.00
279	18.32	341.58	1.38	0.58	0.50	321.25	1.00	321.25	4.000	No	No	2.00
280	18.39	340.61	1.42	0.67	0.50	319.68	1.00	319.68	4.000	No	No	2.00
281	18.45	332.67	1.47	0.76	0.50	311.57	1.00	311.57	4.000	No	No	2.00
282	18.52	313.17	1.49	0.77	0.50	292.69	1.00	292.69	4.000	No	No	2.00
283	18.59	288.38	1.49	0.71	0.50	268.88	1.00	268.88	4.000	No	No	2.00
284	18.65	268.07	1.49	0.66	0.50	249.39	1.00	249.39	4.000	No	No	2.00
285	18.71	256.39	1.51	0.66	0.50	238.03	1.00	238.03	4.000	No	No	2.00
286	18.78	254.18	1.52	0.69	0.50	235.48	1.00	235.48	4.000	No	No	2.00
287	18.84	254.09	1.52	0.69	0.50	234.99	1.00	234.99	4.000	No	No	2.00
288	18.91	243.65	1.56	0.74	0.50	224.82	1.00	224.82	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.97	236.62	1.59	0.79	0.50	217.92	1.00	217.92	4.000	No	No	2.00
290	19.04	229.14	1.62	0.84	0.50	210.57	1.00	210.57	4.000	No	No	2.00
291	19.10	230.86	1.62	0.85	0.50	211.78	1.00	211.78	4.000	No	No	2.00
292	19.18	228.89	1.63	0.86	0.50	209.51	1.00	209.51	4.000	No	No	2.00
293	19.25	231.23	1.61	0.83	0.50	211.26	1.00	211.26	4.000	No	No	2.00
294	19.31	237.02	1.57	0.74	0.50	216.15	1.00	216.15	4.000	No	No	2.00
295	19.37	248.27	1.51	0.63	0.50	226.10	1.00	226.10	4.000	No	No	2.00
296	19.44	264.31	1.45	0.55	0.50	240.29	1.00	240.29	4.000	No	No	2.00
297	19.51	286.48	1.40	0.50	0.50	260.02	1.00	260.02	4.000	No	No	2.00
298	19.57	311.09	1.38	0.50	0.50	281.97	1.00	281.97	4.000	No	No	2.00
299	19.64	332.73	1.37	0.53	0.50	301.06	1.00	301.06	4.000	No	No	2.00
300	19.70	350.17	1.36	0.53	0.50	316.36	1.00	316.36	4.000	No	No	2.00
301	19.77	359.20	1.35	0.54	0.50	323.87	1.00	323.87	4.000	No	No	2.00
302	19.83	363.37	1.35	0.53	0.50	327.11	1.00	327.11	4.000	No	No	2.00
303	19.90	359.70	1.36	0.55	0.50	323.13	1.00	323.13	4.000	No	No	2.00
304	19.96	357.18	1.38	0.59	0.50	320.33	1.00	320.33	4.000	No	No	2.00
305	20.03	354.67	1.44	0.69	0.50	317.45	1.00	317.45	4.000	No	No	2.00
306	20.09	356.14	1.48	0.79	0.50	318.26	1.00	318.26	4.000	No	No	2.00
307	20.16	357.69	1.48	0.81	0.50	319.03	1.00	319.03	4.000	No	No	2.00
308	20.22	360.82	1.46	0.75	0.50	321.27	1.00	321.27	4.000	No	No	2.00
309	20.29	354.19	1.46	0.73	0.50	314.71	1.00	314.71	4.000	No	No	2.00
310	20.36	344.75	1.47	0.74	0.50	305.76	1.00	305.76	4.000	No	No	2.00
311	20.42	327.19	1.52	0.83	0.50	289.62	1.00	289.62	4.000	No	No	2.00
312	20.49	305.32	1.58	0.94	0.50	269.63	1.00	269.63	4.000	No	No	2.00
313	20.55	281.59	1.64	1.03	0.50	248.22	1.00	248.22	4.000	No	No	2.00
314	20.62	257.17	1.68	1.07	0.51	225.85	1.00	225.85	4.000	No	No	2.00
315	20.69	241.41	1.69	1.06	0.52	211.38	1.00	211.38	4.000	No	No	2.00
316	20.75	228.61	1.73	1.13	0.53	199.43	1.05	208.87	4.000	No	No	2.00
317	20.81	229.82	1.73	1.14	0.53	200.13	1.05	210.74	4.000	No	No	2.00
318	20.89	237.26	1.72	1.13	0.52	206.31	1.03	211.50	4.000	No	No	2.00
319	20.95	243.15	1.70	1.09	0.52	211.25	1.00	211.25	4.000	No	No	2.00
320	21.02	239.16	1.70	1.06	0.52	207.46	1.00	207.46	4.000	No	No	2.00
321	21.08	229.54	1.66	0.90	0.51	199.11	1.00	199.11	4.000	No	No	2.00
322	21.16	218.86	1.60	0.72	0.50	189.57	1.00	189.57	4.000	No	No	2.00
323	21.22	208.27	1.55	0.55	0.50	180.06	1.00	180.06	4.000	No	No	2.00
324	21.28	201.05	1.55	0.53	0.50	173.49	1.00	173.49	4.000	No	No	2.00
325	21.35	195.97	1.56	0.54	0.50	168.80	1.00	168.80	4.000	No	No	2.00
326	21.42	182.17	1.62	0.59	0.50	156.57	1.00	156.57	4.000	No	No	2.00
327	21.48	177.25	1.65	0.64	0.50	152.03	1.00	152.03	4.000	No	No	2.00
328	21.55	174.36	1.68	0.69	0.51	149.04	1.00	149.04	4.000	No	No	2.00
329	21.62	183.11	1.66	0.71	0.51	156.38	1.00	156.38	4.000	No	No	2.00
330	21.69	184.42	1.68	0.74	0.51	157.11	1.00	157.11	4.000	No	No	2.00
331	21.73	184.66	1.69	0.78	0.52	157.04	1.00	157.04	4.000	No	No	2.00
332	21.80	184.85	1.70	0.80	0.52	156.84	1.00	156.84	4.000	No	No	2.00
333	21.87	183.97	1.71	0.82	0.52	155.73	1.00	156.45	4.000	No	No	2.00
334	21.94	180.52	1.72	0.84	0.52	152.38	1.03	157.51	4.000	No	No	2.00
335	22.01	172.11	1.76	0.91	0.54	144.62	1.10	159.60	4.000	No	No	2.00
336	22.08	155.91	1.85	1.09	0.56	129.95	1.20	156.00	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.15	138.07	1.96	1.35	0.59	113.95	1.27	145.16	4.000	No	No	2.00
338	22.19	119.85	2.07	1.68	0.63	97.96	1.37	134.69	4.000	No	No	2.00
339	22.26	107.54	2.15	1.92	0.65	87.16	1.49	130.28	4.000	No	No	2.00
340	22.33	91.38	2.26	2.32	0.68	73.20	1.77	129.66	4.000	No	No	2.00
341	22.40	79.76	2.36	2.76	0.71	63.18	2.15	136.10	4.000	No	No	2.00
342	22.47	73.47	2.42	3.16	0.74	57.69	2.51	144.73	4.000	No	No	2.00
343	22.55	75.28	2.42	3.22	0.74	58.99	2.50	147.48	4.000	No	No	2.00
344	22.58	75.16	2.42	3.17	0.73	58.83	2.48	145.83	4.000	No	No	2.00
345	22.65	69.30	2.45	3.24	0.74	53.90	2.67	144.16	4.000	No	No	2.00
346	22.72	63.14	2.48	3.22	0.75	48.78	2.86	139.50	4.000	No	No	2.00
347	22.79	61.79	2.47	2.98	0.75	47.66	2.75	131.30	4.000	No	No	2.00
348	22.86	68.74	2.37	2.43	0.72	53.38	2.22	118.59	4.000	No	No	2.00
349	22.93	82.28	2.24	1.91	0.68	64.59	1.72	111.02	4.000	No	No	2.00
350	23.00	96.73	2.13	1.60	0.65	76.56	1.47	112.56	4.000	No	No	2.00
351	23.04	112.36	2.02	1.30	0.61	89.77	1.32	118.92	4.000	No	No	2.00
352	23.11	126.85	1.89	0.96	0.58	102.29	1.23	126.00	4.000	No	No	2.00
353	23.18	141.52	1.77	0.71	0.54	115.16	1.11	128.08	4.000	No	No	2.00
354	23.25	151.24	1.70	0.59	0.52	123.62	1.00	123.62	4.000	No	No	2.00
355	23.33	155.82	1.69	0.60	0.52	127.21	1.00	127.21	4.000	No	No	2.00
356	23.40	156.95	1.70	0.62	0.52	127.86	1.00	127.86	4.000	No	No	2.00
357	23.43	148.35	1.74	0.67	0.53	120.31	1.07	128.16	4.000	No	No	2.00
358	23.51	143.77	1.76	0.68	0.53	116.19	1.09	126.98	4.000	No	No	2.00
359	23.58	139.50	1.77	0.68	0.54	112.40	1.11	124.98	4.000	No	No	2.00
360	23.63	143.21	1.75	0.66	0.53	115.48	1.08	124.83	4.000	No	No	2.00
361	23.70	142.24	1.76	0.68	0.54	114.36	1.10	126.28	4.000	No	No	2.00
362	23.77	141.65	1.78	0.74	0.54	113.47	1.13	128.73	4.000	No	No	2.00
363	23.84	142.33	1.81	0.80	0.55	113.61	1.16	131.88	4.000	No	No	2.00
364	23.91	144.67	1.82	0.86	0.55	115.13	1.18	135.43	4.000	No	No	2.00
365	23.98	147.87	1.83	0.92	0.56	117.38	1.19	139.39	4.000	No	No	2.00
366	24.05	151.70	1.84	0.97	0.56	120.17	1.19	143.43	4.000	No	No	2.00
367	24.12	155.75	1.84	1.00	0.56	123.19	1.19	147.02	4.000	No	No	2.00
368	24.16	161.77	1.83	1.01	0.56	127.99	1.18	151.54	4.000	No	No	2.00
369	24.23	170.62	1.81	1.00	0.55	135.07	1.16	157.28	4.000	No	No	2.00
370	24.30	183.16	1.78	0.98	0.54	145.23	1.13	164.17	4.000	No	No	2.00
371	24.37	197.74	1.75	0.95	0.53	157.11	1.08	169.69	4.000	No	No	2.00
372	24.44	212.34	1.71	0.92	0.52	169.04	1.02	171.99	4.000	No	No	2.00
373	24.51	224.74	1.69	0.89	0.51	179.14	1.00	179.14	4.000	No	No	2.00
374	24.58	233.02	1.67	0.87	0.51	185.80	1.00	185.80	4.000	No	No	2.00
375	24.62	238.69	1.65	0.85	0.50	190.49	1.00	190.49	4.000	No	No	2.00
376	24.69	240.50	1.64	0.82	0.50	191.86	1.00	191.86	4.000	No	No	2.00
377	24.76	237.26	1.64	0.80	0.50	188.98	1.00	188.98	4.000	No	No	2.00
378	24.83	227.48	1.66	0.81	0.51	180.56	1.00	180.56	4.000	No	No	2.00
379	24.90	214.78	1.68	0.82	0.51	169.73	1.00	169.73	4.000	No	No	2.00
380	24.98	204.25	1.70	0.83	0.52	160.78	1.00	160.78	4.000	No	No	2.00
381	25.01	196.87	1.71	0.83	0.52	154.59	1.02	157.14	4.000	No	No	2.00
382	25.08	193.06	1.69	0.76	0.52	151.66	1.00	151.66	4.000	No	No	2.00
383	25.15	191.60	1.63	0.60	0.50	151.11	1.00	151.11	4.000	No	No	2.00
384	25.23	191.29	1.57	0.46	0.50	150.64	1.00	150.64	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.30	190.76	1.55	0.44	0.50	150.00	1.00	150.00	4.000	No	No	2.00
386	25.37	190.26	1.59	0.51	0.50	149.38	1.00	149.38	4.000	No	No	2.00
387	25.41	192.07	1.62	0.58	0.50	150.69	1.00	150.69	4.000	No	No	2.00
388	25.48	190.20	1.66	0.65	0.51	148.68	1.00	148.68	4.000	No	No	2.00
389	25.54	195.28	1.69	0.74	0.51	152.03	1.00	152.03	4.000	No	No	2.00
390	25.61	201.57	1.70	0.81	0.52	156.42	1.00	156.42	4.000	No	No	2.00
391	25.67	214.83	1.67	0.79	0.51	167.13	1.00	167.13	4.000	No	No	2.00
392	25.73	223.96	1.60	0.64	0.50	174.72	1.00	174.72	4.000	No	No	2.00
393	25.80	234.55	1.52	0.50	0.50	182.77	1.00	182.77	4.000	No	No	2.00
394	25.87	245.08	1.46	0.43	0.50	190.75	1.00	190.75	4.000	No	No	2.00
395	25.94	255.57	1.48	0.48	0.50	198.68	1.00	198.68	4.000	No	No	2.00
396	25.99	266.10	1.50	0.55	0.50	206.70	1.00	206.70	4.000	No	No	2.00
397	26.07	270.90	1.53	0.62	0.50	210.13	1.00	210.13	4.000	No	No	2.00
398	26.14	276.41	1.55	0.69	0.50	214.12	1.00	214.12	4.000	No	No	2.00
399	26.19	280.81	1.57	0.73	0.50	217.28	1.00	217.28	4.000	No	No	2.00
400	26.27	289.93	1.56	0.73	0.50	224.02	1.00	224.02	4.000	No	No	2.00
401	26.32	296.13	1.55	0.74	0.50	228.59	1.00	228.59	4.000	No	No	2.00
402	26.39	299.58	1.55	0.73	0.50	230.95	1.00	230.95	4.000	No	No	2.00
403	26.46	303.11	1.53	0.70	0.50	233.35	1.00	233.35	4.000	No	No	2.00
404	26.52	305.69	1.50	0.62	0.50	235.02	1.00	235.02	4.000	No	No	2.00
405	26.59	303.67	1.46	0.54	0.50	233.13	1.00	233.13	4.000	No	No	2.00
406	26.66	296.38	1.46	0.53	0.50	227.19	1.00	227.19	4.000	No	No	2.00
407	26.73	284.63	1.49	0.56	0.50	217.84	1.00	217.84	4.000	No	No	2.00
408	26.80	269.43	1.54	0.63	0.50	205.86	1.00	205.86	4.000	No	No	2.00
409	26.85	253.05	1.57	0.64	0.50	193.05	1.00	193.05	4.000	No	No	2.00
410	26.91	231.53	1.60	0.64	0.50	176.32	1.00	176.32	4.000	No	No	2.00
411	26.99	202.72	1.68	0.72	0.51	153.26	1.00	153.26	4.000	No	No	2.00
412	27.05	169.99	1.82	0.95	0.55	125.83	1.17	147.83	4.000	No	No	2.00
413	27.12	136.10	2.01	1.38	0.61	98.00	1.31	128.76	4.000	No	No	2.00
414	27.18	109.29	2.16	1.79	0.66	76.79	1.53	117.53	4.000	No	No	2.00
415	27.24	83.72	2.33	2.27	0.71	57.24	2.03	116.33	4.000	No	No	2.00
416	27.31	65.16	2.47	2.75	0.75	43.38	2.80	121.33	4.000	No	No	2.00
417	27.38	51.79	2.61	3.34	0.79	33.56	3.85	129.29	4.000	No	Yes	2.00
418	27.44	48.46	2.66	3.57	0.81	31.09	4.26	132.46	4.000	No	Yes	2.00
419	27.53	47.28	2.68	3.75	0.81	30.13	4.50	135.55	4.000	No	Yes	2.00
420	27.59	50.02	2.65	3.64	0.80	31.99	4.22	135.07	4.000	No	Yes	2.00
421	27.67	51.77	2.64	3.58	0.80	33.14	4.08	135.07	4.000	No	Yes	2.00
422	27.70	56.88	2.58	3.31	0.78	36.75	3.58	131.70	4.000	No	No	2.00
423	27.78	59.18	2.56	3.22	0.78	38.31	3.41	130.56	4.000	No	No	2.00
424	27.85	61.16	2.54	3.13	0.77	39.65	3.26	129.19	4.000	No	No	2.00
425	27.92	60.01	2.55	3.16	0.77	38.74	3.34	129.29	4.000	No	No	2.00
426	27.99	61.25	2.53	3.04	0.77	39.58	3.20	126.73	4.000	No	No	2.00
427	28.03	63.93	2.50	2.86	0.76	41.51	2.96	122.92	4.000	No	No	2.00
428	28.10	70.59	2.43	2.57	0.74	46.28	2.55	117.97	4.000	No	No	2.00
429	28.18	80.77	2.34	2.25	0.71	53.65	2.11	113.12	4.000	No	No	2.00
430	28.25	91.44	2.27	2.00	0.69	61.44	1.81	111.13	4.000	No	No	2.00
431	28.32	100.28	2.21	1.83	0.67	67.92	1.64	111.22	4.000	No	No	2.00
432	28.36	106.13	2.18	1.76	0.66	72.20	1.56	112.75	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.43	109.85	2.16	1.74	0.66	74.79	1.53	114.43	4.000	No	No	2.00
434	28.50	113.16	2.15	1.74	0.65	77.05	1.51	116.36	4.000	No	No	2.00
435	28.58	115.54	2.15	1.75	0.65	78.59	1.50	118.19	4.000	No	No	2.00
436	28.65	117.39	2.13	1.68	0.65	79.94	1.47	117.50	4.000	No	No	2.00
437	28.69	119.66	2.07	1.42	0.63	82.12	1.38	113.55	4.000	No	No	2.00
438	28.76	122.15	2.01	1.16	0.61	84.53	1.31	111.01	4.000	No	No	2.00
439	28.83	124.26	1.97	1.03	0.60	86.36	1.28	110.79	4.000	No	No	2.00
440	28.91	125.44	1.98	1.10	0.60	86.85	1.29	112.44	4.000	No	No	2.00
441	28.95	126.53	2.01	1.20	0.61	87.23	1.31	114.61	4.000	No	No	2.00
442	29.02	119.12	2.07	1.40	0.63	81.10	1.38	112.28	4.000	No	No	2.00
443	29.08	122.15	2.09	1.51	0.63	82.90	1.40	116.30	4.000	No	No	2.00
444	29.15	125.26	2.10	1.61	0.64	84.77	1.42	120.28	4.000	No	No	2.00
445	29.22	135.88	2.07	1.60	0.63	92.27	1.38	127.48	4.000	No	No	2.00
446	29.27	133.64	2.11	1.75	0.64	90.17	1.43	128.67	4.000	No	No	2.00
447	29.36	128.78	2.14	1.87	0.65	86.22	1.49	128.13	4.000	No	No	2.00
448	29.41	122.40	2.17	1.97	0.66	81.36	1.55	126.23	4.000	No	No	2.00
449	29.50	116.91	2.19	1.99	0.67	77.26	1.60	123.51	4.000	No	No	2.00
450	29.55	111.99	2.21	2.01	0.67	73.65	1.64	121.04	4.000	No	No	2.00
451	29.61	108.13	2.22	2.01	0.68	70.83	1.68	118.69	4.000	No	No	2.00
452	29.67	104.39	2.23	1.95	0.68	68.21	1.68	114.85	4.000	No	No	2.00
453	29.73	99.66	2.24	1.92	0.68	64.85	1.72	111.37	4.000	No	No	2.00
454	29.82	94.12	2.27	1.97	0.69	60.78	1.80	109.64	4.000	No	No	2.00
455	29.89	88.07	2.32	2.14	0.70	56.26	1.99	111.71	4.000	No	No	2.00
456	29.95	84.28	2.35	2.31	0.71	53.37	2.15	114.83	4.000	No	No	2.00
457	30.01	82.59	2.38	2.43	0.72	52.00	2.26	117.55	4.000	No	No	2.00
458	30.07	82.34	2.38	2.46	0.72	51.72	2.29	118.42	4.000	No	No	2.00
459	30.13	80.58	2.39	2.48	0.73	50.43	2.34	118.01	4.000	No	No	2.00
460	30.21	76.87	2.41	2.51	0.73	47.79	2.45	117.13	4.000	No	No	2.00
461	30.28	75.47	2.42	2.47	0.73	46.80	2.46	115.27	4.000	No	No	2.00
462	30.35	73.91	2.43	2.47	0.74	45.66	2.51	114.63	4.000	No	No	2.00
463	30.42	76.00	2.41	2.39	0.73	47.05	2.40	112.95	4.000	No	No	2.00
464	30.46	79.47	2.38	2.29	0.72	49.43	2.26	111.58	4.000	No	No	2.00
465	30.53	86.79	2.33	2.13	0.71	54.45	2.02	110.20	4.000	No	No	2.00
466	30.60	94.16	2.28	2.02	0.69	59.51	1.85	110.29	4.000	No	No	2.00
467	30.68	100.13	2.25	1.95	0.68	63.59	1.75	111.16	4.000	No	No	2.00
468	30.75	104.24	2.23	1.90	0.68	66.36	1.69	111.87	4.000	No	No	2.00
469	30.79	105.41	2.22	1.90	0.68	67.10	1.68	112.45	4.000	No	No	2.00
470	30.86	102.53	2.25	1.98	0.68	64.86	1.75	113.23	4.000	No	No	2.00
471	30.93	98.01	2.28	2.11	0.69	61.47	1.86	114.52	4.000	No	No	2.00
472	31.01	94.20	2.31	2.21	0.70	58.65	1.97	115.48	4.000	No	No	2.00
473	31.05	91.83	2.32	2.17	0.70	57.05	1.98	113.16	4.000	No	No	2.00
474	31.12	88.90	2.31	2.08	0.70	55.10	1.98	109.13	4.000	No	No	2.00
475	31.19	82.64	2.34	2.09	0.71	50.82	2.09	106.29	4.000	No	No	2.00
476	31.26	73.42	2.41	2.27	0.73	44.41	2.43	107.71	4.000	No	No	2.00
477	31.33	63.95	2.50	2.59	0.76	37.87	2.98	112.71	4.000	No	No	2.00
478	31.41	57.41	2.57	2.87	0.78	33.40	3.50	116.98	4.000	No	No	2.00
479	31.44	54.08	2.61	3.04	0.79	31.16	3.83	119.20	4.000	No	Yes	2.00
480	31.52	53.58	2.61	3.00	0.79	30.79	3.83	117.95	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.59	54.76	2.56	2.60	0.78	31.72	3.41	108.23	4.000	No	No	2.00
482	31.66	56.70	2.46	1.96	0.75	33.36	2.75	91.64	4.000	No	No	2.00
483	31.70	57.79	2.38	1.49	0.72	34.49	2.29	78.81	4.000	No	No	2.00
484	31.77	58.07	2.36	1.38	0.72	34.75	2.17	75.57	4.000	No	No	2.00
485	31.85	58.88	2.39	1.57	0.73	34.99	2.33	81.36	4.000	No	No	2.00
486	31.92	59.13	2.44	1.87	0.74	34.79	2.58	89.88	4.000	No	No	2.00
487	31.99	57.94	2.49	2.21	0.76	33.67	2.94	99.07	4.000	No	No	2.00
488	32.05	54.39	2.56	2.58	0.78	31.11	3.45	107.17	4.000	No	No	2.00
489	32.12	50.47	2.62	2.80	0.79	28.45	3.90	110.85	4.000	No	Yes	2.00
490	32.19	47.45	2.66	3.01	0.81	26.42	4.31	113.86	4.000	No	Yes	2.00
491	32.26	47.94	2.66	3.06	0.81	26.65	4.32	115.19	4.000	No	Yes	2.00
492	32.30	56.54	2.57	2.73	0.78	32.14	3.48	111.98	4.000	No	No	2.00
493	32.37	71.21	2.43	2.26	0.74	41.75	2.53	105.75	4.000	No	No	2.00
494	32.44	84.88	2.33	2.02	0.71	50.81	2.05	104.16	4.000	No	No	2.00
495	32.52	92.17	2.29	1.95	0.70	55.57	1.90	105.38	4.000	No	No	2.00
496	32.56	96.84	2.27	1.93	0.69	58.62	1.82	106.94	4.000	No	No	2.00
497	32.63	103.63	2.23	1.84	0.68	63.15	1.71	107.74	4.000	No	No	2.00
498	32.70	110.24	2.21	1.79	0.67	67.51	1.63	109.89	4.000	No	No	2.00
499	32.77	113.41	2.20	1.84	0.67	69.39	1.62	112.73	4.000	No	No	2.00
500	32.85	113.41	2.22	1.95	0.67	69.04	1.67	115.46	4.000	No	No	2.00
501	32.89	114.13	2.23	2.02	0.68	69.29	1.70	117.87	4.000	No	No	2.00
502	32.96	117.28	2.22	2.02	0.68	71.25	1.68	119.38	4.000	No	No	2.00
503	33.03	122.85	2.20	1.99	0.67	74.87	1.62	121.30	4.000	No	No	2.00
504	33.10	129.92	2.18	1.94	0.66	79.52	1.56	123.85	4.000	No	No	2.00
505	33.18	137.21	2.15	1.89	0.65	84.32	1.50	126.87	4.000	No	No	2.00
506	33.22	147.11	2.12	1.82	0.64	91.04	1.44	131.30	4.000	No	No	2.00
507	33.29	158.54	2.08	1.74	0.63	98.78	1.39	136.96	4.000	No	No	2.00
508	33.36	170.91	2.04	1.67	0.62	107.19	1.34	143.99	4.000	No	No	2.00
509	33.44	179.53	2.02	1.64	0.61	113.00	1.32	149.30	4.000	No	No	2.00
510	33.47	185.64	2.00	1.62	0.61	117.14	1.31	153.23	4.000	No	No	2.00
511	33.55	189.19	1.99	1.60	0.61	119.45	1.30	155.35	4.000	No	No	2.00
512	33.62	190.90	1.99	1.58	0.60	120.49	1.30	156.20	4.000	No	No	2.00
513	33.69	189.19	1.99	1.59	0.61	119.15	1.30	154.78	4.000	No	No	2.00
514	33.76	183.65	2.01	1.61	0.61	115.10	1.31	151.00	4.000	No	No	2.00
515	33.84	176.33	2.03	1.66	0.62	109.79	1.33	146.38	4.000	No	No	2.00
516	33.87	165.62	2.07	1.76	0.63	102.16	1.38	140.63	4.000	No	No	2.00
517	33.95	152.98	2.12	1.90	0.64	93.17	1.45	135.14	4.000	No	No	2.00
518	34.02	137.80	2.19	2.09	0.66	82.56	1.58	130.71	4.000	No	No	2.00
519	34.09	125.36	2.25	2.27	0.68	74.00	1.74	128.92	4.000	No	No	2.00
520	34.13	114.05	2.30	2.45	0.70	66.39	1.94	128.61	4.000	No	No	2.00
521	34.21	105.37	2.35	2.56	0.71	60.63	2.11	127.93	4.000	No	No	2.00
522	34.28	99.31	2.36	2.55	0.72	56.77	2.20	124.63	4.000	No	No	2.00
523	34.35	97.72	2.35	2.38	0.71	55.92	2.12	118.72	4.000	No	No	2.00
524	34.39	98.63	2.31	2.11	0.70	56.87	1.95	111.10	4.000	No	No	2.00
525	34.47	99.47	2.27	1.89	0.69	57.69	1.82	105.19	4.000	No	No	2.00
526	34.54	103.71	2.22	1.66	0.67	60.78	1.66	100.76	4.000	No	No	2.00
527	34.61	122.11	2.09	1.30	0.63	73.63	1.40	103.02	4.000	No	No	2.00
528	34.69	151.11	1.93	0.99	0.59	94.33	1.25	118.30	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.73	186.24	1.75	0.71	0.53	120.69	1.09	131.63	4.000	No	No	2.00
530	34.79	222.06	1.60	0.51	0.50	147.44	1.00	147.44	4.000	No	No	2.00
531	34.85	268.37	1.46	0.39	0.50	178.32	1.00	178.32	4.000	No	No	2.00
532	34.92	321.72	1.35	0.32	0.50	213.84	1.00	213.84	4.000	No	No	2.00
533	34.99	366.98	1.31	0.33	0.50	243.86	1.00	243.86	4.000	No	No	2.00
534	35.06	381.28	1.33	0.38	0.50	253.15	1.00	253.15	4.000	No	No	2.00
535	35.12	406.29	1.35	0.44	0.50	269.61	1.00	269.61	4.000	No	No	2.00
536	35.18	433.95	1.35	0.47	0.50	287.77	1.00	287.77	4.000	No	No	2.00
537	35.25	478.11	1.32	0.47	0.50	316.88	1.00	316.88	4.000	No	No	2.00
538	35.31	502.03	1.30	0.46	0.50	332.47	1.00	332.47	4.000	No	No	2.00
539	35.38	520.97	1.29	0.47	0.50	344.68	1.00	344.68	4.000	No	No	2.00
540	35.45	539.31	1.26	0.44	0.50	356.52	1.00	356.52	4.000	No	No	2.00
541	35.51	556.75	1.26	0.45	0.50	367.72	1.00	367.72	4.000	No	No	2.00
542	35.58	571.77	1.34	0.60	0.50	377.30	1.00	377.30	4.000	No	No	2.00
543	35.64	587.50	1.45	0.87	0.50	387.29	1.00	387.29	4.000	No	No	2.00
544	35.71	604.78	1.54	1.13	0.50	398.31	1.00	398.31	4.000	No	No	2.00
545	35.78	619.49	1.57	1.24	0.50	407.58	1.00	407.58	4.000	No	No	2.00
546	35.84	622.54	1.56	1.21	0.50	409.19	1.00	409.19	4.000	No	No	2.00
547	35.91	631.17	1.53	1.12	0.50	414.45	1.00	414.45	4.000	No	No	2.00
548	35.97	649.63	1.50	1.05	0.50	426.16	1.00	426.16	4.000	No	No	2.00
549	36.03	673.09	1.48	1.02	0.50	441.18	1.00	441.18	4.000	No	No	2.00
550	36.10	687.29	1.47	1.01	0.50	450.03	1.00	450.03	4.000	No	No	2.00
551	36.17	657.77	1.48	1.02	0.50	430.18	1.00	430.18	4.000	No	No	2.00
552	36.23	627.22	1.49	0.99	0.50	409.74	1.00	409.74	4.000	No	No	2.00
553	36.30	587.72	1.50	0.98	0.50	383.44	1.00	383.44	4.000	No	No	2.00
554	36.37	579.66	1.48	0.90	0.50	377.76	1.00	377.76	4.000	No	No	2.00
555	36.43	575.80	1.45	0.83	0.50	374.86	1.00	374.86	4.000	No	No	2.00
556	36.49	577.01	1.40	0.72	0.50	375.29	1.00	375.29	4.000	No	No	2.00
557	36.56	572.06	1.36	0.64	0.50	371.64	1.00	371.64	4.000	No	No	2.00
558	36.63	570.31	1.33	0.57	0.50	370.15	1.00	370.15	4.000	No	No	2.00
559	36.70	567.95	1.31	0.54	0.50	368.22	1.00	368.22	4.000	No	No	2.00
560	36.76	576.17	1.30	0.52	0.50	373.20	1.00	373.20	4.000	No	No	2.00
561	36.83	576.02	1.30	0.52	0.50	372.72	1.00	372.72	4.000	No	No	2.00
562	36.89	576.73	1.30	0.52	0.50	372.84	1.00	372.84	4.000	No	No	2.00
563	36.96	579.75	1.29	0.51	0.50	374.42	1.00	374.42	4.000	No	No	2.00
564	37.02	583.05	1.29	0.51	0.50	376.24	1.00	376.24	4.000	No	No	2.00
565	37.08	583.86	1.28	0.50	0.50	376.39	1.00	376.39	4.000	No	No	2.00
566	37.15	578.10	1.28	0.49	0.50	372.28	1.00	372.28	4.000	No	No	2.00
567	37.21	573.61	1.28	0.49	0.50	369.04	1.00	369.04	4.000	No	No	2.00
568	37.28	570.81	1.28	0.49	0.50	366.86	1.00	366.86	4.000	No	No	2.00
569	37.35	570.44	1.29	0.49	0.50	366.27	1.00	366.27	4.000	No	No	2.00
570	37.41	570.47	1.29	0.50	0.50	365.92	1.00	365.92	4.000	No	No	2.00
571	37.48	570.71	1.30	0.51	0.50	365.75	1.00	365.75	4.000	No	No	2.00
572	37.54	575.92	1.31	0.53	0.50	368.73	1.00	368.73	4.000	No	No	2.00
573	37.62	588.72	1.31	0.55	0.50	376.56	1.00	376.56	4.000	No	No	2.00
574	37.68	599.03	1.31	0.56	0.50	382.80	1.00	382.80	4.000	No	No	2.00
575	37.74	610.64	1.29	0.52	0.50	389.91	1.00	389.91	4.000	No	No	2.00
576	37.81	621.48	1.22	0.43	0.50	396.48	1.00	396.48	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	37.87	631.51	1.15	0.35	0.50	402.51	1.00	402.51	4.000	No	No	2.00
578	37.94	633.69	1.15	0.35	0.50	403.52	1.00	403.52	4.000	No	No	2.00
579	38.00	635.90	1.23	0.45	0.50	404.58	1.00	404.58	4.000	No	No	2.00
580	38.07	635.38	1.31	0.59	0.50	403.85	1.00	403.85	4.000	No	No	2.00
581	38.13	637.91	1.37	0.69	0.50	405.06	1.00	405.06	4.000	No	No	2.00
582	38.20	635.89	1.39	0.74	0.50	403.39	1.00	403.39	4.000	No	No	2.00
583	38.27	639.11	1.39	0.74	0.50	405.03	1.00	405.03	4.000	No	No	2.00
584	38.33	641.82	1.39	0.74	0.50	406.36	1.00	406.36	4.000	No	No	2.00
585	38.40	640.58	1.39	0.73	0.50	405.14	1.00	405.14	4.000	No	No	2.00
586	38.46	640.91	1.38	0.73	0.50	405.01	1.00	405.01	4.000	No	No	2.00
587	38.54	635.37	1.39	0.73	0.50	401.05	1.00	401.05	4.000	No	No	2.00
588	38.59	615.50	1.41	0.75	0.50	388.14	1.00	388.14	4.000	No	No	2.00
589	38.67	595.42	1.42	0.75	0.50	375.03	1.00	375.03	4.000	No	No	2.00
590	38.73	581.03	1.40	0.71	0.50	365.59	1.00	365.59	4.000	No	No	2.00
591	38.80	582.37	1.36	0.63	0.50	366.09	1.00	366.09	4.000	No	No	2.00
592	38.86	588.22	1.34	0.59	0.50	369.46	1.00	369.46	4.000	No	No	2.00
593	38.93	599.59	1.33	0.57	0.50	376.25	1.00	376.25	4.000	No	No	2.00
594	38.99	613.13	1.31	0.56	0.50	384.46	1.00	384.46	4.000	No	No	2.00
595	39.05	620.08	1.29	0.53	0.50	388.47	1.00	388.47	4.000	No	No	2.00
596	39.12	622.96	1.26	0.49	0.50	389.92	1.00	389.92	4.000	No	No	2.00
597	39.19	616.14	1.25	0.46	0.50	385.24	1.00	385.24	4.000	No	No	2.00
598	39.25	618.88	1.23	0.44	0.50	386.65	1.00	386.65	4.000	No	No	2.00
599	39.31	624.34	1.25	0.46	0.50	389.72	1.00	389.72	4.000	No	No	2.00
600	39.38	643.43	1.25	0.48	0.50	401.30	1.00	401.30	4.000	No	No	2.00
601	39.45	662.93	1.23	0.46	0.50	413.09	1.00	413.09	4.000	No	No	2.00
602	39.52	679.47	1.19	0.42	0.50	423.05	1.00	423.05	4.000	No	No	2.00
603	39.58	687.91	1.17	0.39	0.50	427.96	1.00	427.96	4.000	No	No	2.00
604	39.64	701.46	1.16	0.39	0.50	436.03	1.00	436.03	4.000	No	No	2.00
605	39.71	716.63	1.16	0.39	0.50	445.08	1.00	445.08	4.000	No	No	2.00
606	39.78	744.29	1.13	0.38	0.50	461.87	1.00	461.87	4.000	No	No	2.00
607	39.84	747.81	1.14	0.39	0.50	463.65	1.00	463.65	4.000	No	No	2.00
608	39.91	748.49	1.18	0.43	0.50	463.68	1.00	463.68	4.000	No	No	2.00
609	39.98	738.28	1.22	0.49	0.50	456.88	1.00	456.88	4.000	No	No	2.00
610	40.04	725.94	1.26	0.55	0.50	448.81	1.00	448.81	4.000	No	No	2.00
611	40.10	725.15	1.29	0.60	0.50	447.93	1.00	447.93	4.000	No	No	2.00
612	40.17	719.42	1.32	0.65	0.50	443.95	1.00	443.95	4.000	No	No	2.00
613	40.23	731.16	1.34	0.70	0.50	450.83	1.00	450.83	4.000	No	No	2.00
614	40.30	730.68	1.22	0.48	0.50	450.12	1.00	450.12	4.000	No	No	2.00
615	40.37	735.19	1.02	0.24	0.50	452.52	1.00	452.52	4.000	No	No	2.00
616	40.44	734.32	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
617	40.50	735.69	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
618	40.57	746.25	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
619	40.63	773.56	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
620	40.70	798.76	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.07	2.00	0.00	0.00	0.07	0.00	0.14	2.00	0.00	0.00	0.07	0.00
0.20	2.00	0.00	0.00	0.07	0.00	0.28	2.00	0.00	0.00	0.07	0.00
0.33	2.00	0.00	0.00	0.06	0.00	0.40	2.00	0.00	0.00	0.07	0.00
0.47	2.00	0.00	0.00	0.06	0.00	0.54	2.00	0.00	0.00	0.07	0.00
0.59	2.00	0.00	0.00	0.06	0.00	0.66	2.00	0.00	0.00	0.07	0.00
0.72	2.00	0.00	0.00	0.06	0.00	0.79	2.00	0.00	0.00	0.06	0.00
0.87	2.00	0.00	0.00	0.08	0.00	0.93	2.00	0.00	0.00	0.06	0.00
1.00	2.00	0.00	0.00	0.07	0.00	1.06	2.00	0.00	0.00	0.06	0.00
1.13	2.00	0.00	0.00	0.07	0.00	1.19	2.00	0.00	0.00	0.06	0.00
1.26	2.00	0.00	0.00	0.07	0.00	1.32	2.00	0.00	0.00	0.07	0.00
1.39	2.00	0.00	0.00	0.06	0.00	1.45	2.00	0.00	0.00	0.06	0.00
1.52	2.00	0.00	0.00	0.07	0.00	1.58	2.00	0.00	0.00	0.07	0.00
1.65	2.00	0.00	0.00	0.07	0.00	1.71	2.00	0.00	0.00	0.06	0.00
1.78	2.00	0.00	0.00	0.08	0.00	1.84	2.00	0.00	0.00	0.06	0.00
1.92	2.00	0.00	0.00	0.07	0.00	1.98	2.00	0.00	0.00	0.06	0.00
2.04	2.00	0.00	0.00	0.06	0.00	2.11	2.00	0.00	0.00	0.07	0.00
2.17	2.00	0.00	0.00	0.07	0.00	2.25	2.00	0.00	0.00	0.07	0.00
2.30	2.00	0.00	0.00	0.05	0.00	2.37	2.00	0.00	0.00	0.07	0.00
2.43	2.00	0.00	0.00	0.06	0.00	2.52	2.00	0.00	0.00	0.09	0.00
2.58	2.00	0.00	0.00	0.06	0.00	2.65	2.00	0.00	0.00	0.06	0.00
2.71	2.00	0.00	0.00	0.06	0.00	2.77	2.00	0.00	0.00	0.06	0.00
2.83	2.00	0.00	0.00	0.06	0.00	2.90	2.00	0.00	0.00	0.06	0.00
2.96	2.00	0.00	0.00	0.06	0.00	3.02	2.00	0.00	0.00	0.06	0.00
3.10	2.00	0.00	0.00	0.08	0.00	3.17	2.00	0.00	0.00	0.07	0.00
3.22	2.00	0.00	0.00	0.05	0.00	3.31	2.00	0.00	0.00	0.09	0.00
3.38	2.00	0.00	0.00	0.07	0.00	3.44	2.00	0.00	0.00	0.07	0.00
3.48	2.00	0.00	0.00	0.03	0.00	3.54	2.00	0.00	0.00	0.07	0.00
3.64	2.00	0.00	0.00	0.10	0.00	3.68	2.00	0.00	0.00	0.04	0.00
3.75	2.00	0.00	0.00	0.07	0.00	3.81	2.00	0.00	0.00	0.07	0.00
3.88	2.00	0.00	0.00	0.06	0.00	3.95	2.00	0.00	0.00	0.07	0.00
4.02	2.00	0.00	0.00	0.07	0.00	4.09	2.00	0.00	0.00	0.07	0.00
4.16	2.00	0.00	0.00	0.07	0.00	4.22	2.00	0.00	0.00	0.07	0.00
4.29	2.00	0.00	0.00	0.07	0.00	4.36	2.00	0.00	0.00	0.07	0.00
4.43	2.00	0.00	0.00	0.07	0.00	4.46	2.00	0.00	0.00	0.04	0.00
4.53	2.00	0.00	0.00	0.07	0.00	4.60	2.00	0.00	0.00	0.07	0.00
4.67	2.00	0.00	0.00	0.07	0.00	4.73	2.00	0.00	0.00	0.07	0.00
4.80	2.00	0.00	0.00	0.07	0.00	4.87	2.00	0.00	0.00	0.07	0.00
4.94	2.00	0.00	0.00	0.07	0.00	5.01	2.00	0.00	0.00	0.07	0.00
5.07	2.00	0.00	0.00	0.06	0.00	5.14	2.00	0.00	0.00	0.07	0.00
5.21	2.00	0.00	0.00	0.06	0.00	5.28	2.00	0.00	0.00	0.07	0.00
5.34	2.00	0.00	0.00	0.06	0.00	5.41	2.00	0.00	0.00	0.07	0.00
5.47	2.00	0.00	0.00	0.07	0.00	5.55	2.00	0.00	0.00	0.07	0.00
5.58	2.00	0.00	0.00	0.04	0.00	5.65	2.00	0.00	0.00	0.07	0.00
5.72	2.00	0.00	0.00	0.07	0.00	5.78	2.00	0.00	0.00	0.06	0.00
5.85	2.00	0.00	0.00	0.07	0.00	5.91	2.00	0.00	0.00	0.07	0.00
5.98	2.00	0.00	0.00	0.07	0.00	6.05	2.00	0.00	0.00	0.07	0.00
6.12	2.00	0.00	0.00	0.07	0.00	6.18	2.00	0.00	0.00	0.07	0.00
6.26	2.00	0.00	0.00	0.07	0.00	6.33	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.37	2.00	0.00	0.00	0.04	0.00	6.43	2.00	0.00	0.00	0.07	0.00
6.50	2.00	0.00	0.00	0.07	0.00	6.57	2.00	0.00	0.00	0.07	0.00
6.63	2.00	0.00	0.00	0.07	0.00	6.70	2.00	0.00	0.00	0.07	0.00
6.77	2.00	0.00	0.00	0.07	0.00	6.84	2.00	0.00	0.00	0.07	0.00
6.90	2.00	0.00	0.00	0.07	0.00	6.97	2.00	0.00	0.00	0.07	0.00
7.04	2.00	0.00	0.00	0.07	0.00	7.11	2.00	0.00	0.00	0.07	0.00
7.17	2.00	0.00	0.00	0.07	0.00	7.24	2.00	0.00	0.00	0.07	0.00
7.31	2.00	0.00	0.00	0.07	0.00	7.38	2.00	0.00	0.00	0.07	0.00
7.44	2.00	0.00	0.00	0.06	0.00	7.51	2.00	0.00	0.00	0.07	0.00
7.58	2.00	0.00	0.00	0.07	0.00	7.64	2.00	0.00	0.00	0.07	0.00
7.68	2.00	0.00	0.00	0.04	0.00	7.75	2.00	0.00	0.00	0.07	0.00
7.82	2.00	0.00	0.00	0.07	0.00	7.88	2.00	0.00	0.00	0.07	0.00
7.96	2.00	0.00	0.00	0.07	0.00	8.03	2.00	0.00	0.00	0.07	0.00
8.08	2.00	0.00	0.00	0.05	0.00	8.15	2.00	0.00	0.00	0.07	0.00
8.20	2.00	0.00	0.00	0.05	0.00	8.29	2.00	0.00	0.00	0.09	0.00
8.35	2.00	0.00	0.00	0.06	0.00	8.42	2.00	0.00	0.00	0.06	0.00
8.48	2.00	0.00	0.00	0.07	0.00	8.55	2.00	0.00	0.00	0.06	0.00
8.62	2.00	0.00	0.00	0.07	0.00	8.69	2.00	0.00	0.00	0.07	0.00
8.76	2.00	0.00	0.00	0.07	0.00	8.83	2.00	0.00	0.00	0.07	0.00
8.86	2.00	0.00	0.00	0.04	0.00	8.93	2.00	0.00	0.00	0.07	0.00
8.99	2.00	0.00	0.00	0.06	0.00	9.06	2.00	0.00	0.00	0.07	0.00
9.13	2.00	0.00	0.00	0.07	0.00	9.20	2.00	0.00	0.00	0.07	0.00
9.27	2.00	0.00	0.00	0.07	0.00	9.34	2.00	0.00	0.00	0.06	0.00
9.41	2.00	0.00	0.00	0.07	0.00	9.47	2.00	0.00	0.00	0.06	0.00
9.54	2.00	0.00	0.00	0.07	0.00	9.61	2.00	0.00	0.00	0.07	0.00
9.67	2.00	0.00	0.00	0.07	0.00	9.72	2.00	0.00	0.00	0.04	0.00
9.78	2.00	0.00	0.00	0.06	0.00	9.86	2.00	0.00	0.00	0.08	0.00
9.92	2.00	0.00	0.00	0.06	0.00	9.99	2.00	0.00	0.00	0.07	0.00
10.05	2.00	0.00	0.00	0.06	0.00	10.12	2.00	0.00	0.00	0.07	0.00
10.19	2.00	0.00	0.00	0.08	0.00	10.26	2.00	0.00	0.00	0.06	0.00
10.32	2.00	0.00	0.00	0.07	0.00	10.39	2.00	0.00	0.00	0.07	0.00
10.46	2.00	0.00	0.00	0.07	0.00	10.53	2.00	0.00	0.00	0.07	0.00
10.60	2.00	0.00	0.00	0.07	0.00	10.67	2.00	0.00	0.00	0.07	0.00
10.71	2.00	0.00	0.00	0.04	0.00	10.78	2.00	0.00	0.00	0.07	0.00
10.85	2.00	0.00	0.00	0.07	0.00	10.91	2.00	0.00	0.00	0.07	0.00
10.98	2.00	0.00	0.00	0.07	0.00	11.05	2.00	0.00	0.00	0.07	0.00
11.12	2.00	0.00	0.00	0.07	0.00	11.19	2.00	0.00	0.00	0.07	0.00
11.26	2.00	0.00	0.00	0.07	0.00	11.33	2.00	0.00	0.00	0.07	0.00
11.37	2.00	0.00	0.00	0.04	0.00	11.44	2.00	0.00	0.00	0.07	0.00
11.51	2.00	0.00	0.00	0.07	0.00	11.58	2.00	0.00	0.00	0.07	0.00
11.65	2.00	0.00	0.00	0.07	0.00	11.72	2.00	0.00	0.00	0.07	0.00
11.76	2.00	0.00	0.00	0.04	0.00	11.82	2.00	0.00	0.00	0.07	0.00
11.90	2.00	0.00	0.00	0.07	0.00	11.97	2.00	0.00	0.00	0.07	0.00
12.04	2.00	0.00	0.00	0.07	0.00	12.11	2.00	0.00	0.00	0.07	0.00
12.18	2.00	0.00	0.00	0.07	0.00	12.22	2.00	0.00	0.00	0.04	0.00
12.29	2.00	0.00	0.00	0.07	0.00	12.36	2.00	0.00	0.00	0.07	0.00
12.43	2.00	0.00	0.00	0.07	0.00	12.48	2.00	0.00	0.00	0.05	0.00
12.56	2.00	0.00	0.00	0.08	0.00	12.64	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.71	2.00	0.00	0.00	0.07	0.00	12.74	2.00	0.00	0.00	0.04	0.00
12.81	2.00	0.00	0.00	0.07	0.00	12.88	2.00	0.00	0.00	0.07	0.00
12.96	2.00	0.00	0.00	0.07	0.00	13.03	2.00	0.00	0.00	0.07	0.00
13.10	2.00	0.00	0.00	0.07	0.00	13.13	2.00	0.00	0.00	0.04	0.00
13.20	2.00	0.00	0.00	0.07	0.00	13.27	2.00	0.00	0.00	0.07	0.00
13.34	2.00	0.00	0.00	0.07	0.00	13.41	2.00	0.00	0.00	0.07	0.00
13.48	2.00	0.00	0.00	0.07	0.00	13.55	2.00	0.00	0.00	0.07	0.00
13.62	2.00	0.00	0.00	0.07	0.00	13.69	2.00	0.00	0.00	0.07	0.00
13.73	2.00	0.00	0.00	0.04	0.00	13.80	2.00	0.00	0.00	0.07	0.00
13.87	2.00	0.00	0.00	0.07	0.00	13.95	2.00	0.00	0.00	0.07	0.00
14.00	2.00	0.00	0.00	0.06	0.00	14.06	2.00	0.00	0.00	0.06	0.00
14.12	2.00	0.00	0.00	0.06	0.00	14.19	2.00	0.00	0.00	0.07	0.00
14.26	2.00	0.00	0.00	0.08	0.00	14.33	2.00	0.00	0.00	0.07	0.00
14.40	2.00	0.00	0.00	0.07	0.00	14.45	2.00	0.00	0.00	0.04	0.00
14.51	2.00	0.00	0.00	0.06	0.00	14.58	2.00	0.00	0.00	0.07	0.00
14.64	2.00	0.00	0.00	0.07	0.00	14.71	2.00	0.00	0.00	0.06	0.00
14.78	2.00	0.00	0.00	0.07	0.00	14.84	2.00	0.00	0.00	0.07	0.00
14.91	2.00	0.00	0.00	0.07	0.00	14.97	2.00	0.00	0.00	0.07	0.00
15.04	2.00	0.00	0.00	0.07	0.00	15.11	2.00	0.00	0.00	0.07	0.00
15.17	2.00	0.00	0.00	0.06	0.00	15.24	2.00	0.00	0.00	0.06	0.00
15.30	2.00	0.00	0.00	0.07	0.00	15.37	2.00	0.00	0.00	0.06	0.00
15.44	2.00	0.00	0.00	0.07	0.00	15.50	2.00	0.00	0.00	0.07	0.00
15.56	2.00	0.00	0.00	0.06	0.00	15.63	2.00	0.00	0.00	0.06	0.00
15.70	2.00	0.00	0.00	0.08	0.00	15.76	2.00	0.00	0.00	0.06	0.00
15.82	2.00	0.00	0.00	0.06	0.00	15.89	2.00	0.00	0.00	0.07	0.00
15.96	2.00	0.00	0.00	0.06	0.00	16.02	2.00	0.00	0.00	0.07	0.00
16.09	2.00	0.00	0.00	0.07	0.00	16.15	2.00	0.00	0.00	0.06	0.00
16.23	2.00	0.00	0.00	0.07	0.00	16.28	2.00	0.00	0.00	0.06	0.00
16.35	2.00	0.00	0.00	0.07	0.00	16.43	2.00	0.00	0.00	0.07	0.00
16.49	2.00	0.00	0.00	0.07	0.00	16.55	2.00	0.00	0.00	0.05	0.00
16.62	2.00	0.00	0.00	0.07	0.00	16.68	2.00	0.00	0.00	0.05	0.00
16.75	2.00	0.00	0.00	0.07	0.00	16.82	2.00	0.00	0.00	0.07	0.00
16.88	2.00	0.00	0.00	0.06	0.00	16.95	2.00	0.00	0.00	0.07	0.00
17.01	2.00	0.00	0.00	0.06	0.00	17.07	2.00	0.00	0.00	0.06	0.00
17.14	2.00	0.00	0.00	0.07	0.00	17.21	2.00	0.00	0.00	0.07	0.00
17.28	2.00	0.00	0.00	0.06	0.00	17.34	2.00	0.00	0.00	0.06	0.00
17.41	2.00	0.00	0.00	0.07	0.00	17.47	2.00	0.00	0.00	0.05	0.00
17.54	2.00	0.00	0.00	0.07	0.00	17.60	2.00	0.00	0.00	0.06	0.00
17.66	2.00	0.00	0.00	0.07	0.00	17.73	2.00	0.00	0.00	0.07	0.00
17.80	2.00	0.00	0.00	0.07	0.00	17.86	2.00	0.00	0.00	0.07	0.00
17.93	2.00	0.00	0.00	0.07	0.00	17.99	2.00	0.00	0.00	0.06	0.00
18.06	2.00	0.00	0.00	0.07	0.00	18.13	2.00	0.00	0.00	0.07	0.00
18.19	2.00	0.00	0.00	0.06	0.00	18.25	2.00	0.00	0.00	0.07	0.00
18.32	2.00	0.00	0.00	0.07	0.00	18.39	2.00	0.00	0.00	0.07	0.00
18.45	2.00	0.00	0.00	0.07	0.00	18.52	2.00	0.00	0.00	0.06	0.00
18.59	2.00	0.00	0.00	0.07	0.00	18.65	2.00	0.00	0.00	0.06	0.00
18.71	2.00	0.00	0.00	0.06	0.00	18.78	2.00	0.00	0.00	0.07	0.00
18.84	2.00	0.00	0.00	0.06	0.00	18.91	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.97	2.00	0.00	0.00	0.06	0.00	19.04	2.00	0.00	0.00	0.07	0.00
19.10	2.00	0.00	0.00	0.06	0.00	19.18	2.00	0.00	0.00	0.07	0.00
19.25	2.00	0.00	0.00	0.07	0.00	19.31	2.00	0.00	0.00	0.07	0.00
19.37	2.00	0.00	0.00	0.05	0.00	19.44	2.00	0.00	0.00	0.07	0.00
19.51	2.00	0.00	0.00	0.07	0.00	19.57	2.00	0.00	0.00	0.06	0.00
19.64	2.00	0.00	0.00	0.07	0.00	19.70	2.00	0.00	0.00	0.06	0.00
19.77	2.00	0.00	0.00	0.07	0.00	19.83	2.00	0.00	0.00	0.06	0.00
19.90	2.00	0.00	0.00	0.07	0.00	19.96	2.00	0.00	0.00	0.06	0.00
20.03	2.00	0.00	0.00	0.07	0.00	20.09	2.00	0.00	0.00	0.05	0.00
20.16	2.00	0.00	0.00	0.07	0.00	20.22	2.00	0.00	0.00	0.06	0.00
20.29	2.00	0.00	0.00	0.07	0.00	20.36	2.00	0.00	0.00	0.06	0.00
20.42	2.00	0.00	0.00	0.06	0.00	20.49	2.00	0.00	0.00	0.08	0.00
20.55	2.00	0.00	0.00	0.05	0.00	20.62	2.00	0.00	0.00	0.07	0.00
20.69	2.00	0.00	0.00	0.07	0.00	20.75	2.00	0.00	0.00	0.07	0.00
20.81	2.00	0.00	0.00	0.06	0.00	20.89	2.00	0.00	0.00	0.08	0.00
20.95	2.00	0.00	0.00	0.06	0.00	21.02	2.00	0.00	0.00	0.06	0.00
21.08	2.00	0.00	0.00	0.06	0.00	21.16	2.00	0.00	0.00	0.08	0.00
21.22	2.00	0.00	0.00	0.06	0.00	21.28	2.00	0.00	0.00	0.06	0.00
21.35	2.00	0.00	0.00	0.07	0.00	21.42	2.00	0.00	0.00	0.07	0.00
21.48	2.00	0.00	0.00	0.06	0.00	21.55	2.00	0.00	0.00	0.07	0.00
21.62	2.00	0.00	0.00	0.07	0.00	21.69	2.00	0.00	0.00	0.07	0.00
21.73	2.00	0.00	0.00	0.04	0.00	21.80	2.00	0.00	0.00	0.07	0.00
21.87	2.00	0.00	0.00	0.07	0.00	21.94	2.00	0.00	0.00	0.07	0.00
22.01	2.00	0.00	0.00	0.07	0.00	22.08	2.00	0.00	0.00	0.07	0.00
22.15	2.00	0.00	0.00	0.07	0.00	22.19	2.00	0.00	0.00	0.04	0.00
22.26	2.00	0.00	0.00	0.07	0.00	22.33	2.00	0.00	0.00	0.07	0.00
22.40	2.00	0.00	0.00	0.07	0.00	22.47	2.00	0.00	0.00	0.07	0.00
22.55	2.00	0.00	0.00	0.07	0.00	22.58	2.00	0.00	0.00	0.04	0.00
22.65	2.00	0.00	0.00	0.07	0.00	22.72	2.00	0.00	0.00	0.07	0.00
22.79	2.00	0.00	0.00	0.07	0.00	22.86	2.00	0.00	0.00	0.07	0.00
22.93	2.00	0.00	0.00	0.07	0.00	23.00	2.00	0.00	0.00	0.07	0.00
23.04	2.00	0.00	0.00	0.04	0.00	23.11	2.00	0.00	0.00	0.07	0.00
23.18	2.00	0.00	0.00	0.07	0.00	23.25	2.00	0.00	0.00	0.07	0.00
23.33	2.00	0.00	0.00	0.07	0.00	23.40	2.00	0.00	0.00	0.07	0.00
23.43	2.00	0.00	0.00	0.04	0.00	23.51	2.00	0.00	0.00	0.08	0.00
23.58	2.00	0.00	0.00	0.07	0.00	23.63	2.00	0.00	0.00	0.05	0.00
23.70	2.00	0.00	0.00	0.07	0.00	23.77	2.00	0.00	0.00	0.07	0.00
23.84	2.00	0.00	0.00	0.07	0.00	23.91	2.00	0.00	0.00	0.07	0.00
23.98	2.00	0.00	0.00	0.07	0.00	24.05	2.00	0.00	0.00	0.07	0.00
24.12	2.00	0.00	0.00	0.07	0.00	24.16	2.00	0.00	0.00	0.04	0.00
24.23	2.00	0.00	0.00	0.07	0.00	24.30	2.00	0.00	0.00	0.07	0.00
24.37	2.00	0.00	0.00	0.07	0.00	24.44	2.00	0.00	0.00	0.07	0.00
24.51	2.00	0.00	0.00	0.07	0.00	24.58	2.00	0.00	0.00	0.07	0.00
24.62	2.00	0.00	0.00	0.04	0.00	24.69	2.00	0.00	0.00	0.07	0.00
24.76	2.00	0.00	0.00	0.07	0.00	24.83	2.00	0.00	0.00	0.07	0.00
24.90	2.00	0.00	0.00	0.07	0.00	24.98	2.00	0.00	0.00	0.07	0.00
25.01	2.00	0.00	0.00	0.04	0.00	25.08	2.00	0.00	0.00	0.07	0.00
25.15	2.00	0.00	0.00	0.07	0.00	25.23	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.30	2.00	0.00	0.00	0.07	0.00	25.37	2.00	0.00	0.00	0.07	0.00
25.41	2.00	0.00	0.00	0.04	0.00	25.48	2.00	0.00	0.00	0.07	0.00
25.54	2.00	0.00	0.00	0.07	0.00	25.61	2.00	0.00	0.00	0.07	0.00
25.67	2.00	0.00	0.00	0.06	0.00	25.73	2.00	0.00	0.00	0.07	0.00
25.80	2.00	0.00	0.00	0.07	0.00	25.87	2.00	0.00	0.00	0.07	0.00
25.94	2.00	0.00	0.00	0.07	0.00	25.99	2.00	0.00	0.00	0.05	0.00
26.07	2.00	0.00	0.00	0.07	0.00	26.14	2.00	0.00	0.00	0.07	0.00
26.19	2.00	0.00	0.00	0.06	0.00	26.27	2.00	0.00	0.00	0.08	0.00
26.32	2.00	0.00	0.00	0.05	0.00	26.39	2.00	0.00	0.00	0.07	0.00
26.46	2.00	0.00	0.00	0.07	0.00	26.52	2.00	0.00	0.00	0.07	0.00
26.59	2.00	0.00	0.00	0.07	0.00	26.66	2.00	0.00	0.00	0.07	0.00
26.73	2.00	0.00	0.00	0.07	0.00	26.80	2.00	0.00	0.00	0.07	0.00
26.85	2.00	0.00	0.00	0.06	0.00	26.91	2.00	0.00	0.00	0.06	0.00
26.99	2.00	0.00	0.00	0.08	0.00	27.05	2.00	0.00	0.00	0.06	0.00
27.12	2.00	0.00	0.00	0.06	0.00	27.18	2.00	0.00	0.00	0.06	0.00
27.24	2.00	0.00	0.00	0.06	0.00	27.31	2.00	0.00	0.00	0.07	0.00
27.38	2.00	0.00	0.00	0.07	0.00	27.44	2.00	0.00	0.00	0.06	0.00
27.53	2.00	0.00	0.00	0.09	0.00	27.59	2.00	0.00	0.00	0.07	0.00
27.67	2.00	0.00	0.00	0.07	0.00	27.70	2.00	0.00	0.00	0.04	0.00
27.78	2.00	0.00	0.00	0.07	0.00	27.85	2.00	0.00	0.00	0.07	0.00
27.92	2.00	0.00	0.00	0.07	0.00	27.99	2.00	0.00	0.00	0.07	0.00
28.03	2.00	0.00	0.00	0.04	0.00	28.10	2.00	0.00	0.00	0.07	0.00
28.18	2.00	0.00	0.00	0.07	0.00	28.25	2.00	0.00	0.00	0.07	0.00
28.32	2.00	0.00	0.00	0.07	0.00	28.36	2.00	0.00	0.00	0.04	0.00
28.43	2.00	0.00	0.00	0.07	0.00	28.50	2.00	0.00	0.00	0.07	0.00
28.58	2.00	0.00	0.00	0.07	0.00	28.65	2.00	0.00	0.00	0.07	0.00
28.69	2.00	0.00	0.00	0.04	0.00	28.76	2.00	0.00	0.00	0.07	0.00
28.83	2.00	0.00	0.00	0.07	0.00	28.91	2.00	0.00	0.00	0.07	0.00
28.95	2.00	0.00	0.00	0.04	0.00	29.02	2.00	0.00	0.00	0.07	0.00
29.08	2.00	0.00	0.00	0.06	0.00	29.15	2.00	0.00	0.00	0.07	0.00
29.22	2.00	0.00	0.00	0.07	0.00	29.27	2.00	0.00	0.00	0.05	0.00
29.36	2.00	0.00	0.00	0.08	0.00	29.41	2.00	0.00	0.00	0.06	0.00
29.50	2.00	0.00	0.00	0.08	0.00	29.55	2.00	0.00	0.00	0.06	0.00
29.61	2.00	0.00	0.00	0.06	0.00	29.67	2.00	0.00	0.00	0.06	0.00
29.73	2.00	0.00	0.00	0.06	0.00	29.82	2.00	0.00	0.00	0.09	0.00
29.89	2.00	0.00	0.00	0.06	0.00	29.95	2.00	0.00	0.00	0.06	0.00
30.01	2.00	0.00	0.00	0.06	0.00	30.07	2.00	0.00	0.00	0.05	0.00
30.13	2.00	0.00	0.00	0.06	0.00	30.21	2.00	0.00	0.00	0.08	0.00
30.28	2.00	0.00	0.00	0.07	0.00	30.35	2.00	0.00	0.00	0.07	0.00
30.42	2.00	0.00	0.00	0.07	0.00	30.46	2.00	0.00	0.00	0.04	0.00
30.53	2.00	0.00	0.00	0.07	0.00	30.60	2.00	0.00	0.00	0.07	0.00
30.68	2.00	0.00	0.00	0.07	0.00	30.75	2.00	0.00	0.00	0.07	0.00
30.79	2.00	0.00	0.00	0.04	0.00	30.86	2.00	0.00	0.00	0.07	0.00
30.93	2.00	0.00	0.00	0.07	0.00	31.01	2.00	0.00	0.00	0.07	0.00
31.05	2.00	0.00	0.00	0.04	0.00	31.12	2.00	0.00	0.00	0.07	0.00
31.19	2.00	0.00	0.00	0.07	0.00	31.26	2.00	0.00	0.00	0.07	0.00
31.33	2.00	0.00	0.00	0.07	0.00	31.41	2.00	0.00	0.00	0.07	0.00
31.44	2.00	0.00	0.00	0.04	0.00	31.52	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.59	2.00	0.00	0.00	0.07	0.00	31.66	2.00	0.00	0.00	0.07	0.00
31.70	2.00	0.00	0.00	0.04	0.00	31.77	2.00	0.00	0.00	0.07	0.00
31.85	2.00	0.00	0.00	0.08	0.00	31.92	2.00	0.00	0.00	0.07	0.00
31.99	2.00	0.00	0.00	0.07	0.00	32.05	2.00	0.00	0.00	0.05	0.00
32.12	2.00	0.00	0.00	0.07	0.00	32.19	2.00	0.00	0.00	0.07	0.00
32.26	2.00	0.00	0.00	0.07	0.00	32.30	2.00	0.00	0.00	0.04	0.00
32.37	2.00	0.00	0.00	0.07	0.00	32.44	2.00	0.00	0.00	0.07	0.00
32.52	2.00	0.00	0.00	0.08	0.00	32.56	2.00	0.00	0.00	0.04	0.00
32.63	2.00	0.00	0.00	0.07	0.00	32.70	2.00	0.00	0.00	0.07	0.00
32.77	2.00	0.00	0.00	0.07	0.00	32.85	2.00	0.00	0.00	0.07	0.00
32.89	2.00	0.00	0.00	0.04	0.00	32.96	2.00	0.00	0.00	0.07	0.00
33.03	2.00	0.00	0.00	0.07	0.00	33.10	2.00	0.00	0.00	0.07	0.00
33.18	2.00	0.00	0.00	0.07	0.00	33.22	2.00	0.00	0.00	0.04	0.00
33.29	2.00	0.00	0.00	0.07	0.00	33.36	2.00	0.00	0.00	0.07	0.00
33.44	2.00	0.00	0.00	0.07	0.00	33.47	2.00	0.00	0.00	0.04	0.00
33.55	2.00	0.00	0.00	0.07	0.00	33.62	2.00	0.00	0.00	0.07	0.00
33.69	2.00	0.00	0.00	0.07	0.00	33.76	2.00	0.00	0.00	0.07	0.00
33.84	2.00	0.00	0.00	0.07	0.00	33.87	2.00	0.00	0.00	0.04	0.00
33.95	2.00	0.00	0.00	0.07	0.00	34.02	2.00	0.00	0.00	0.07	0.00
34.09	2.00	0.00	0.00	0.07	0.00	34.13	2.00	0.00	0.00	0.04	0.00
34.21	2.00	0.00	0.00	0.07	0.00	34.28	2.00	0.00	0.00	0.07	0.00
34.35	2.00	0.00	0.00	0.07	0.00	34.39	2.00	0.00	0.00	0.04	0.00
34.47	2.00	0.00	0.00	0.08	0.00	34.54	2.00	0.00	0.00	0.07	0.00
34.61	2.00	0.00	0.00	0.07	0.00	34.69	2.00	0.00	0.00	0.07	0.00
34.73	2.00	0.00	0.00	0.04	0.00	34.79	2.00	0.00	0.00	0.07	0.00
34.85	2.00	0.00	0.00	0.06	0.00	34.92	2.00	0.00	0.00	0.06	0.00
34.99	2.00	0.00	0.00	0.07	0.00	35.06	2.00	0.00	0.00	0.07	0.00
35.12	2.00	0.00	0.00	0.06	0.00	35.18	2.00	0.00	0.00	0.06	0.00
35.25	2.00	0.00	0.00	0.07	0.00	35.31	2.00	0.00	0.00	0.06	0.00
35.38	2.00	0.00	0.00	0.07	0.00	35.45	2.00	0.00	0.00	0.06	0.00
35.51	2.00	0.00	0.00	0.07	0.00	35.58	2.00	0.00	0.00	0.06	0.00
35.64	2.00	0.00	0.00	0.07	0.00	35.71	2.00	0.00	0.00	0.07	0.00
35.78	2.00	0.00	0.00	0.07	0.00	35.84	2.00	0.00	0.00	0.06	0.00
35.91	2.00	0.00	0.00	0.06	0.00	35.97	2.00	0.00	0.00	0.07	0.00
36.03	2.00	0.00	0.00	0.06	0.00	36.10	2.00	0.00	0.00	0.07	0.00
36.17	2.00	0.00	0.00	0.07	0.00	36.23	2.00	0.00	0.00	0.06	0.00
36.30	2.00	0.00	0.00	0.07	0.00	36.37	2.00	0.00	0.00	0.07	0.00
36.43	2.00	0.00	0.00	0.06	0.00	36.49	2.00	0.00	0.00	0.06	0.00
36.56	2.00	0.00	0.00	0.07	0.00	36.63	2.00	0.00	0.00	0.06	0.00
36.70	2.00	0.00	0.00	0.07	0.00	36.76	2.00	0.00	0.00	0.07	0.00
36.83	2.00	0.00	0.00	0.07	0.00	36.89	2.00	0.00	0.00	0.06	0.00
36.96	2.00	0.00	0.00	0.07	0.00	37.02	2.00	0.00	0.00	0.06	0.00
37.08	2.00	0.00	0.00	0.06	0.00	37.15	2.00	0.00	0.00	0.07	0.00
37.21	2.00	0.00	0.00	0.06	0.00	37.28	2.00	0.00	0.00	0.07	0.00
37.35	2.00	0.00	0.00	0.06	0.00	37.41	2.00	0.00	0.00	0.07	0.00
37.48	2.00	0.00	0.00	0.06	0.00	37.54	2.00	0.00	0.00	0.07	0.00
37.62	2.00	0.00	0.00	0.07	0.00	37.68	2.00	0.00	0.00	0.07	0.00
37.74	2.00	0.00	0.00	0.06	0.00	37.81	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
37.87	2.00	0.00	0.00	0.07	0.00	37.94	2.00	0.00	0.00	0.07	0.00
38.00	2.00	0.00	0.00	0.06	0.00	38.07	2.00	0.00	0.00	0.07	0.00
38.13	2.00	0.00	0.00	0.07	0.00	38.20	2.00	0.00	0.00	0.06	0.00
38.27	2.00	0.00	0.00	0.07	0.00	38.33	2.00	0.00	0.00	0.07	0.00
38.40	2.00	0.00	0.00	0.07	0.00	38.46	2.00	0.00	0.00	0.06	0.00
38.54	2.00	0.00	0.00	0.07	0.00	38.59	2.00	0.00	0.00	0.06	0.00
38.67	2.00	0.00	0.00	0.07	0.00	38.73	2.00	0.00	0.00	0.06	0.00
38.80	2.00	0.00	0.00	0.07	0.00	38.86	2.00	0.00	0.00	0.06	0.00
38.93	2.00	0.00	0.00	0.07	0.00	38.99	2.00	0.00	0.00	0.06	0.00
39.05	2.00	0.00	0.00	0.07	0.00	39.12	2.00	0.00	0.00	0.06	0.00
39.19	2.00	0.00	0.00	0.07	0.00	39.25	2.00	0.00	0.00	0.06	0.00
39.31	2.00	0.00	0.00	0.07	0.00	39.38	2.00	0.00	0.00	0.07	0.00
39.45	2.00	0.00	0.00	0.07	0.00	39.52	2.00	0.00	0.00	0.06	0.00
39.58	2.00	0.00	0.00	0.06	0.00	39.64	2.00	0.00	0.00	0.06	0.00
39.71	2.00	0.00	0.00	0.07	0.00	39.78	2.00	0.00	0.00	0.07	0.00
39.84	2.00	0.00	0.00	0.06	0.00	39.91	2.00	0.00	0.00	0.06	0.00
39.98	2.00	0.00	0.00	0.07	0.00	40.04	2.00	0.00	0.00	0.07	0.00
40.10	2.00	0.00	0.00	0.06	0.00	40.17	2.00	0.00	0.00	0.07	0.00
40.23	2.00	0.00	0.00	0.06	0.00	40.30	2.00	0.00	0.00	0.07	0.00
40.37	2.00	0.00	0.00	0.07	0.00	40.44	2.00	0.00	0.00	0.07	0.00
40.50	2.00	0.00	0.00	0.06	0.00	40.57	2.00	0.00	0.00	0.07	0.00
40.63	2.00	0.00	0.00	0.06	0.00	40.70	2.00	0.00	0.00	0.07	0.00

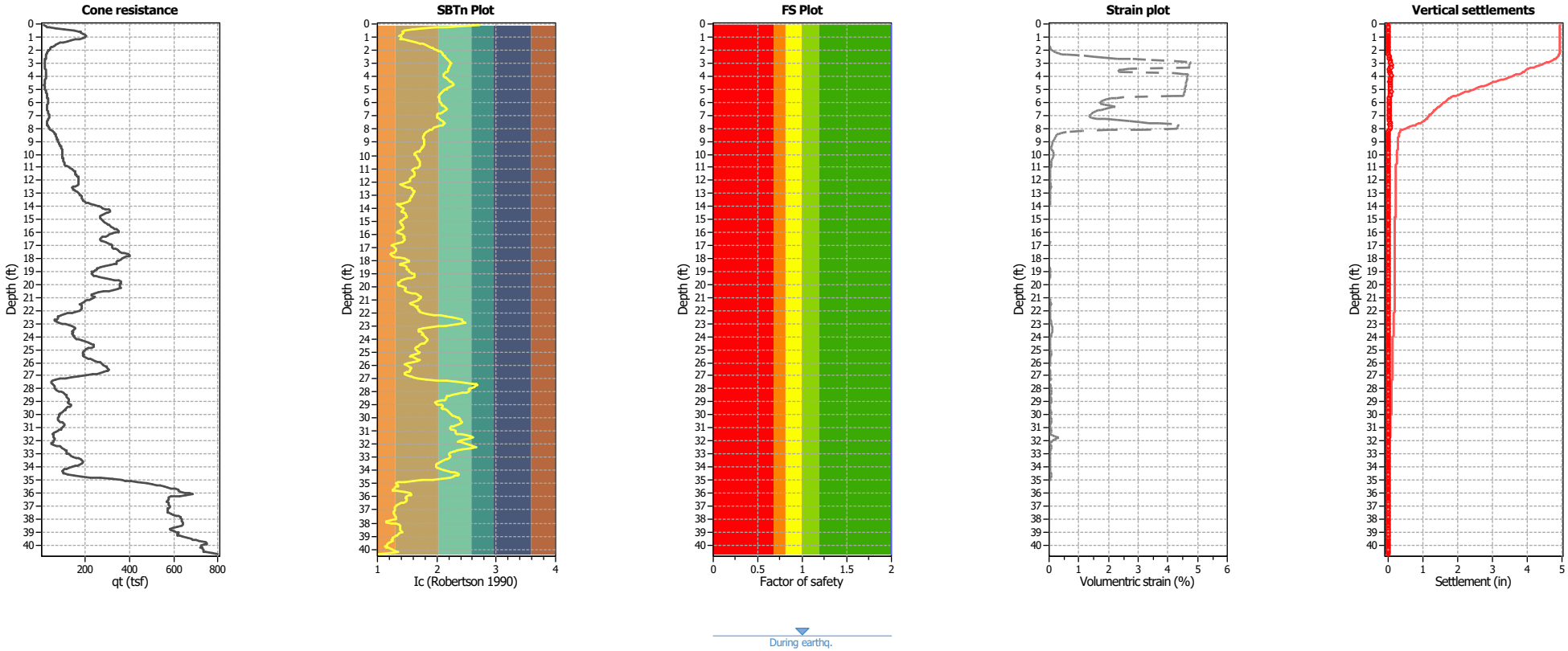
Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.07	2.73	19.09	4.98	95.18	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.14	2.41	32.21	2.41	77.49	19	380	0.57	0.001	0.00	21.03	0.00	0.000
0.20	2.17	45.37	1.55	70.24	16	398	0.57	0.002	0.00	21.03	0.00	0.000
0.28	1.99	62.12	1.30	80.91	17	435	0.57	0.002	0.00	21.03	0.00	0.000
0.33	1.77	106.45	1.11	117.95	23	557	0.57	0.002	0.00	21.03	0.00	0.000
0.40	1.59	172.70	1.00	172.70	31	721	0.57	0.002	0.00	21.03	0.00	0.000
0.47	1.46	243.25	1.00	243.25	42	866	0.57	0.002	0.00	21.03	0.00	0.000
0.54	1.43	275.31	1.00	275.31	47	939	0.56	0.002	0.00	21.03	0.00	0.000
0.59	1.43	289.39	1.00	289.39	49	985	0.56	0.002	0.00	21.03	0.00	0.000
0.66	1.45	287.53	1.00	287.53	49	1007	0.56	0.002	0.00	21.03	0.00	0.000
0.72	1.43	302.69	1.00	302.69	52	1031	0.56	0.002	0.00	21.03	0.00	0.000
0.79	1.40	316.12	1.00	316.12	53	1039	0.56	0.002	0.00	21.03	0.00	0.000
0.87	1.37	330.67	1.00	330.67	55	1052	0.56	0.003	0.00	21.03	0.00	0.000
0.93	1.39	328.61	1.00	328.61	55	1067	0.56	0.003	0.00	21.03	0.00	0.000
1.00	1.40	318.45	1.00	318.45	54	1049	0.56	0.003	0.00	21.03	0.00	0.000
1.06	1.39	300.68	1.00	300.68	51	985	0.56	0.004	0.00	21.03	0.00	0.000
1.13	1.39	277.50	1.00	277.50	47	907	0.56	0.004	0.00	21.03	0.00	0.000
1.19	1.43	248.87	1.00	248.87	43	857	0.56	0.005	0.00	21.03	0.00	0.000
1.26	1.52	218.59	1.00	218.59	38	836	0.56	0.005	0.00	21.03	0.00	0.000
1.32	1.59	190.62	1.00	190.62	34	798	0.56	0.006	0.00	21.03	0.00	0.000
1.39	1.66	163.04	1.00	163.04	30	745	0.56	0.007	0.00	21.03	0.01	0.000
1.45	1.71	139.72	1.01	141.72	27	685	0.56	0.009	0.01	21.03	0.01	0.000
1.52	1.77	119.45	1.11	132.98	25	628	0.56	0.011	0.01	21.03	0.01	0.000
1.58	1.81	106.13	1.16	123.08	24	585	0.56	0.013	0.01	21.03	0.01	0.000
1.65	1.85	94.77	1.20	113.77	22	552	0.56	0.016	0.01	21.03	0.02	0.000
1.71	1.89	84.75	1.23	104.01	21	517	0.56	0.020	0.02	21.03	0.02	0.000
1.78	1.91	76.59	1.24	95.03	19	479	0.56	0.025	0.03	21.03	0.03	0.001
1.84	1.93	68.83	1.26	86.40	17	443	0.56	0.033	0.04	21.03	0.04	0.001
1.92	1.96	62.77	1.27	80.00	16	419	0.56	0.042	0.05	21.03	0.06	0.001
1.98	2.00	57.16	1.31	74.63	16	402	0.56	0.051	0.07	21.03	0.08	0.001
2.04	2.03	52.60	1.33	70.15	15	385	0.56	0.064	0.09	21.03	0.10	0.002
2.11	2.06	47.65	1.37	65.31	14	364	0.56	0.084	0.13	21.03	0.15	0.002
2.17	2.08	43.74	1.40	61.06	13	343	0.56	0.116	0.19	21.03	0.22	0.003
2.25	2.10	40.57	1.42	57.49	12	324	0.56	0.162	0.29	21.03	0.32	0.006
2.30	2.10	38.51	1.43	54.91	12	310	0.56	0.213	0.40	21.03	0.44	0.006
2.37	2.12	36.80	1.44	53.11	12	300	0.56	0.269	0.52	21.03	0.58	0.010
2.43	2.13	35.10	1.00	35.10	8	292	0.56	0.336	1.06	21.03	1.18	0.016
2.52	2.14	33.84	1.00	33.84	7	285	0.56	0.415	1.36	21.03	1.51	0.032
2.58	2.16	32.54	1.00	32.54	7	279	0.56	0.500	1.70	21.03	1.89	0.030
2.65	2.17	31.49	1.00	31.49	7	275	0.56	0.586	2.06	21.03	2.29	0.035
2.71	2.18	30.48	1.00	30.48	7	270	0.56	0.694	2.52	21.03	2.80	0.041
2.77	2.19	29.47	1.00	29.47	7	265	0.56	0.827	3.11	21.03	3.45	0.053
2.83	2.21	28.56	1.00	28.56	6	261	0.56	0.974	3.78	21.03	4.19	0.063
2.90	2.22	27.66	1.00	27.66	6	257	0.56	1.145	4.59	21.03	4.75	0.072
2.96	2.23	26.96	1.00	26.96	6	255	0.56	1.304	5.36	21.03	4.75	0.072
3.02	2.24	26.55	1.00	26.55	6	253	0.56	1.451	6.05	21.03	4.74	0.068
3.10	2.23	26.69	1.00	26.69	6	253	0.56	1.573	6.54	21.03	4.74	0.091
3.17	2.22	27.19	1.00	27.19	6	254	0.56	1.645	6.73	21.03	4.73	0.079

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.22	2.21	28.14	1.00	28.14	6	258	0.56	1.552	6.14	21.03	4.73	0.059
3.31	2.20	29.07	1.00	29.07	7	264	0.56	1.434	5.47	21.03	4.72	0.097
3.38	2.19	29.97	1.00	29.97	7	270	0.56	1.281	4.72	21.03	4.71	0.077
3.44	2.19	30.57	1.60	48.92	11	276	0.56	1.199	2.46	21.03	2.69	0.045
3.48	2.19	31.12	1.60	49.63	11	280	0.56	1.118	2.25	21.03	2.47	0.020
3.54	2.18	31.91	1.57	50.23	11	284	0.56	1.079	2.15	21.03	2.35	0.037
3.64	2.17	32.70	1.55	50.70	11	287	0.56	1.088	2.16	21.03	2.36	0.055
3.68	2.16	33.50	1.52	50.80	11	288	0.56	1.093	2.18	21.03	2.38	0.021
3.75	2.14	34.04	1.00	34.04	7	287	0.56	1.185	3.85	21.03	4.20	0.072
3.81	2.12	34.59	1.00	34.59	8	285	0.56	1.295	4.16	21.03	4.53	0.072
3.88	2.12	34.78	1.00	34.78	8	284	0.56	1.399	4.48	21.03	4.67	0.072
3.95	2.11	34.82	1.00	34.82	8	284	0.56	1.489	4.77	21.03	4.67	0.079
4.02	2.13	34.37	1.00	34.37	8	285	0.56	1.537	4.97	21.03	4.66	0.079
4.09	2.14	33.57	1.00	33.57	7	284	0.56	1.653	5.45	21.03	4.65	0.078
4.16	2.17	31.96	1.00	31.96	7	279	0.56	1.981	6.85	21.03	4.65	0.074
4.22	2.19	29.90	1.00	29.90	7	267	0.56	2.808	10.42	21.03	4.64	0.075
4.29	2.20	27.79	1.00	27.79	6	253	0.56	4.393	17.65	21.03	4.64	0.078
4.36	2.22	25.94	1.00	25.94	6	242	0.56	6.704	29.01	21.03	4.63	0.078
4.43	2.24	24.68	1.00	24.68	6	235	0.56	8.929	40.66	21.03	4.62	0.072
4.46	2.26	23.73	1.00	23.73	5	232	0.56	10.293	48.64	21.03	4.62	0.039
4.53	2.27	23.13	1.00	23.13	5	230	0.56	11.527	55.75	21.03	4.62	0.075
4.60	2.28	22.72	1.00	22.72	5	229	0.56	12.631	62.07	21.03	4.61	0.074
4.67	2.28	22.57	1.00	22.57	5	226	0.56	15.272	75.94	21.03	4.60	0.074
4.73	2.24	22.77	1.00	22.77	5	218	0.56	21.593	108.06	21.03	4.60	0.073
4.80	2.21	23.46	1.00	23.46	5	216	0.56	25.685	126.15	21.03	4.59	0.077
4.87	2.18	24.90	1.00	24.90	6	220	0.56	22.122	102.64	21.03	4.59	0.075
4.94	2.16	26.95	1.00	26.95	6	234	0.56	13.780	58.61	21.03	4.58	0.078
5.01	2.14	29.30	1.00	29.30	6	246	0.56	9.287	36.16	21.03	4.58	0.075
5.07	2.11	31.69	1.00	31.69	7	258	0.56	6.566	23.55	21.03	4.57	0.065
5.14	2.10	33.69	1.00	33.69	7	269	0.56	5.066	17.02	21.03	4.56	0.081
5.21	2.08	35.48	1.00	35.48	8	277	0.56	4.160	13.24	21.03	4.56	0.071
5.28	2.07	37.08	1.00	37.08	8	286	0.56	3.471	10.53	21.03	4.55	0.074
5.34	2.05	39.12	1.00	39.12	8	295	0.56	2.837	8.13	21.03	4.55	0.069
5.41	2.04	41.12	1.00	41.12	9	306	0.56	2.299	6.24	21.03	4.54	0.076
5.47	2.03	43.12	1.00	43.12	9	317	0.56	1.858	4.78	21.03	4.54	0.073
5.55	2.03	44.42	1.00	44.42	9	326	0.56	1.607	4.00	21.03	4.21	0.072
5.58	2.03	45.46	1.34	60.80	13	334	0.56	1.399	2.39	21.03	2.52	0.022
5.65	2.03	46.20	1.34	61.87	13	340	0.56	1.292	2.16	21.03	2.27	0.037
5.72	2.04	46.95	1.34	62.90	13	346	0.56	1.203	1.97	21.03	2.07	0.034
5.78	2.04	47.54	1.34	63.72	13	351	0.56	1.144	1.84	21.03	1.93	0.028
5.85	2.04	47.84	1.34	64.32	14	355	0.56	1.104	1.75	21.03	1.84	0.030
5.91	2.05	47.88	1.35	64.74	14	358	0.56	1.074	1.69	21.03	1.77	0.028
5.98	2.06	47.62	1.36	64.95	14	361	0.56	1.059	1.65	21.03	1.73	0.028
6.05	2.07	47.17	1.38	65.05	14	364	0.56	1.055	1.63	21.03	1.70	0.029
6.12	2.08	46.52	1.40	64.90	14	364	0.56	1.079	1.66	21.03	1.73	0.028
6.18	2.10	45.56	1.41	64.32	14	362	0.56	1.154	1.79	21.03	1.86	0.029
6.26	2.11	44.21	1.43	63.43	14	359	0.56	1.280	2.00	21.03	2.08	0.037
6.33	2.13	43.05	1.46	62.92	14	356	0.56	1.377	2.16	21.03	2.24	0.038

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.37	2.15	42.15	1.50	63.27	14	359	0.56	1.345	2.07	21.03	2.15	0.018
6.43	2.16	41.89	1.53	64.11	14	363	0.56	1.285	1.93	21.03	2.00	0.032
6.50	2.17	42.23	1.54	65.02	14	368	0.56	1.218	1.80	21.03	1.86	0.029
6.57	2.15	43.58	1.51	65.77	15	373	0.56	1.163	1.70	21.03	1.76	0.029
6.63	2.12	45.87	1.46	66.78	15	378	0.56	1.101	1.61	21.03	1.66	0.027
6.70	2.09	48.52	1.40	68.14	15	383	0.56	1.044	1.51	21.03	1.56	0.025
6.77	2.06	51.02	1.36	69.61	15	387	0.56	1.011	1.45	21.03	1.49	0.024
6.84	2.03	53.16	1.34	71.07	15	391	0.56	0.990	1.40	21.03	1.44	0.023
6.90	2.01	54.91	1.32	72.25	15	392	0.56	0.997	1.40	21.03	1.44	0.023
6.97	2.00	56.10	1.31	73.31	15	395	0.56	0.978	1.35	21.03	1.39	0.022
7.04	2.00	56.49	1.31	73.84	15	398	0.56	0.963	1.32	21.03	1.35	0.022
7.11	2.01	55.93	1.32	73.72	15	401	0.56	0.957	1.31	21.03	1.34	0.023
7.17	2.03	54.58	1.33	72.75	15	399	0.56	1.009	1.39	21.03	1.42	0.022
7.24	2.05	52.63	1.35	71.14	15	394	0.56	1.122	1.57	21.03	1.61	0.025
7.31	2.07	50.22	1.38	69.19	15	387	0.56	1.294	1.86	21.03	1.89	0.032
7.38	2.09	47.60	1.41	67.17	15	378	0.56	1.531	2.25	21.03	2.29	0.038
7.44	2.12	45.50	1.44	65.65	14	371	0.56	1.776	2.66	21.03	2.70	0.042
7.51	2.13	44.34	1.46	64.67	14	366	0.56	2.001	3.03	21.03	3.08	0.050
7.58	2.12	44.08	1.46	64.16	14	363	0.56	2.173	3.33	21.03	3.38	0.053
7.64	2.12	44.07	1.45	63.75	14	361	0.56	2.348	3.63	21.03	3.68	0.061
7.68	2.10	44.22	1.42	62.71	14	354	0.56	2.733	4.35	21.03	4.35	0.038
7.75	2.06	44.77	1.36	61.01	13	339	0.56	3.771	6.33	21.03	4.34	0.068
7.82	2.00	46.31	1.00	46.31	10	328	0.56	4.946	11.85	21.03	4.34	0.074
7.88	1.96	49.32	1.00	49.32	10	329	0.56	5.035	11.44	21.03	4.33	0.069
7.96	1.92	54.01	1.00	54.01	11	346	0.56	3.581	7.40	21.03	4.33	0.077
8.03	1.91	57.39	1.00	57.39	12	363	0.56	2.662	5.14	21.03	4.32	0.072
8.08	1.89	62.42	1.00	62.42	12	386	0.56	1.785	3.15	21.03	3.17	0.040
8.15	1.86	67.47	1.00	67.47	13	410	0.56	1.266	2.06	21.03	2.07	0.037
8.20	1.83	76.00	1.00	76.00	15	446	0.56	0.782	1.12	21.03	1.12	0.014
8.29	1.81	83.02	1.16	96.25	19	481	0.56	0.536	0.58	21.03	0.58	0.012
8.35	1.79	89.65	1.14	102.59	20	514	0.55	0.388	0.39	21.03	0.39	0.006
8.42	1.78	94.04	1.13	106.64	20	537	0.55	0.321	0.31	21.03	0.31	0.005
8.48	1.78	97.12	1.13	109.40	21	554	0.55	0.284	0.27	21.03	0.27	0.004
8.55	1.78	99.17	1.12	111.29	21	566	0.55	0.263	0.24	21.03	0.24	0.004
8.62	1.78	100.60	1.12	112.92	22	577	0.55	0.246	0.22	21.03	0.22	0.004
8.69	1.78	102.05	1.12	114.67	22	589	0.55	0.231	0.21	21.03	0.20	0.003
8.76	1.78	103.56	1.13	116.68	22	602	0.55	0.214	0.19	21.03	0.19	0.003
8.83	1.78	104.99	1.13	118.55	23	615	0.55	0.201	0.17	21.03	0.17	0.003
8.86	1.78	106.69	1.13	120.61	23	627	0.55	0.187	0.16	21.03	0.16	0.001
8.93	1.78	108.10	1.13	122.35	24	638	0.55	0.177	0.15	21.03	0.14	0.002
8.99	1.78	109.91	1.13	124.55	24	653	0.55	0.165	0.13	21.03	0.13	0.002
9.06	1.78	111.72	1.13	126.73	24	667	0.55	0.155	0.12	21.03	0.12	0.002
9.13	1.78	113.77	1.13	128.91	25	682	0.55	0.145	0.11	21.03	0.11	0.002
9.20	1.78	116.18	1.13	130.95	25	696	0.55	0.137	0.10	21.03	0.10	0.002
9.27	1.77	118.83	1.12	132.94	25	711	0.55	0.130	0.10	21.03	0.10	0.002
9.34	1.77	121.84	1.11	135.01	26	726	0.55	0.122	0.09	21.03	0.09	0.001
9.41	1.76	124.45	1.09	136.09	26	737	0.55	0.118	0.09	21.03	0.08	0.001
9.47	1.74	126.67	1.07	135.97	26	744	0.55	0.116	0.09	21.03	0.08	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.54	1.73	128.05	1.05	134.40	25	745	0.55	0.117	0.09	21.03	0.09	0.001
9.61	1.72	128.79	1.03	132.28	25	743	0.55	0.120	0.09	21.03	0.09	0.001
9.67	1.71	128.21	1.00	128.21	24	733	0.55	0.128	0.10	21.03	0.10	0.002
9.72	1.68	127.39	1.00	127.39	24	707	0.55	0.146	0.12	21.03	0.12	0.001
9.78	1.65	126.29	1.00	126.29	23	682	0.55	0.170	0.14	21.03	0.14	0.002
9.86	1.63	126.11	1.00	126.11	23	666	0.55	0.190	0.16	21.03	0.16	0.003
9.92	1.63	125.41	1.00	125.41	23	669	0.55	0.190	0.16	21.03	0.16	0.002
9.99	1.64	125.04	1.00	125.04	23	676	0.55	0.185	0.16	21.03	0.15	0.002
10.05	1.65	123.82	1.00	123.82	23	682	0.55	0.181	0.16	21.03	0.15	0.002
10.12	1.66	124.22	1.00	124.22	23	693	0.55	0.173	0.15	21.03	0.14	0.002
10.19	1.67	124.88	1.00	124.88	23	709	0.55	0.162	0.14	21.03	0.13	0.002
10.26	1.68	127.48	1.00	127.48	24	730	0.55	0.147	0.12	21.03	0.12	0.002
10.32	1.69	129.41	1.00	129.41	24	752	0.55	0.134	0.11	21.03	0.10	0.002
10.39	1.70	130.97	1.00	130.97	24	772	0.55	0.124	0.10	21.03	0.09	0.002
10.46	1.71	132.08	1.00	132.17	25	789	0.55	0.117	0.09	21.03	0.09	0.001
10.53	1.71	132.80	1.02	134.96	25	803	0.55	0.113	0.08	21.03	0.08	0.001
10.60	1.72	133.18	1.02	136.25	26	811	0.55	0.111	0.08	21.03	0.08	0.001
10.67	1.72	133.34	1.02	136.32	26	815	0.55	0.110	0.08	21.03	0.08	0.001
10.71	1.71	134.31	1.01	136.18	26	819	0.55	0.109	0.08	21.03	0.08	0.001
10.78	1.70	136.26	1.00	136.26	25	826	0.55	0.108	0.08	21.03	0.08	0.001
10.85	1.69	139.99	1.00	139.99	26	841	0.55	0.103	0.08	21.03	0.07	0.001
10.91	1.67	145.83	1.00	145.83	27	857	0.55	0.099	0.07	21.03	0.07	0.001
10.98	1.64	153.81	1.00	153.81	28	875	0.55	0.094	0.06	21.03	0.06	0.001
11.05	1.60	163.93	1.00	163.93	30	898	0.55	0.088	0.05	21.03	0.05	0.001
11.12	1.59	173.31	1.00	173.31	31	939	0.55	0.079	0.05	21.03	0.04	0.001
11.19	1.61	180.35	1.00	180.35	33	999	0.55	0.067	0.04	21.03	0.04	0.001
11.26	1.62	184.99	1.00	184.99	34	1050	0.55	0.060	0.03	21.03	0.03	0.001
11.33	1.63	187.65	1.00	187.65	34	1073	0.55	0.058	0.03	21.03	0.03	0.000
11.37	1.62	188.12	1.00	188.12	34	1073	0.55	0.058	0.03	21.03	0.03	0.000
11.44	1.62	187.11	1.00	187.11	34	1069	0.55	0.059	0.03	21.03	0.03	0.001
11.51	1.62	187.40	1.00	187.40	34	1072	0.55	0.059	0.03	21.03	0.03	0.001
11.58	1.61	190.85	1.00	190.85	34	1076	0.55	0.060	0.03	21.03	0.03	0.000
11.65	1.58	195.97	1.00	195.97	35	1075	0.55	0.060	0.03	21.03	0.03	0.000
11.72	1.56	199.68	1.00	199.68	36	1072	0.55	0.061	0.03	21.03	0.03	0.000
11.76	1.55	201.63	1.00	201.63	36	1069	0.55	0.062	0.03	21.03	0.03	0.000
11.82	1.55	201.51	1.00	201.51	36	1068	0.55	0.063	0.03	21.03	0.03	0.000
11.90	1.55	201.35	1.00	201.35	36	1070	0.55	0.063	0.03	21.03	0.03	0.001
11.97	1.54	201.98	1.00	201.98	36	1072	0.55	0.064	0.03	21.03	0.03	0.001
12.04	1.51	202.55	1.00	202.55	35	1035	0.55	0.070	0.04	21.03	0.03	0.001
12.11	1.46	202.44	1.00	202.44	35	970	0.55	0.085	0.04	21.03	0.04	0.001
12.18	1.40	201.10	1.00	201.10	34	902	0.55	0.106	0.06	21.03	0.05	0.001
12.22	1.39	199.85	1.00	199.85	34	885	0.55	0.113	0.06	21.03	0.06	0.000
12.29	1.42	196.70	1.00	196.70	33	904	0.55	0.107	0.06	21.03	0.05	0.001
12.36	1.45	192.01	1.00	192.01	33	923	0.55	0.102	0.06	21.03	0.05	0.001
12.43	1.51	177.86	1.00	177.86	31	925	0.55	0.102	0.06	21.03	0.06	0.001
12.48	1.55	169.41	1.00	169.41	30	927	0.55	0.102	0.06	21.03	0.06	0.001
12.56	1.59	162.67	1.00	162.67	29	935	0.55	0.101	0.06	21.03	0.06	0.001
12.64	1.59	166.59	1.00	166.59	30	968	0.55	0.092	0.06	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.71	1.61	167.77	1.00	167.77	30	1002	0.55	0.085	0.05	21.03	0.05	0.001
12.74	1.62	172.20	1.00	172.20	31	1039	0.55	0.077	0.05	21.03	0.04	0.000
12.81	1.61	178.56	1.00	178.56	32	1075	0.55	0.071	0.04	21.03	0.04	0.001
12.88	1.61	185.83	1.00	185.83	34	1113	0.55	0.066	0.04	21.03	0.03	0.001
12.96	1.60	191.78	1.00	191.78	35	1144	0.55	0.062	0.03	21.03	0.03	0.001
13.03	1.59	196.57	1.00	196.57	35	1164	0.55	0.061	0.03	21.03	0.03	0.000
13.10	1.58	200.43	1.00	200.43	36	1176	0.55	0.060	0.03	21.03	0.03	0.000
13.13	1.57	204.16	1.00	204.16	36	1181	0.55	0.059	0.03	21.03	0.03	0.000
13.20	1.56	206.00	1.00	206.00	37	1183	0.55	0.060	0.03	21.03	0.03	0.000
13.27	1.56	207.61	1.00	207.61	37	1183	0.55	0.060	0.03	21.03	0.03	0.000
13.34	1.55	208.23	1.00	208.23	37	1180	0.55	0.061	0.03	21.03	0.03	0.000
13.41	1.54	208.72	1.00	208.72	37	1174	0.55	0.062	0.03	21.03	0.03	0.000
13.48	1.53	209.78	1.00	209.78	37	1169	0.55	0.064	0.03	21.03	0.03	0.000
13.55	1.52	212.64	1.00	212.64	37	1168	0.55	0.064	0.03	21.03	0.03	0.000
13.62	1.46	218.71	1.00	218.71	38	1123	0.55	0.071	0.03	21.03	0.03	0.000
13.69	1.39	225.46	1.00	225.46	38	1067	0.55	0.082	0.04	21.03	0.03	0.001
13.73	1.33	235.75	1.00	235.75	39	1031	0.55	0.091	0.04	21.03	0.04	0.000
13.80	1.35	248.52	1.00	248.52	41	1111	0.55	0.075	0.03	21.03	0.03	0.000
13.87	1.38	265.15	1.00	265.15	45	1234	0.55	0.059	0.02	21.03	0.02	0.000
13.95	1.40	280.85	1.00	280.85	47	1349	0.55	0.049	0.02	21.03	0.02	0.000
14.00	1.43	288.41	1.00	288.41	49	1450	0.55	0.043	0.01	21.03	0.01	0.000
14.06	1.45	295.82	1.00	295.82	51	1518	0.55	0.039	0.01	21.03	0.01	0.000
14.12	1.44	304.08	1.00	304.08	52	1557	0.55	0.038	0.01	21.03	0.01	0.000
14.19	1.41	320.22	1.00	320.22	54	1583	0.55	0.037	0.01	21.03	0.01	0.000
14.26	1.41	333.60	1.00	333.60	57	1647	0.55	0.035	0.01	21.03	0.01	0.000
14.33	1.44	336.98	1.00	336.98	58	1728	0.55	0.032	0.01	21.03	0.01	0.000
14.40	1.46	333.68	1.00	333.68	58	1774	0.55	0.031	0.01	21.03	0.01	0.000
14.45	1.47	327.43	1.00	327.43	57	1766	0.55	0.031	0.01	21.03	0.01	0.000
14.51	1.48	321.04	1.00	321.04	56	1741	0.55	0.032	0.01	21.03	0.01	0.000
14.58	1.49	309.41	1.00	309.41	54	1704	0.55	0.034	0.01	21.03	0.01	0.000
14.64	1.50	296.23	1.00	296.23	52	1659	0.55	0.036	0.01	21.03	0.01	0.000
14.71	1.49	286.02	1.00	286.02	50	1593	0.55	0.039	0.01	21.03	0.01	0.000
14.78	1.46	283.63	1.00	283.63	49	1526	0.55	0.042	0.01	21.03	0.01	0.000
14.84	1.44	281.42	1.00	281.42	48	1472	0.55	0.045	0.02	21.03	0.01	0.000
14.91	1.42	282.67	1.00	282.67	48	1442	0.55	0.048	0.02	21.03	0.01	0.000
14.97	1.41	284.93	1.00	284.93	48	1438	0.55	0.048	0.02	21.03	0.01	0.000
15.04	1.39	289.82	1.00	289.82	49	1444	0.55	0.048	0.02	21.03	0.01	0.000
15.11	1.39	293.83	1.00	293.83	50	1468	0.55	0.047	0.02	21.03	0.01	0.000
15.17	1.40	296.91	1.00	296.91	50	1503	0.55	0.045	0.01	21.03	0.01	0.000
15.24	1.41	301.73	1.00	301.73	51	1542	0.55	0.043	0.01	21.03	0.01	0.000
15.30	1.41	307.03	1.00	307.03	52	1582	0.55	0.042	0.01	21.03	0.01	0.000
15.37	1.42	314.21	1.00	314.21	53	1633	0.55	0.039	0.01	21.03	0.01	0.000
15.44	1.43	318.02	1.00	318.02	54	1686	0.55	0.037	0.01	21.03	0.01	0.000
15.50	1.44	322.94	1.00	322.94	55	1731	0.55	0.036	0.01	21.03	0.01	0.000
15.56	1.43	327.02	1.00	327.02	56	1747	0.55	0.036	0.01	21.03	0.01	0.000
15.63	1.42	333.93	1.00	333.93	57	1752	0.55	0.036	0.01	21.03	0.01	0.000
15.70	1.39	341.24	1.00	341.24	58	1733	0.55	0.037	0.01	21.03	0.01	0.000
15.76	1.35	349.07	1.00	349.07	58	1695	0.55	0.038	0.01	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.82	1.33	354.29	1.00	354.29	59	1669	0.55	0.040	0.01	21.03	0.01	0.000
15.89	1.33	356.81	1.00	356.81	59	1699	0.55	0.039	0.01	21.03	0.01	0.000
15.96	1.37	356.30	1.00	356.30	60	1782	0.55	0.036	0.01	21.03	0.01	0.000
16.02	1.42	340.43	1.00	340.43	58	1823	0.55	0.035	0.01	21.03	0.01	0.000
16.09	1.45	325.37	1.00	325.37	56	1802	0.55	0.036	0.01	21.03	0.01	0.000
16.15	1.46	310.36	1.00	310.36	53	1743	0.55	0.038	0.01	21.03	0.01	0.000
16.23	1.44	303.66	1.00	303.66	52	1683	0.55	0.041	0.01	21.03	0.01	0.000
16.28	1.44	293.25	1.00	293.25	50	1631	0.55	0.043	0.01	21.03	0.01	0.000
16.35	1.45	280.45	1.00	280.45	48	1577	0.55	0.046	0.02	21.03	0.01	0.000
16.43	1.45	273.26	1.00	273.26	47	1536	0.55	0.049	0.02	21.03	0.01	0.000
16.49	1.45	268.54	1.00	268.54	46	1511	0.55	0.051	0.02	21.03	0.02	0.000
16.55	1.44	267.64	1.00	267.64	46	1500	0.55	0.052	0.02	21.03	0.02	0.000
16.62	1.42	269.90	1.00	269.90	46	1472	0.54	0.055	0.02	21.03	0.02	0.000
16.68	1.35	277.00	1.00	277.00	46	1379	0.54	0.063	0.02	21.03	0.02	0.000
16.75	1.27	286.82	1.00	286.82	47	1304	0.54	0.072	0.03	21.03	0.02	0.000
16.82	1.23	297.08	1.00	297.08	48	1288	0.54	0.075	0.03	21.03	0.02	0.000
16.88	1.26	306.89	1.00	306.89	50	1381	0.54	0.064	0.02	21.03	0.02	0.000
16.95	1.28	312.93	1.00	312.93	51	1450	0.54	0.058	0.02	21.03	0.02	0.000
17.01	1.30	315.45	1.00	315.45	52	1492	0.54	0.055	0.02	21.03	0.01	0.000
17.07	1.31	313.74	1.00	313.74	52	1509	0.54	0.054	0.02	21.03	0.01	0.000
17.14	1.31	315.02	1.00	315.02	52	1523	0.54	0.053	0.02	21.03	0.01	0.000
17.21	1.31	320.17	1.00	320.17	53	1545	0.54	0.052	0.02	21.03	0.01	0.000
17.28	1.31	328.44	1.00	328.44	54	1589	0.54	0.050	0.02	21.03	0.01	0.000
17.34	1.30	335.93	1.00	335.93	55	1610	0.54	0.049	0.01	21.03	0.01	0.000
17.41	1.28	341.22	1.00	341.22	56	1595	0.54	0.050	0.01	21.03	0.01	0.000
17.47	1.24	346.15	1.00	346.15	56	1555	0.54	0.053	0.02	21.03	0.01	0.000
17.54	1.23	352.01	1.00	352.01	56	1548	0.54	0.054	0.02	21.03	0.01	0.000
17.60	1.24	363.09	1.00	363.09	58	1620	0.54	0.049	0.01	21.03	0.01	0.000
17.66	1.25	380.47	1.00	380.47	62	1739	0.54	0.043	0.01	21.03	0.01	0.000
17.73	1.31	384.95	1.00	384.95	63	1896	0.54	0.037	0.01	21.03	0.01	0.000
17.80	1.37	382.32	1.00	382.32	64	2045	0.54	0.033	0.01	21.03	0.01	0.000
17.86	1.45	366.74	1.00	366.74	63	2167	0.54	0.030	0.01	21.03	0.01	0.000
17.93	1.49	359.64	1.00	359.64	63	2249	0.54	0.029	0.01	21.03	0.01	0.000
17.99	1.53	348.75	1.00	348.75	61	2272	0.54	0.029	0.01	21.03	0.01	0.000
18.06	1.53	340.85	1.00	340.85	60	2245	0.54	0.029	0.01	21.03	0.01	0.000
18.13	1.51	331.41	1.00	331.41	58	2135	0.54	0.032	0.01	21.03	0.01	0.000
18.19	1.45	325.81	1.00	325.81	56	1952	0.54	0.037	0.01	21.03	0.01	0.000
18.25	1.39	321.29	1.00	321.29	54	1785	0.54	0.043	0.01	21.03	0.01	0.000
18.32	1.38	321.25	1.00	321.25	54	1754	0.54	0.045	0.01	21.03	0.01	0.000
18.39	1.42	319.68	1.00	319.68	54	1849	0.54	0.041	0.01	21.03	0.01	0.000
18.45	1.47	311.57	1.00	311.57	54	1926	0.54	0.039	0.01	21.03	0.01	0.000
18.52	1.49	292.69	1.00	292.69	51	1865	0.54	0.041	0.01	21.03	0.01	0.000
18.59	1.49	268.88	1.00	268.88	47	1714	0.54	0.048	0.02	21.03	0.01	0.000
18.65	1.49	249.39	1.00	249.39	43	1592	0.54	0.056	0.02	21.03	0.02	0.000
18.71	1.51	238.03	1.00	238.03	42	1548	0.55	0.060	0.02	21.03	0.02	0.000
18.78	1.52	235.48	1.00	235.48	41	1568	0.55	0.058	0.02	21.03	0.02	0.000
18.84	1.52	234.99	1.00	234.99	41	1570	0.55	0.058	0.02	21.03	0.02	0.000
18.91	1.56	224.82	1.00	224.82	40	1574	0.55	0.059	0.03	21.03	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.97	1.59	217.92	1.00	217.92	39	1589	0.55	0.058	0.03	21.03	0.02	0.000
19.04	1.62	210.57	1.00	210.57	38	1595	0.55	0.058	0.03	21.03	0.02	0.000
19.10	1.62	211.78	1.00	211.78	38	1613	0.55	0.057	0.03	21.03	0.02	0.000
19.18	1.63	209.51	1.00	209.51	38	1612	0.55	0.057	0.03	21.03	0.02	0.000
19.25	1.61	211.26	1.00	211.26	38	1598	0.55	0.058	0.03	21.03	0.02	0.000
19.31	1.57	216.15	1.00	216.15	39	1560	0.55	0.062	0.03	21.03	0.02	0.000
19.37	1.51	226.10	1.00	226.10	40	1508	0.55	0.066	0.03	21.03	0.02	0.000
19.44	1.45	240.29	1.00	240.29	41	1493	0.55	0.068	0.03	21.03	0.02	0.000
19.51	1.40	260.02	1.00	260.02	44	1514	0.55	0.067	0.03	21.03	0.02	0.000
19.57	1.38	281.97	1.00	281.97	47	1592	0.55	0.060	0.02	21.03	0.02	0.000
19.64	1.37	301.06	1.00	301.06	50	1685	0.55	0.054	0.02	21.03	0.01	0.000
19.70	1.36	316.36	1.00	316.36	53	1750	0.55	0.050	0.02	21.03	0.01	0.000
19.77	1.35	323.87	1.00	323.87	54	1789	0.55	0.049	0.01	21.03	0.01	0.000
19.83	1.35	327.11	1.00	327.11	54	1792	0.55	0.049	0.01	21.03	0.01	0.000
19.90	1.36	323.13	1.00	323.13	54	1800	0.55	0.049	0.01	21.03	0.01	0.000
19.96	1.38	320.33	1.00	320.33	54	1847	0.55	0.047	0.01	21.03	0.01	0.000
20.03	1.44	317.45	1.00	317.45	54	1960	0.55	0.042	0.01	21.03	0.01	0.000
20.09	1.48	318.26	1.00	318.26	55	2077	0.55	0.038	0.01	21.03	0.01	0.000
20.16	1.48	319.03	1.00	319.03	55	2102	0.55	0.038	0.01	21.03	0.01	0.000
20.22	1.46	321.27	1.00	321.27	55	2053	0.55	0.039	0.01	21.03	0.01	0.000
20.29	1.46	314.71	1.00	314.71	54	2005	0.55	0.041	0.01	21.03	0.01	0.000
20.36	1.47	305.76	1.00	305.76	53	1980	0.55	0.042	0.01	21.03	0.01	0.000
20.42	1.52	289.62	1.00	289.62	51	2010	0.55	0.041	0.01	21.03	0.01	0.000
20.49	1.58	269.63	1.00	269.63	48	2026	0.55	0.041	0.01	21.03	0.01	0.000
20.55	1.64	248.22	1.00	248.22	45	2001	0.55	0.042	0.02	21.03	0.01	0.000
20.62	1.68	225.85	1.00	225.85	42	1925	0.55	0.045	0.02	21.03	0.01	0.000
20.69	1.69	211.38	1.00	211.38	39	1841	0.55	0.049	0.02	21.03	0.02	0.000
20.75	1.73	199.43	1.05	208.87	39	1828	0.55	0.050	0.02	21.03	0.02	0.000
20.81	1.73	200.13	1.05	210.74	40	1844	0.56	0.050	0.02	21.03	0.02	0.000
20.89	1.72	206.31	1.03	211.50	40	1871	0.56	0.049	0.02	21.03	0.02	0.000
20.95	1.70	211.25	1.00	211.25	39	1877	0.56	0.049	0.02	21.03	0.02	0.000
21.02	1.70	207.46	1.00	207.46	39	1837	0.56	0.051	0.02	21.03	0.02	0.000
21.08	1.66	199.11	1.00	199.11	37	1676	0.56	0.061	0.03	21.03	0.02	0.000
21.16	1.60	189.57	1.00	189.57	34	1495	0.56	0.079	0.04	21.03	0.03	0.001
21.22	1.55	180.06	1.00	180.06	32	1321	0.56	0.107	0.06	21.03	0.05	0.001
21.28	1.55	173.49	1.00	173.49	31	1281	0.56	0.116	0.07	21.03	0.05	0.001
21.35	1.56	168.80	1.00	168.80	30	1271	0.56	0.120	0.07	21.03	0.05	0.001
21.42	1.62	156.57	1.00	156.57	28	1262	0.56	0.123	0.08	21.03	0.06	0.001
21.48	1.65	152.03	1.00	152.03	28	1278	0.56	0.119	0.08	21.03	0.06	0.001
21.55	1.68	149.04	1.00	149.04	28	1301	0.56	0.114	0.08	21.03	0.06	0.001
21.62	1.66	156.38	1.00	156.38	29	1347	0.56	0.105	0.07	21.03	0.05	0.001
21.69	1.68	157.11	1.00	157.11	29	1379	0.56	0.099	0.06	21.03	0.05	0.001
21.73	1.69	157.04	1.00	157.04	29	1406	0.56	0.095	0.06	21.03	0.04	0.000
21.80	1.70	156.84	1.00	156.84	29	1422	0.56	0.093	0.06	21.03	0.04	0.001
21.87	1.71	155.73	1.00	156.45	29	1431	0.56	0.092	0.06	21.03	0.04	0.001
21.94	1.72	152.38	1.03	157.51	30	1428	0.56	0.093	0.06	21.03	0.04	0.001
22.01	1.76	144.62	1.10	159.60	30	1432	0.56	0.093	0.06	21.03	0.04	0.001
22.08	1.85	129.95	1.20	156.00	31	1448	0.56	0.091	0.05	21.03	0.04	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
22.15	1.96	113.95	1.27	145.16	30	1465	0.56	0.089	0.06	21.03	0.04	0.001
22.19	2.07	97.96	1.37	134.69	29	1462	0.56	0.089	0.06	21.03	0.04	0.000
22.26	2.15	87.16	1.49	130.28	29	1446	0.56	0.092	0.06	21.03	0.04	0.001
22.33	2.26	73.20	1.77	129.66	30	1411	0.56	0.098	0.06	21.03	0.04	0.001
22.40	2.36	63.18	2.15	136.10	33	1393	0.56	0.102	0.06	21.03	0.04	0.001
22.47	2.42	57.69	2.51	144.73	36	1400	0.56	0.102	0.05	21.03	0.04	0.001
22.55	2.42	58.99	2.50	147.48	37	1432	0.56	0.096	0.05	21.03	0.03	0.001
22.58	2.42	58.83	2.48	145.83	36	1423	0.56	0.098	0.05	21.03	0.03	0.000
22.65	2.45	53.90	2.67	144.16	36	1367	0.56	0.109	0.05	21.03	0.04	0.001
22.72	2.48	48.78	2.86	139.50	36	1289	0.56	0.129	0.06	21.03	0.05	0.001
22.79	2.47	47.66	2.75	131.30	33	1236	0.56	0.146	0.08	21.03	0.06	0.001
22.86	2.37	53.38	2.22	118.59	29	1219	0.56	0.153	0.10	21.03	0.07	0.001
22.93	2.24	64.59	1.72	111.02	25	1240	0.56	0.146	0.11	21.03	0.08	0.001
23.00	2.13	76.56	1.47	112.56	25	1277	0.56	0.135	0.10	21.03	0.07	0.001
23.04	2.02	89.77	1.32	118.92	25	1290	0.56	0.132	0.10	21.03	0.07	0.001
23.11	1.89	102.29	1.23	126.00	25	1240	0.56	0.148	0.11	21.03	0.08	0.001
23.18	1.77	115.16	1.11	128.08	24	1183	0.56	0.172	0.13	21.03	0.10	0.002
23.25	1.70	123.62	1.00	123.62	23	1155	0.56	0.186	0.16	21.03	0.11	0.002
23.33	1.69	127.21	1.00	127.21	24	1187	0.56	0.172	0.14	21.03	0.10	0.002
23.40	1.70	127.86	1.00	127.86	24	1204	0.56	0.165	0.13	21.03	0.09	0.002
23.43	1.74	120.31	1.07	128.16	24	1196	0.56	0.169	0.13	21.03	0.09	0.001
23.51	1.76	116.19	1.09	126.98	24	1183	0.56	0.176	0.14	21.03	0.10	0.002
23.58	1.77	112.40	1.11	124.98	24	1166	0.57	0.186	0.15	21.03	0.10	0.002
23.63	1.75	115.48	1.08	124.83	24	1167	0.57	0.186	0.15	21.03	0.11	0.001
23.70	1.76	114.36	1.10	126.28	24	1181	0.57	0.180	0.14	21.03	0.10	0.002
23.77	1.78	113.47	1.13	128.73	25	1209	0.57	0.168	0.13	21.03	0.09	0.002
23.84	1.81	113.61	1.16	131.88	26	1250	0.57	0.153	0.11	21.03	0.08	0.001
23.91	1.82	115.13	1.18	135.43	26	1296	0.57	0.139	0.10	21.03	0.07	0.001
23.98	1.83	117.38	1.19	139.39	27	1345	0.57	0.126	0.09	21.03	0.06	0.001
24.05	1.84	120.17	1.19	143.43	28	1393	0.57	0.115	0.08	21.03	0.05	0.001
24.12	1.84	123.19	1.19	147.02	29	1430	0.57	0.108	0.07	21.03	0.05	0.001
24.16	1.83	127.99	1.18	151.54	30	1466	0.57	0.102	0.06	21.03	0.04	0.000
24.23	1.81	135.07	1.16	157.28	31	1508	0.57	0.095	0.06	21.03	0.04	0.001
24.30	1.78	145.23	1.13	164.17	32	1561	0.57	0.088	0.05	21.03	0.04	0.001
24.37	1.75	157.11	1.08	169.69	32	1615	0.57	0.082	0.05	21.03	0.03	0.001
24.44	1.71	169.04	1.02	171.99	32	1664	0.57	0.077	0.04	21.03	0.03	0.001
24.51	1.69	179.14	1.00	179.14	33	1703	0.57	0.074	0.04	21.03	0.03	0.000
24.58	1.67	185.80	1.00	185.80	34	1727	0.57	0.072	0.04	21.03	0.03	0.000
24.62	1.65	190.49	1.00	190.49	35	1733	0.57	0.072	0.04	21.03	0.02	0.000
24.69	1.64	191.86	1.00	191.86	35	1720	0.57	0.073	0.04	21.03	0.03	0.000
24.76	1.64	188.98	1.00	188.98	35	1694	0.57	0.076	0.04	21.03	0.03	0.000
24.83	1.66	180.56	1.00	180.56	33	1659	0.57	0.080	0.04	21.03	0.03	0.000
24.90	1.68	169.73	1.00	169.73	31	1615	0.57	0.085	0.05	21.03	0.03	0.001
24.98	1.70	160.78	1.00	160.78	30	1573	0.57	0.091	0.06	21.03	0.04	0.001
25.01	1.71	154.59	1.02	157.14	29	1541	0.57	0.095	0.06	21.03	0.04	0.000
25.08	1.69	151.66	1.00	151.66	28	1472	0.57	0.107	0.07	21.03	0.05	0.001
25.15	1.63	151.11	1.00	151.11	28	1348	0.57	0.136	0.09	21.03	0.06	0.001
25.23	1.57	150.64	1.00	150.64	27	1239	0.57	0.174	0.12	21.03	0.08	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
25.30	1.55	150.00	1.00	150.00	27	1217	0.57	0.185	0.13	21.03	0.09	0.001
25.37	1.59	149.38	1.00	149.38	27	1277	0.57	0.161	0.11	21.03	0.07	0.001
25.41	1.62	150.69	1.00	150.69	27	1336	0.57	0.141	0.10	21.03	0.06	0.001
25.48	1.66	148.68	1.00	148.68	27	1389	0.57	0.128	0.09	21.03	0.06	0.001
25.54	1.69	152.03	1.00	152.03	28	1475	0.57	0.110	0.07	21.03	0.05	0.001
25.61	1.70	156.42	1.00	156.42	29	1559	0.57	0.096	0.06	21.03	0.04	0.001
25.67	1.67	167.13	1.00	167.13	31	1601	0.57	0.091	0.05	21.03	0.04	0.000
25.73	1.60	174.72	1.00	174.72	32	1519	0.57	0.103	0.06	21.03	0.04	0.001
25.80	1.52	182.77	1.00	182.77	32	1431	0.57	0.121	0.07	21.03	0.04	0.001
25.87	1.46	190.75	1.00	190.75	33	1399	0.57	0.128	0.07	21.03	0.05	0.001
25.94	1.48	198.68	1.00	198.68	34	1488	0.57	0.110	0.06	21.03	0.04	0.001
25.99	1.50	206.70	1.00	206.70	36	1593	0.57	0.094	0.05	21.03	0.03	0.000
26.07	1.53	210.13	1.00	210.13	37	1686	0.57	0.083	0.04	21.03	0.03	0.000
26.14	1.55	214.12	1.00	214.12	38	1772	0.57	0.075	0.03	21.03	0.02	0.000
26.19	1.57	217.28	1.00	217.28	39	1831	0.57	0.070	0.03	21.03	0.02	0.000
26.27	1.56	224.02	1.00	224.02	40	1870	0.57	0.067	0.03	21.03	0.02	0.000
26.32	1.55	228.59	1.00	228.59	41	1898	0.57	0.066	0.03	21.03	0.02	0.000
26.39	1.55	230.95	1.00	230.95	41	1909	0.57	0.065	0.03	21.03	0.02	0.000
26.46	1.53	233.35	1.00	233.35	41	1889	0.57	0.067	0.03	21.03	0.02	0.000
26.52	1.50	235.02	1.00	235.02	41	1820	0.57	0.072	0.03	21.03	0.02	0.000
26.59	1.46	233.13	1.00	233.13	40	1723	0.57	0.081	0.04	21.03	0.02	0.000
26.66	1.46	227.19	1.00	227.19	39	1683	0.57	0.086	0.04	21.03	0.02	0.000
26.73	1.49	217.84	1.00	217.84	38	1683	0.57	0.086	0.04	21.03	0.03	0.000
26.80	1.54	205.86	1.00	205.86	36	1698	0.57	0.085	0.04	21.03	0.03	0.000
26.85	1.57	193.05	1.00	193.05	34	1649	0.57	0.091	0.05	21.03	0.03	0.000
26.91	1.60	176.32	1.00	176.32	32	1562	0.57	0.103	0.06	21.03	0.04	0.001
26.99	1.68	153.26	1.00	153.26	28	1513	0.57	0.113	0.07	21.03	0.05	0.001
27.05	1.82	125.83	1.17	147.83	29	1520	0.57	0.112	0.07	21.03	0.05	0.001
27.12	2.01	98.00	1.31	128.76	27	1539	0.57	0.109	0.08	21.03	0.05	0.001
27.18	2.16	76.79	1.53	117.53	26	1500	0.57	0.116	0.08	21.03	0.05	0.001
27.24	2.33	57.24	2.03	116.33	28	1408	0.57	0.138	0.09	21.03	0.06	0.001
27.31	2.47	43.38	2.80	121.33	31	1309	0.57	0.170	0.10	21.03	0.06	0.001
27.38	2.61	33.56	3.85	129.29	0	0	0.57	0.000	0.00	0.00	0.00	0.000
27.44	2.66	31.09	4.26	132.46	0	0	0.57	0.000	0.00	0.00	0.00	0.000
27.53	2.68	30.13	4.50	135.55	0	0	0.57	0.000	0.00	0.00	0.00	0.000
27.59	2.65	31.99	4.22	135.07	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.67	2.64	33.14	4.08	135.07	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.70	2.58	36.75	3.58	131.70	35	1304	0.58	0.176	0.09	21.03	0.06	0.000
27.78	2.56	38.31	3.41	130.56	35	1321	0.58	0.170	0.09	21.03	0.05	0.001
27.85	2.54	39.65	3.26	129.19	34	1334	0.58	0.166	0.09	21.03	0.05	0.001
27.92	2.55	38.74	3.34	129.29	34	1325	0.58	0.170	0.09	21.03	0.06	0.001
27.99	2.53	39.58	3.20	126.73	33	1323	0.58	0.172	0.09	21.03	0.06	0.001
28.03	2.50	41.51	2.96	122.92	32	1324	0.58	0.172	0.10	21.03	0.06	0.001
28.10	2.43	46.28	2.55	117.97	29	1349	0.58	0.163	0.10	21.03	0.06	0.001
28.18	2.34	53.65	2.11	113.12	27	1387	0.58	0.152	0.11	21.03	0.06	0.001
28.25	2.27	61.44	1.81	111.13	26	1426	0.58	0.141	0.10	21.03	0.06	0.001
28.32	2.21	67.92	1.64	111.22	25	1456	0.58	0.134	0.10	21.03	0.06	0.001
28.36	2.18	72.20	1.56	112.75	25	1482	0.58	0.128	0.10	21.03	0.06	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
28.43	2.16	74.79	1.53	114.43	25	1506	0.58	0.123	0.09	21.03	0.06	0.001
28.50	2.15	77.05	1.51	116.36	26	1533	0.58	0.118	0.09	21.03	0.05	0.001
28.58	2.15	78.59	1.50	118.19	26	1559	0.58	0.114	0.08	21.03	0.05	0.001
28.65	2.13	79.94	1.47	117.50	26	1548	0.58	0.116	0.09	21.03	0.05	0.001
28.69	2.07	82.12	1.38	113.55	24	1467	0.58	0.134	0.11	21.03	0.06	0.001
28.76	2.01	84.53	1.31	111.01	23	1377	0.58	0.160	0.13	21.03	0.08	0.001
28.83	1.97	86.36	1.28	110.79	23	1333	0.58	0.176	0.15	21.03	0.09	0.002
28.91	1.98	86.85	1.29	112.44	23	1374	0.58	0.162	0.14	21.03	0.08	0.001
28.95	2.01	87.23	1.31	114.61	24	1428	0.58	0.146	0.12	21.03	0.07	0.001
29.02	2.07	81.10	1.38	112.28	24	1462	0.58	0.137	0.11	21.03	0.07	0.001
29.08	2.09	82.90	1.40	116.30	25	1526	0.58	0.123	0.09	21.03	0.06	0.001
29.15	2.10	84.77	1.42	120.28	26	1588	0.58	0.112	0.08	21.03	0.05	0.001
29.22	2.07	92.27	1.38	127.48	27	1666	0.58	0.100	0.07	21.03	0.04	0.001
29.27	2.11	90.17	1.43	128.67	28	1708	0.58	0.095	0.06	21.03	0.04	0.000
29.36	2.14	86.22	1.49	128.13	28	1720	0.58	0.094	0.06	21.03	0.04	0.001
29.41	2.17	81.36	1.55	126.23	28	1702	0.58	0.096	0.06	21.03	0.04	0.001
29.50	2.19	77.26	1.60	123.51	28	1667	0.58	0.102	0.07	21.03	0.04	0.001
29.55	2.21	73.65	1.64	121.04	27	1632	0.58	0.107	0.07	21.03	0.04	0.001
29.61	2.22	70.83	1.68	118.69	27	1599	0.58	0.113	0.08	21.03	0.05	0.001
29.67	2.23	68.21	1.68	114.85	26	1548	0.58	0.123	0.09	21.03	0.05	0.001
29.73	2.24	64.85	1.72	111.37	26	1499	0.58	0.134	0.10	21.03	0.06	0.001
29.82	2.27	60.78	1.80	109.64	25	1465	0.58	0.143	0.11	21.03	0.06	0.001
29.89	2.32	56.26	1.99	111.71	26	1458	0.58	0.145	0.10	21.03	0.06	0.001
29.95	2.35	53.37	2.15	114.83	28	1464	0.58	0.144	0.10	21.03	0.06	0.001
30.01	2.38	52.00	2.26	117.55	29	1476	0.58	0.141	0.09	21.03	0.05	0.001
30.07	2.38	51.72	2.29	118.42	29	1483	0.58	0.140	0.09	21.03	0.05	0.001
30.13	2.39	50.43	2.34	118.01	29	1469	0.58	0.144	0.09	21.03	0.05	0.001
30.21	2.41	47.79	2.45	117.13	29	1437	0.58	0.153	0.10	21.03	0.06	0.001
30.28	2.42	46.80	2.46	115.27	29	1414	0.58	0.161	0.10	21.03	0.06	0.001
30.35	2.43	45.66	2.51	114.63	29	1399	0.58	0.167	0.11	21.03	0.06	0.001
30.42	2.41	47.05	2.40	112.95	28	1404	0.58	0.166	0.11	21.03	0.06	0.001
30.46	2.38	49.43	2.26	111.58	27	1418	0.58	0.161	0.11	21.03	0.06	0.001
30.53	2.33	54.45	2.02	110.20	26	1453	0.58	0.151	0.11	21.03	0.06	0.001
30.60	2.28	59.51	1.85	110.29	26	1492	0.58	0.141	0.10	21.03	0.06	0.001
30.68	2.25	63.59	1.75	111.16	26	1525	0.58	0.134	0.10	21.03	0.06	0.001
30.75	2.23	66.36	1.69	111.87	26	1546	0.58	0.129	0.10	21.03	0.05	0.001
30.79	2.22	67.10	1.68	112.45	26	1557	0.58	0.127	0.09	21.03	0.05	0.000
30.86	2.25	64.86	1.75	113.23	26	1560	0.58	0.127	0.09	21.03	0.05	0.001
30.93	2.28	61.47	1.86	114.52	27	1559	0.58	0.128	0.09	21.03	0.05	0.001
31.01	2.31	58.65	1.97	115.48	27	1552	0.58	0.130	0.09	21.03	0.05	0.001
31.05	2.32	57.05	1.98	113.16	27	1519	0.58	0.137	0.10	21.03	0.05	0.000
31.12	2.31	55.10	1.98	109.13	26	1468	0.58	0.151	0.11	21.03	0.06	0.001
31.19	2.34	50.82	2.09	106.29	25	1409	0.58	0.170	0.13	21.03	0.07	0.001
31.26	2.41	44.41	2.43	107.71	27	1362	0.58	0.189	0.13	21.03	0.07	0.001
31.33	2.50	37.87	2.98	112.71	29	1324	0.58	0.206	0.13	21.03	0.07	0.001
31.41	2.57	33.40	3.50	116.98	31	1295	0.58	0.222	0.13	21.03	0.07	0.001
31.44	2.61	31.16	3.83	119.20	0	0	0.58	0.000	0.00	0.00	0.00	0.000
31.52	2.61	30.79	3.83	117.95	0	0	0.58	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
31.59	2.56	31.72	3.41	108.23	29	1215	0.58	0.275	0.18	21.03	0.10	0.002
31.66	2.46	33.36	2.75	91.64	23	1118	0.58	0.372	0.31	21.03	0.17	0.003
31.70	2.38	34.49	2.29	78.81	19	1028	0.58	0.518	0.54	21.03	0.29	0.003
31.77	2.36	34.75	2.17	75.57	18	1003	0.58	0.575	0.64	21.03	0.34	0.006
31.85	2.39	34.99	2.33	81.36	20	1058	0.58	0.464	0.47	21.03	0.25	0.004
31.92	2.44	34.79	2.58	89.88	22	1128	0.58	0.364	0.32	21.03	0.17	0.003
31.99	2.49	33.67	2.94	99.07	25	1187	0.58	0.304	0.23	21.03	0.12	0.002
32.05	2.56	31.11	3.45	107.17	28	1212	0.58	0.283	0.19	21.03	0.10	0.001
32.12	2.62	28.45	3.90	110.85	0	0	0.58	0.000	0.00	0.00	0.00	0.000
32.19	2.66	26.42	4.31	113.86	0	0	0.58	0.000	0.00	0.00	0.00	0.000
32.26	2.66	26.65	4.32	115.19	0	0	0.58	0.000	0.00	0.00	0.00	0.000
32.30	2.57	32.14	3.48	111.98	30	1269	0.58	0.246	0.15	21.03	0.08	0.001
32.37	2.43	41.75	2.53	105.75	26	1351	0.58	0.203	0.15	21.03	0.08	0.001
32.44	2.33	50.81	2.05	104.16	25	1430	0.58	0.172	0.13	21.03	0.07	0.001
32.52	2.29	55.57	1.90	105.38	25	1480	0.58	0.157	0.12	21.03	0.06	0.001
32.56	2.27	58.62	1.82	106.94	25	1517	0.58	0.147	0.11	21.03	0.06	0.001
32.63	2.23	63.15	1.71	107.74	25	1549	0.58	0.140	0.11	21.03	0.06	0.001
32.70	2.21	67.51	1.63	109.89	25	1591	0.58	0.131	0.10	21.03	0.05	0.001
32.77	2.20	69.39	1.62	112.73	25	1635	0.58	0.123	0.09	21.03	0.05	0.001
32.85	2.22	69.04	1.67	115.46	26	1673	0.58	0.116	0.08	21.03	0.04	0.001
32.89	2.23	69.29	1.70	117.87	27	1705	0.58	0.111	0.08	21.03	0.04	0.000
32.96	2.22	71.25	1.68	119.38	27	1733	0.58	0.107	0.07	21.03	0.04	0.001
33.03	2.20	74.87	1.62	121.30	27	1769	0.58	0.103	0.07	21.03	0.04	0.001
33.10	2.18	79.52	1.56	123.85	28	1811	0.58	0.098	0.07	21.03	0.03	0.001
33.18	2.15	84.32	1.50	126.87	28	1853	0.58	0.093	0.06	21.03	0.03	0.001
33.22	2.12	91.04	1.44	131.30	29	1902	0.58	0.088	0.06	21.03	0.03	0.000
33.29	2.08	98.78	1.39	136.96	29	1954	0.58	0.084	0.05	21.03	0.03	0.000
33.36	2.04	107.19	1.34	143.99	30	2010	0.58	0.079	0.05	21.03	0.02	0.000
33.44	2.02	113.00	1.32	149.30	31	2053	0.58	0.076	0.04	21.03	0.02	0.000
33.47	2.00	117.14	1.31	153.23	32	2083	0.58	0.074	0.04	21.03	0.02	0.000
33.55	1.99	119.45	1.30	155.35	32	2098	0.58	0.073	0.04	21.03	0.02	0.000
33.62	1.99	120.49	1.30	156.20	32	2103	0.58	0.073	0.04	21.03	0.02	0.000
33.69	1.99	119.15	1.30	154.78	32	2093	0.58	0.074	0.04	21.03	0.02	0.000
33.76	2.01	115.10	1.31	151.00	31	2072	0.58	0.076	0.04	21.03	0.02	0.000
33.84	2.03	109.79	1.33	146.38	31	2048	0.58	0.077	0.05	21.03	0.02	0.000
33.87	2.07	102.16	1.38	140.63	30	2021	0.58	0.080	0.05	21.03	0.02	0.000
33.95	2.12	93.17	1.45	135.14	29	1991	0.58	0.082	0.05	21.03	0.03	0.000
34.02	2.19	82.56	1.58	130.71	29	1949	0.58	0.086	0.05	21.03	0.03	0.000
34.09	2.25	74.00	1.74	128.92	30	1908	0.58	0.090	0.06	21.03	0.03	0.000
34.13	2.30	66.39	1.94	128.61	30	1863	0.58	0.095	0.06	21.03	0.03	0.000
34.21	2.35	60.63	2.11	127.93	31	1812	0.58	0.102	0.06	21.03	0.03	0.001
34.28	2.36	56.77	2.20	124.63	30	1747	0.58	0.111	0.07	21.03	0.03	0.001
34.35	2.35	55.92	2.12	118.72	29	1684	0.58	0.121	0.08	21.03	0.04	0.001
34.39	2.31	56.87	1.95	111.10	26	1615	0.58	0.135	0.10	21.03	0.05	0.000
34.47	2.27	57.69	1.82	105.19	24	1556	0.58	0.149	0.12	21.03	0.06	0.001
34.54	2.22	60.78	1.66	100.76	23	1515	0.58	0.160	0.14	21.03	0.07	0.001
34.61	2.09	73.63	1.40	103.02	22	1516	0.58	0.160	0.14	21.03	0.07	0.001
34.69	1.93	94.33	1.25	118.30	24	1537	0.58	0.155	0.12	21.03	0.06	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
34.73	1.75	120.69	1.09	131.63	25	1527	0.58	0.158	0.12	21.03	0.06	0.001
34.79	1.60	147.44	1.00	147.44	27	1500	0.58	0.166	0.12	21.03	0.06	0.001
34.85	1.46	178.32	1.00	178.32	31	1525	0.58	0.159	0.09	21.03	0.05	0.001
34.92	1.35	213.84	1.00	213.84	36	1596	0.58	0.141	0.07	21.03	0.03	0.001
34.99	1.31	243.86	1.00	243.86	40	1719	0.58	0.118	0.05	21.03	0.02	0.000
35.06	1.33	253.15	1.00	253.15	42	1839	0.58	0.101	0.04	21.03	0.02	0.000
35.12	1.35	269.61	1.00	269.61	45	2009	0.58	0.084	0.03	21.03	0.01	0.000
35.18	1.35	287.77	1.00	287.77	48	2150	0.58	0.074	0.03	21.03	0.01	0.000
35.25	1.32	316.88	1.00	316.88	52	2267	0.58	0.067	0.02	21.03	0.01	0.000
35.31	1.30	332.47	1.00	332.47	54	2325	0.58	0.064	0.02	21.03	0.01	0.000
35.38	1.29	344.68	1.00	344.68	56	2384	0.58	0.061	0.02	21.03	0.01	0.000
35.45	1.26	356.52	1.00	356.52	58	2389	0.58	0.061	0.02	21.03	0.01	0.000
35.51	1.26	367.72	1.00	367.72	59	2446	0.58	0.059	0.02	21.03	0.01	0.000
35.58	1.34	377.30	1.00	377.30	63	2788	0.58	0.047	0.01	21.03	0.01	0.000
35.64	1.45	387.29	1.00	387.29	67	3325	0.58	0.036	0.01	21.03	0.00	0.000
35.71	1.54	398.31	1.00	398.31	70	3816	0.58	0.030	0.01	21.03	0.00	0.000
35.78	1.57	407.58	1.00	407.58	73	4050	0.58	0.028	0.01	21.03	0.00	0.000
35.84	1.56	409.19	1.00	409.19	73	4018	0.58	0.028	0.01	21.03	0.00	0.000
35.91	1.53	414.45	1.00	414.45	73	3930	0.58	0.029	0.01	21.03	0.00	0.000
35.97	1.50	426.16	1.00	426.16	74	3887	0.58	0.030	0.01	21.03	0.00	0.000
36.03	1.48	441.18	1.00	441.18	77	3932	0.58	0.029	0.01	21.03	0.00	0.000
36.10	1.47	450.03	1.00	450.03	78	3967	0.58	0.029	0.01	21.03	0.00	0.000
36.17	1.48	430.18	1.00	430.18	75	3868	0.58	0.030	0.01	21.03	0.00	0.000
36.23	1.49	409.74	1.00	409.74	71	3705	0.58	0.032	0.01	21.03	0.00	0.000
36.30	1.50	383.44	1.00	383.44	67	3523	0.58	0.034	0.01	21.03	0.00	0.000
36.37	1.48	377.76	1.00	377.76	65	3365	0.58	0.036	0.01	21.03	0.00	0.000
36.43	1.45	374.86	1.00	374.86	64	3229	0.58	0.039	0.01	21.03	0.00	0.000
36.49	1.40	375.29	1.00	375.29	63	3044	0.58	0.042	0.01	21.03	0.00	0.000
36.56	1.36	371.64	1.00	371.64	62	2884	0.58	0.046	0.01	21.03	0.01	0.000
36.63	1.33	370.15	1.00	370.15	61	2758	0.58	0.050	0.01	21.03	0.01	0.000
36.70	1.31	368.22	1.00	368.22	61	2688	0.58	0.052	0.01	21.03	0.01	0.000
36.76	1.30	373.20	1.00	373.20	61	2670	0.58	0.052	0.01	21.03	0.01	0.000
36.83	1.30	372.72	1.00	372.72	61	2663	0.58	0.053	0.01	21.03	0.01	0.000
36.89	1.30	372.84	1.00	372.84	61	2667	0.58	0.053	0.01	21.03	0.01	0.000
36.96	1.29	374.42	1.00	374.42	61	2671	0.58	0.053	0.01	21.03	0.01	0.000
37.02	1.29	376.24	1.00	376.24	61	2673	0.58	0.053	0.01	21.03	0.01	0.000
37.08	1.28	376.39	1.00	376.39	61	2662	0.58	0.053	0.01	21.03	0.01	0.000
37.15	1.28	372.28	1.00	372.28	61	2626	0.58	0.054	0.01	21.03	0.01	0.000
37.21	1.28	369.04	1.00	369.04	60	2600	0.57	0.055	0.01	21.03	0.01	0.000
37.28	1.28	366.86	1.00	366.86	60	2594	0.57	0.056	0.01	21.03	0.01	0.000
37.35	1.29	366.27	1.00	366.27	60	2606	0.57	0.055	0.01	21.03	0.01	0.000
37.41	1.29	365.92	1.00	365.92	60	2623	0.57	0.055	0.01	21.03	0.01	0.000
37.48	1.30	365.75	1.00	365.75	60	2647	0.57	0.054	0.01	21.03	0.01	0.000
37.54	1.31	368.73	1.00	368.73	61	2711	0.57	0.052	0.01	21.03	0.01	0.000
37.62	1.31	376.56	1.00	376.56	62	2782	0.57	0.050	0.01	21.03	0.01	0.000
37.68	1.31	382.80	1.00	382.80	63	2837	0.57	0.049	0.01	21.03	0.01	0.000
37.74	1.29	389.91	1.00	389.91	64	2787	0.57	0.050	0.01	21.03	0.01	0.000
37.81	1.22	396.48	1.00	396.48	63	2601	0.57	0.056	0.01	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
37.87	1.15	402.51	1.00	402.51	63	2439	0.57	0.063	0.02	21.03	0.01	0.000
37.94	1.15	403.52	1.00	403.52	63	2438	0.57	0.063	0.02	21.03	0.01	0.000
38.00	1.23	404.58	1.00	404.58	65	2707	0.57	0.053	0.01	21.03	0.01	0.000
38.07	1.31	403.85	1.00	403.85	67	3010	0.57	0.045	0.01	21.03	0.00	0.000
38.13	1.37	405.06	1.00	405.06	68	3227	0.57	0.040	0.01	21.03	0.00	0.000
38.20	1.39	403.39	1.00	403.39	68	3315	0.57	0.039	0.01	21.03	0.00	0.000
38.27	1.39	405.03	1.00	405.03	68	3326	0.57	0.039	0.01	21.03	0.00	0.000
38.33	1.39	406.36	1.00	406.36	68	3330	0.57	0.039	0.01	21.03	0.00	0.000
38.40	1.39	405.14	1.00	405.14	68	3325	0.57	0.039	0.01	21.03	0.00	0.000
38.46	1.38	405.01	1.00	405.01	68	3320	0.57	0.039	0.01	21.03	0.00	0.000
38.54	1.39	401.05	1.00	401.05	68	3311	0.57	0.039	0.01	21.03	0.00	0.000
38.59	1.41	388.14	1.00	388.14	66	3279	0.57	0.040	0.01	21.03	0.00	0.000
38.67	1.42	375.03	1.00	375.03	64	3208	0.57	0.041	0.01	21.03	0.00	0.000
38.73	1.40	365.59	1.00	365.59	62	3071	0.57	0.044	0.01	21.03	0.00	0.000
38.80	1.36	366.09	1.00	366.09	61	2931	0.57	0.048	0.01	21.03	0.00	0.000
38.86	1.34	369.46	1.00	369.46	61	2873	0.57	0.049	0.01	21.03	0.01	0.000
38.93	1.33	376.25	1.00	376.25	62	2879	0.57	0.049	0.01	21.03	0.00	0.000
38.99	1.31	384.46	1.00	384.46	63	2894	0.57	0.049	0.01	21.03	0.00	0.000
39.05	1.29	388.47	1.00	388.47	64	2849	0.57	0.050	0.01	21.03	0.00	0.000
39.12	1.26	389.92	1.00	389.92	63	2766	0.57	0.052	0.01	21.03	0.01	0.000
39.19	1.25	385.24	1.00	385.24	62	2683	0.57	0.055	0.01	21.03	0.01	0.000
39.25	1.23	386.65	1.00	386.65	62	2649	0.57	0.057	0.01	21.03	0.01	0.000
39.31	1.25	389.72	1.00	389.72	63	2718	0.57	0.054	0.01	21.03	0.01	0.000
39.38	1.25	401.30	1.00	401.30	65	2809	0.57	0.051	0.01	21.03	0.00	0.000
39.45	1.23	413.09	1.00	413.09	66	2813	0.57	0.051	0.01	21.03	0.00	0.000
39.52	1.19	423.05	1.00	423.05	67	2755	0.57	0.053	0.01	21.03	0.00	0.000
39.58	1.17	427.96	1.00	427.96	68	2712	0.57	0.055	0.01	21.03	0.00	0.000
39.64	1.16	436.03	1.00	436.03	69	2735	0.57	0.054	0.01	21.03	0.00	0.000
39.71	1.16	445.08	1.00	445.08	70	2777	0.57	0.053	0.01	21.03	0.00	0.000
39.78	1.13	461.87	1.00	461.87	72	2803	0.57	0.052	0.01	21.03	0.00	0.000
39.84	1.14	463.65	1.00	463.65	73	2852	0.57	0.051	0.01	21.03	0.00	0.000
39.91	1.18	463.68	1.00	463.68	73	2976	0.57	0.048	0.01	21.03	0.00	0.000
39.98	1.22	456.88	1.00	456.88	73	3105	0.57	0.045	0.01	21.03	0.00	0.000
40.04	1.26	448.81	1.00	448.81	73	3212	0.57	0.042	0.01	21.03	0.00	0.000
40.10	1.29	447.93	1.00	447.93	73	3327	0.57	0.040	0.01	21.03	0.00	0.000
40.17	1.32	443.95	1.00	443.95	73	3444	0.57	0.038	0.01	21.03	0.00	0.000
40.23	1.34	450.83	1.00	450.83	75	3586	0.57	0.036	0.01	21.03	0.00	0.000
40.30	1.22	450.12	1.00	450.12	72	3057	0.57	0.046	0.01	21.03	0.00	0.000
40.37	1.02	452.52	1.00	452.52	68	2390	0.57	0.069	0.02	21.03	0.01	0.000
40.44	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.50	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.57	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.63	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.70	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)

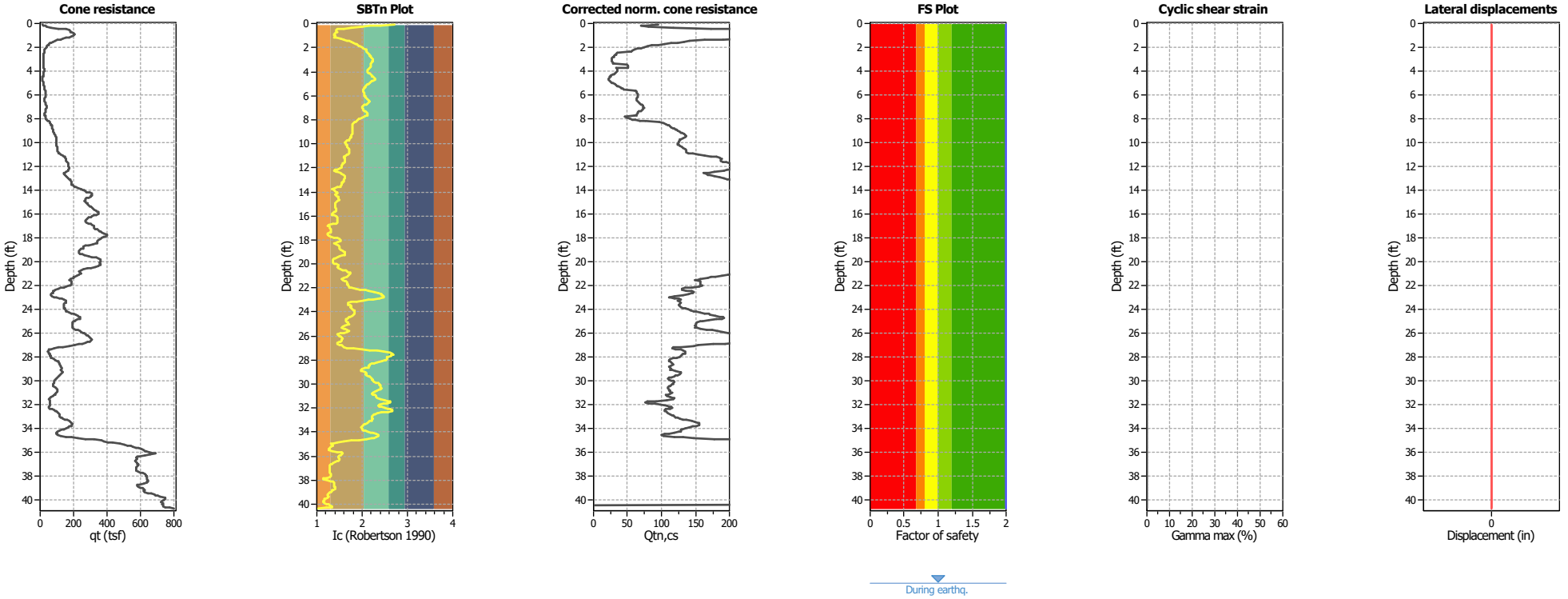
Total estimated settlement: 4.95

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

Estimation of post-earthquake lateral Displacements

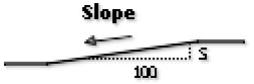
Geometric parameters: Gently sloping ground without free face (Slope 1.00 %)



Abbreviations

q_t: Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c: Soil Behaviour Type Index
$Q_{tn,cs}$: Equivalent clean sand normalized CPT total cone resistance
F.S.: Factor of safety
γ_{max}: Maximum cyclic shear strain
LDI: Lateral displacement index

Surface condition



:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.07	11.89	19.09	4.98	95.18	2.73	0.74	0.74
0.14	20.05	32.21	2.41	77.49	2.41	0.47	0.70
0.20	28.25	45.37	1.55	70.24	2.17	0.26	0.68
0.28	38.68	62.12	1.30	80.91	1.99	0.63	0.71
0.33	66.27	106.45	1.11	117.95	1.77	0.78	0.78
0.40	107.51	172.70	1.00	172.70	1.59	0.86	0.86
0.47	151.43	243.25	1.00	243.25	1.46	0.93	0.93
0.54	171.39	275.31	1.00	275.31	1.43	0.96	0.96
0.59	180.15	289.39	1.00	289.39	1.43	0.97	0.97
0.66	179.00	287.53	1.00	287.53	1.45	0.97	0.97
0.72	188.44	302.69	1.00	302.69	1.43	0.98	0.98
0.79	196.80	316.12	1.00	316.12	1.40	0.99	0.99
0.87	205.87	330.67	1.00	330.67	1.37	1.00	1.00
0.93	204.59	328.61	1.00	328.61	1.39	1.00	1.00
1.00	198.27	318.45	1.00	318.45	1.40	0.99	0.99
1.06	187.21	300.68	1.00	300.68	1.39	0.98	0.98
1.13	172.79	277.50	1.00	277.50	1.39	0.96	0.96
1.19	154.97	248.87	1.00	248.87	1.43	0.93	0.93
1.26	136.13	218.59	1.00	218.59	1.52	0.91	0.91
1.32	118.72	190.62	1.00	190.62	1.59	0.88	0.88
1.39	101.56	163.04	1.00	163.04	1.66	0.84	0.84
1.45	87.05	139.72	1.01	141.72	1.71	0.82	0.82
1.52	74.44	119.45	1.11	132.98	1.77	0.80	0.80
1.58	66.15	106.13	1.16	123.08	1.81	0.79	0.79
1.65	59.08	94.77	1.20	113.77	1.85	0.77	0.77
1.71	52.85	84.75	1.23	104.01	1.89	0.76	0.76
1.78	47.78	76.59	1.24	95.03	1.91	0.74	0.74
1.84	42.95	68.83	1.26	86.40	1.93	0.72	0.72
1.92	39.18	62.77	1.27	80.00	1.96	0.58	0.71
1.98	35.69	57.16	1.31	74.63	2.00	0.37	0.69
2.04	32.86	52.60	1.33	70.15	2.03	0.26	0.68
2.11	29.78	47.65	1.37	65.31	2.06	0.17	0.67
2.17	27.35	43.74	1.40	61.06	2.08	0.12	0.66
2.25	25.38	40.57	1.42	57.49	2.10	0.09	0.65
2.30	24.10	38.51	1.43	54.91	2.10	0.08	0.64
2.37	23.04	36.80	1.44	53.11	2.12	0.07	0.64
2.43	21.98	35.10	1.00	35.10	2.13	0.02	0.62
2.52	21.21	33.84	1.00	33.84	2.14	0.02	0.62
2.58	20.40	32.54	1.00	32.54	2.16	0.02	0.62
2.65	19.75	31.49	1.00	31.49	2.17	0.02	0.62
2.71	19.12	30.48	1.00	30.48	2.18	0.02	0.62
2.77	18.50	29.47	1.00	29.47	2.19	0.02	0.62
2.83	17.94	28.56	1.00	28.56	2.21	0.02	0.62
2.90	17.38	27.66	1.00	27.66	2.22	0.02	0.62
2.96	16.94	26.96	1.00	26.96	2.23	0.02	0.62
3.02	16.69	26.55	1.00	26.55	2.24	0.02	0.62
3.10	16.79	26.69	1.00	26.69	2.23	0.02	0.62
3.17	17.10	27.19	1.00	27.19	2.22	0.02	0.62

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.22	17.69	28.14	1.00	28.14	2.21	0.02	0.62
3.31	18.28	29.07	1.00	29.07	2.20	0.02	0.62
3.38	18.84	29.97	1.00	29.97	2.19	0.02	0.62
3.44	19.22	30.57	1.60	48.92	2.19	0.05	0.62
3.48	19.56	31.12	1.60	49.63	2.19	0.05	0.62
3.54	20.06	31.91	1.57	50.23	2.18	0.05	0.63
3.64	20.55	32.70	1.55	50.70	2.17	0.06	0.63
3.68	21.05	33.50	1.52	50.80	2.16	0.06	0.63
3.75	21.39	34.04	1.00	34.04	2.14	0.02	0.62
3.81	21.74	34.59	1.00	34.59	2.12	0.02	0.62
3.88	21.86	34.78	1.00	34.78	2.12	0.02	0.62
3.95	21.89	34.82	1.00	34.82	2.11	0.02	0.62
4.02	21.61	34.37	1.00	34.37	2.13	0.02	0.62
4.09	21.11	33.57	1.00	33.57	2.14	0.02	0.62
4.16	20.12	31.96	1.00	31.96	2.17	0.02	0.62
4.22	18.84	29.90	1.00	29.90	2.19	0.02	0.62
4.29	17.53	27.79	1.00	27.79	2.20	0.02	0.62
4.36	16.38	25.94	1.00	25.94	2.22	0.02	0.62
4.43	15.60	24.68	1.00	24.68	2.24	0.02	0.62
4.46	15.01	23.73	1.00	23.73	2.26	0.02	0.62
4.53	14.64	23.13	1.00	23.13	2.27	0.02	0.62
4.60	14.39	22.72	1.00	22.72	2.28	0.02	0.62
4.67	14.30	22.57	1.00	22.57	2.28	0.02	0.62
4.73	14.42	22.77	1.00	22.77	2.24	0.02	0.62
4.80	14.86	23.46	1.00	23.46	2.21	0.02	0.62
4.87	15.76	24.90	1.00	24.90	2.18	0.02	0.62
4.94	17.04	26.95	1.00	26.95	2.16	0.02	0.62
5.01	18.50	29.30	1.00	29.30	2.14	0.02	0.62
5.07	20.00	31.69	1.00	31.69	2.11	0.02	0.62
5.14	21.24	33.69	1.00	33.69	2.10	0.02	0.62
5.21	22.36	35.48	1.00	35.48	2.08	0.02	0.62
5.28	23.36	37.08	1.00	37.08	2.07	0.02	0.62
5.34	24.63	39.12	1.00	39.12	2.05	0.03	0.62
5.41	25.88	41.12	1.00	41.12	2.04	0.03	0.62
5.47	27.13	43.12	1.00	43.12	2.03	0.03	0.62
5.55	27.94	44.42	1.00	44.42	2.03	0.04	0.62
5.58	28.59	45.46	1.34	60.80	2.03	0.12	0.66
5.65	29.06	46.20	1.34	61.87	2.03	0.13	0.66
5.72	29.52	46.95	1.34	62.90	2.04	0.14	0.66
5.78	29.90	47.54	1.34	63.72	2.04	0.15	0.67
5.85	30.08	47.84	1.34	64.32	2.04	0.16	0.67
5.91	30.11	47.88	1.35	64.74	2.05	0.17	0.67
5.98	29.96	47.62	1.36	64.95	2.06	0.17	0.67
6.05	29.68	47.17	1.38	65.05	2.07	0.17	0.67
6.12	29.28	46.52	1.40	64.90	2.08	0.17	0.67
6.18	28.69	45.56	1.41	64.32	2.10	0.16	0.67
6.26	27.85	44.21	1.43	63.43	2.11	0.15	0.67
6.33	27.13	43.05	1.46	62.92	2.13	0.14	0.66

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.37	26.57	42.15	1.50	63.27	2.15	0.15	0.67
6.43	26.41	41.89	1.53	64.11	2.16	0.16	0.67
6.50	26.63	42.23	1.54	65.02	2.17	0.17	0.67
6.57	27.47	43.58	1.51	65.77	2.15	0.18	0.67
6.63	28.90	45.87	1.46	66.78	2.12	0.20	0.68
6.70	30.56	48.52	1.40	68.14	2.09	0.22	0.68
6.77	32.11	51.02	1.36	69.61	2.06	0.25	0.68
6.84	33.45	53.16	1.34	71.07	2.03	0.28	0.69
6.90	34.54	54.91	1.32	72.25	2.01	0.31	0.69
6.97	35.29	56.10	1.31	73.31	2.00	0.33	0.69
7.04	35.54	56.49	1.31	73.84	2.00	0.35	0.69
7.11	35.19	55.93	1.32	73.72	2.01	0.35	0.69
7.17	34.35	54.58	1.33	72.75	2.03	0.32	0.69
7.24	33.14	52.63	1.35	71.14	2.05	0.28	0.69
7.31	31.64	50.22	1.38	69.19	2.07	0.24	0.68
7.38	30.02	47.60	1.41	67.17	2.09	0.20	0.68
7.44	28.71	45.50	1.44	65.65	2.12	0.18	0.67
7.51	27.99	44.34	1.46	64.67	2.13	0.16	0.67
7.58	27.84	44.08	1.46	64.16	2.12	0.16	0.67
7.64	27.84	44.07	1.45	63.75	2.12	0.15	0.67
7.68	27.93	44.22	1.42	62.71	2.10	0.14	0.66
7.75	28.27	44.77	1.36	61.01	2.06	0.12	0.66
7.82	29.24	46.31	1.00	46.31	2.00	0.04	0.62
7.88	31.11	49.32	1.00	49.32	1.96	0.05	0.62
7.96	34.04	54.01	1.00	54.01	1.92	0.07	0.64
8.03	36.22	57.39	1.00	57.39	1.91	0.09	0.65
8.08	39.77	62.42	1.00	62.42	1.89	0.14	0.66
8.15	43.45	67.47	1.00	67.47	1.86	0.21	0.68
8.20	49.55	76.00	1.00	76.00	1.83	0.42	0.70
8.29	54.69	83.02	1.16	96.25	1.81	0.74	0.74
8.35	59.48	89.65	1.14	102.59	1.79	0.75	0.75
8.42	62.79	94.04	1.13	106.64	1.78	0.76	0.76
8.48	65.22	97.12	1.13	109.40	1.78	0.77	0.77
8.55	66.93	99.17	1.12	111.29	1.78	0.77	0.77
8.62	68.21	100.60	1.12	112.92	1.78	0.77	0.77
8.69	69.48	102.05	1.12	114.67	1.78	0.77	0.77
8.76	70.85	103.56	1.13	116.68	1.78	0.78	0.78
8.83	72.13	104.99	1.13	118.55	1.78	0.78	0.78
8.86	73.44	106.69	1.13	120.61	1.78	0.78	0.78
8.93	74.71	108.10	1.13	122.35	1.78	0.79	0.79
8.99	76.27	109.91	1.13	124.55	1.78	0.79	0.79
9.06	77.86	111.72	1.13	126.73	1.78	0.79	0.79
9.13	79.67	113.77	1.13	128.91	1.78	0.80	0.80
9.20	81.79	116.18	1.13	130.95	1.78	0.80	0.80
9.27	84.15	118.83	1.12	132.94	1.77	0.80	0.80
9.34	86.77	121.84	1.11	135.01	1.77	0.81	0.81
9.41	89.19	124.45	1.09	136.09	1.76	0.81	0.81
9.47	91.37	126.67	1.07	135.97	1.74	0.81	0.81

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.54	93.02	128.05	1.05	134.40	1.73	0.80	0.80
9.61	94.18	128.79	1.03	132.28	1.72	0.80	0.80
9.67	94.40	128.21	1.00	128.21	1.71	0.80	0.80
9.72	94.62	127.39	1.00	127.39	1.68	0.79	0.79
9.78	94.68	126.29	1.00	126.29	1.65	0.79	0.79
9.86	95.12	126.11	1.00	126.11	1.63	0.79	0.79
9.92	94.90	125.41	1.00	125.41	1.63	0.79	0.79
9.99	94.96	125.04	1.00	125.04	1.64	0.79	0.79
10.05	94.13	123.82	1.00	123.82	1.65	0.79	0.79
10.12	94.60	124.22	1.00	124.22	1.66	0.79	0.79
10.19	95.32	124.88	1.00	124.88	1.67	0.79	0.79
10.26	97.52	127.48	1.00	127.48	1.68	0.79	0.79
10.32	99.14	129.41	1.00	129.41	1.69	0.80	0.80
10.39	100.52	130.97	1.00	130.97	1.70	0.80	0.80
10.46	101.58	132.08	1.00	132.17	1.71	0.80	0.80
10.53	102.39	132.80	1.02	134.96	1.71	0.81	0.81
10.60	103.01	133.18	1.02	136.25	1.72	0.81	0.81
10.67	103.54	133.34	1.02	136.32	1.72	0.81	0.81
10.71	104.56	134.31	1.01	136.18	1.71	0.81	0.81
10.78	106.62	136.26	1.00	136.26	1.70	0.81	0.81
10.85	110.17	139.99	1.00	139.99	1.69	0.81	0.81
10.91	115.56	145.83	1.00	145.83	1.67	0.82	0.82
10.98	122.94	153.81	1.00	153.81	1.64	0.83	0.83
11.05	131.45	163.93	1.00	163.93	1.60	0.85	0.85
11.12	139.42	173.31	1.00	173.31	1.59	0.86	0.86
11.19	145.56	180.35	1.00	180.35	1.61	0.86	0.86
11.26	149.82	184.99	1.00	184.99	1.62	0.87	0.87
11.33	152.50	187.65	1.00	187.65	1.63	0.87	0.87
11.37	153.15	188.12	1.00	188.12	1.62	0.87	0.87
11.44	152.88	187.11	1.00	187.11	1.62	0.87	0.87
11.51	153.66	187.40	1.00	187.40	1.62	0.87	0.87
11.58	157.02	190.85	1.00	190.85	1.61	0.88	0.88
11.65	161.76	195.97	1.00	195.97	1.58	0.88	0.88
11.72	165.37	199.68	1.00	199.68	1.56	0.89	0.89
11.76	167.27	201.63	1.00	201.63	1.55	0.89	0.89
11.82	167.73	201.51	1.00	201.51	1.55	0.89	0.89
11.90	168.17	201.35	1.00	201.35	1.55	0.89	0.89
11.97	169.26	201.98	1.00	201.98	1.54	0.89	0.89
12.04	170.29	202.55	1.00	202.55	1.51	0.89	0.89
12.11	170.75	202.44	1.00	202.44	1.46	0.89	0.89
12.18	170.16	201.10	1.00	201.10	1.40	0.89	0.89
12.22	169.38	199.85	1.00	199.85	1.39	0.89	0.89
12.29	167.26	196.70	1.00	196.70	1.42	0.88	0.88
12.36	163.80	192.01	1.00	192.01	1.45	0.88	0.88
12.43	152.25	177.86	1.00	177.86	1.51	0.86	0.86
12.48	145.40	169.41	1.00	169.41	1.55	0.85	0.85
12.56	140.14	162.67	1.00	162.67	1.59	0.84	0.84
12.64	143.94	166.59	1.00	166.59	1.59	0.85	0.85

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.71	145.40	167.77	1.00	167.77	1.61	0.85	0.85
12.74	149.44	172.20	1.00	172.20	1.62	0.86	0.86
12.81	155.42	178.56	1.00	178.56	1.61	0.86	0.86
12.88	162.22	185.83	1.00	185.83	1.61	0.87	0.87
12.96	167.92	191.78	1.00	191.78	1.60	0.88	0.88
13.03	172.62	196.57	1.00	196.57	1.59	0.88	0.88
13.10	176.55	200.43	1.00	200.43	1.58	0.89	0.89
13.13	180.10	204.16	1.00	204.16	1.57	0.89	0.89
13.20	182.24	206.00	1.00	206.00	1.56	0.89	0.89
13.27	184.21	207.61	1.00	207.61	1.56	0.89	0.89
13.34	185.30	208.23	1.00	208.23	1.55	0.90	0.90
13.41	186.27	208.72	1.00	208.72	1.54	0.90	0.90
13.48	187.76	209.78	1.00	209.78	1.53	0.90	0.90
13.55	190.87	212.64	1.00	212.64	1.52	0.90	0.90
13.62	196.85	218.71	1.00	218.71	1.46	0.91	0.91
13.69	203.48	225.46	1.00	225.46	1.39	0.91	0.91
13.73	213.05	235.75	1.00	235.75	1.33	0.92	0.92
13.80	225.20	248.52	1.00	248.52	1.35	0.93	0.93
13.87	240.90	265.15	1.00	265.15	1.38	0.95	0.95
13.95	255.88	280.85	1.00	280.85	1.40	0.96	0.96
14.00	263.35	288.41	1.00	288.41	1.43	0.97	0.97
14.06	270.76	295.82	1.00	295.82	1.45	0.97	0.97
14.12	278.95	304.08	1.00	304.08	1.44	0.98	0.98
14.19	294.52	320.22	1.00	320.22	1.41	0.99	0.99
14.26	307.76	333.60	1.00	333.60	1.41	1.00	1.00
14.33	311.72	336.98	1.00	336.98	1.44	1.01	1.01
14.40	309.57	333.68	1.00	333.68	1.46	1.00	1.00
14.45	304.33	327.43	1.00	327.43	1.47	1.00	1.00
14.51	299.19	321.04	1.00	321.04	1.48	0.99	0.99
14.58	289.16	309.41	1.00	309.41	1.49	0.99	0.99
14.64	277.61	296.23	1.00	296.23	1.50	0.97	0.97
14.71	268.73	286.02	1.00	286.02	1.49	0.97	0.97
14.78	267.18	283.63	1.00	283.63	1.46	0.96	0.96
14.84	265.78	281.42	1.00	281.42	1.44	0.96	0.96
14.91	267.61	282.67	1.00	282.67	1.42	0.96	0.96
14.97	270.42	284.93	1.00	284.93	1.41	0.97	0.97
15.04	275.75	289.82	1.00	289.82	1.39	0.97	0.97
15.11	280.27	293.83	1.00	293.83	1.39	0.97	0.97
15.17	283.88	296.91	1.00	296.91	1.40	0.98	0.98
15.24	289.17	301.73	1.00	301.73	1.41	0.98	0.98
15.30	294.96	307.03	1.00	307.03	1.41	0.98	0.98
15.37	302.56	314.21	1.00	314.21	1.42	0.99	0.99
15.44	306.99	318.02	1.00	318.02	1.43	0.99	0.99
15.50	312.50	322.94	1.00	322.94	1.44	1.00	1.00
15.56	317.17	327.02	1.00	327.02	1.43	1.00	1.00
15.63	324.58	333.93	1.00	333.93	1.42	1.00	1.00
15.70	332.58	341.24	1.00	341.24	1.39	1.01	1.01
15.76	340.96	349.07	1.00	349.07	1.35	1.01	1.01

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.82	346.82	354.29	1.00	354.29	1.33	1.02	1.02
15.89	350.12	356.81	1.00	356.81	1.33	1.02	1.02
15.96	350.43	356.30	1.00	356.30	1.37	1.02	1.02
16.02	335.66	340.43	1.00	340.43	1.42	1.01	1.01
16.09	321.62	325.37	1.00	325.37	1.45	1.00	1.00
16.15	307.51	310.36	1.00	310.36	1.46	0.99	0.99
16.23	301.66	303.66	1.00	303.66	1.44	0.98	0.98
16.28	291.94	293.25	1.00	293.25	1.44	0.97	0.97
16.35	279.89	280.45	1.00	280.45	1.45	0.96	0.96
16.43	273.44	273.26	1.00	273.26	1.45	0.96	0.96
16.49	269.36	268.54	1.00	268.54	1.45	0.95	0.95
16.55	268.95	267.64	1.00	267.64	1.44	0.95	0.95
16.62	271.88	269.90	1.00	269.90	1.42	0.95	0.95
16.68	279.51	277.00	1.00	277.00	1.35	0.96	0.96
16.75	290.07	286.82	1.00	286.82	1.27	0.97	0.97
16.82	301.13	297.08	1.00	297.08	1.23	0.98	0.98
16.88	311.62	306.89	1.00	306.89	1.26	0.98	0.98
16.95	318.44	312.93	1.00	312.93	1.28	0.99	0.99
17.01	321.66	315.45	1.00	315.45	1.30	0.99	0.99
17.07	320.57	313.74	1.00	313.74	1.31	0.99	0.99
17.14	322.59	315.02	1.00	315.02	1.31	0.99	0.99
17.21	328.62	320.17	1.00	320.17	1.31	0.99	0.99
17.28	337.78	328.44	1.00	328.44	1.31	1.00	1.00
17.34	346.16	335.93	1.00	335.93	1.30	1.00	1.00
17.41	352.39	341.22	1.00	341.22	1.28	1.01	1.01
17.47	358.09	346.15	1.00	346.15	1.24	1.01	1.01
17.54	364.97	352.01	1.00	352.01	1.23	1.02	1.02
17.60	377.12	363.09	1.00	363.09	1.24	1.02	1.02
17.66	395.96	380.47	1.00	380.47	1.25	1.04	1.04
17.73	401.44	384.95	1.00	384.95	1.31	1.04	1.04
17.80	399.57	382.32	1.00	382.32	1.37	1.04	1.04
17.86	384.18	366.74	1.00	366.74	1.45	1.03	1.03
17.93	377.58	359.64	1.00	359.64	1.49	1.02	1.02
17.99	366.90	348.75	1.00	348.75	1.53	1.01	1.01
18.06	359.40	340.85	1.00	340.85	1.53	1.01	1.01
18.13	350.24	331.41	1.00	331.41	1.51	1.00	1.00
18.19	344.97	325.81	1.00	325.81	1.45	1.00	1.00
18.25	340.92	321.29	1.00	321.29	1.39	0.99	0.99
18.32	341.58	321.25	1.00	321.25	1.38	0.99	0.99
18.39	340.61	319.68	1.00	319.68	1.42	0.99	0.99
18.45	332.67	311.57	1.00	311.57	1.47	0.99	0.99
18.52	313.17	292.69	1.00	292.69	1.49	0.97	0.97
18.59	288.38	268.88	1.00	268.88	1.49	0.95	0.95
18.65	268.07	249.39	1.00	249.39	1.49	0.94	0.94
18.71	256.39	238.03	1.00	238.03	1.51	0.92	0.92
18.78	254.18	235.48	1.00	235.48	1.52	0.92	0.92
18.84	254.09	234.99	1.00	234.99	1.52	0.92	0.92
18.91	243.65	224.82	1.00	224.82	1.56	0.91	0.91

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.97	236.62	217.92	1.00	217.92	1.59	0.91	0.91
19.04	229.14	210.57	1.00	210.57	1.62	0.90	0.90
19.10	230.86	211.78	1.00	211.78	1.62	0.90	0.90
19.18	228.89	209.51	1.00	209.51	1.63	0.90	0.90
19.25	231.23	211.26	1.00	211.26	1.61	0.90	0.90
19.31	237.02	216.15	1.00	216.15	1.57	0.90	0.90
19.37	248.27	226.10	1.00	226.10	1.51	0.91	0.91
19.44	264.31	240.29	1.00	240.29	1.45	0.93	0.93
19.51	286.48	260.02	1.00	260.02	1.40	0.94	0.94
19.57	311.09	281.97	1.00	281.97	1.38	0.96	0.96
19.64	332.73	301.06	1.00	301.06	1.37	0.98	0.98
19.70	350.17	316.36	1.00	316.36	1.36	0.99	0.99
19.77	359.20	323.87	1.00	323.87	1.35	1.00	1.00
19.83	363.37	327.11	1.00	327.11	1.35	1.00	1.00
19.90	359.70	323.13	1.00	323.13	1.36	1.00	1.00
19.96	357.18	320.33	1.00	320.33	1.38	0.99	0.99
20.03	354.67	317.45	1.00	317.45	1.44	0.99	0.99
20.09	356.14	318.26	1.00	318.26	1.48	0.99	0.99
20.16	357.69	319.03	1.00	319.03	1.48	0.99	0.99
20.22	360.82	321.27	1.00	321.27	1.46	0.99	0.99
20.29	354.19	314.71	1.00	314.71	1.46	0.99	0.99
20.36	344.75	305.76	1.00	305.76	1.47	0.98	0.98
20.42	327.19	289.62	1.00	289.62	1.52	0.97	0.97
20.49	305.32	269.63	1.00	269.63	1.58	0.95	0.95
20.55	281.59	248.22	1.00	248.22	1.64	0.93	0.93
20.62	257.17	225.85	1.00	225.85	1.68	0.91	0.91
20.69	241.41	211.38	1.00	211.38	1.69	0.90	0.90
20.75	228.61	199.43	1.05	208.87	1.73	0.90	0.90
20.81	229.82	200.13	1.05	210.74	1.73	0.90	0.90
20.89	237.26	206.31	1.03	211.50	1.72	0.90	0.90
20.95	243.15	211.25	1.00	211.25	1.70	0.90	0.90
21.02	239.16	207.46	1.00	207.46	1.70	0.89	0.89
21.08	229.54	199.11	1.00	199.11	1.66	0.89	0.89
21.16	218.86	189.57	1.00	189.57	1.60	0.88	0.88
21.22	208.27	180.06	1.00	180.06	1.55	0.86	0.86
21.28	201.05	173.49	1.00	173.49	1.55	0.86	0.86
21.35	195.97	168.80	1.00	168.80	1.56	0.85	0.85
21.42	182.17	156.57	1.00	156.57	1.62	0.84	0.84
21.48	177.25	152.03	1.00	152.03	1.65	0.83	0.83
21.55	174.36	149.04	1.00	149.04	1.68	0.83	0.83
21.62	183.11	156.38	1.00	156.38	1.66	0.84	0.84
21.69	184.42	157.11	1.00	157.11	1.68	0.84	0.84
21.73	184.66	157.04	1.00	157.04	1.69	0.84	0.84
21.80	184.85	156.84	1.00	156.84	1.70	0.84	0.84
21.87	183.97	155.73	1.00	156.45	1.71	0.84	0.84
21.94	180.52	152.38	1.03	157.51	1.72	0.84	0.84
22.01	172.11	144.62	1.10	159.60	1.76	0.84	0.84
22.08	155.91	129.95	1.20	156.00	1.85	0.83	0.83

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.15	138.07	113.95	1.27	145.16	1.96	0.82	0.82
22.19	119.85	97.96	1.37	134.69	2.07	0.81	0.81
22.26	107.54	87.16	1.49	130.28	2.15	0.80	0.80
22.33	91.38	73.20	1.77	129.66	2.26	0.80	0.80
22.40	79.76	63.18	2.15	136.10	2.36	0.81	0.81
22.47	73.47	57.69	2.51	144.73	2.42	0.82	0.82
22.55	75.28	58.99	2.50	147.48	2.42	0.82	0.82
22.58	75.16	58.83	2.48	145.83	2.42	0.82	0.82
22.65	69.30	53.90	2.67	144.16	2.45	0.82	0.82
22.72	63.14	48.78	2.86	139.50	2.48	0.81	0.81
22.79	61.79	47.66	2.75	131.30	2.47	0.80	0.80
22.86	68.74	53.38	2.22	118.59	2.37	0.78	0.78
22.93	82.28	64.59	1.72	111.02	2.24	0.77	0.77
23.00	96.73	76.56	1.47	112.56	2.13	0.77	0.77
23.04	112.36	89.77	1.32	118.92	2.02	0.78	0.78
23.11	126.85	102.29	1.23	126.00	1.89	0.79	0.79
23.18	141.52	115.16	1.11	128.08	1.77	0.80	0.80
23.25	151.24	123.62	1.00	123.62	1.70	0.79	0.79
23.33	155.82	127.21	1.00	127.21	1.69	0.79	0.79
23.40	156.95	127.86	1.00	127.86	1.70	0.80	0.80
23.43	148.35	120.31	1.07	128.16	1.74	0.80	0.80
23.51	143.77	116.19	1.09	126.98	1.76	0.79	0.79
23.58	139.50	112.40	1.11	124.98	1.77	0.79	0.79
23.63	143.21	115.48	1.08	124.83	1.75	0.79	0.79
23.70	142.24	114.36	1.10	126.28	1.76	0.79	0.79
23.77	141.65	113.47	1.13	128.73	1.78	0.80	0.80
23.84	142.33	113.61	1.16	131.88	1.81	0.80	0.80
23.91	144.67	115.13	1.18	135.43	1.82	0.81	0.81
23.98	147.87	117.38	1.19	139.39	1.83	0.81	0.81
24.05	151.70	120.17	1.19	143.43	1.84	0.82	0.82
24.12	155.75	123.19	1.19	147.02	1.84	0.82	0.82
24.16	161.77	127.99	1.18	151.54	1.83	0.83	0.83
24.23	170.62	135.07	1.16	157.28	1.81	0.84	0.84
24.30	183.16	145.23	1.13	164.17	1.78	0.85	0.85
24.37	197.74	157.11	1.08	169.69	1.75	0.85	0.85
24.44	212.34	169.04	1.02	171.99	1.71	0.85	0.85
24.51	224.74	179.14	1.00	179.14	1.69	0.86	0.86
24.58	233.02	185.80	1.00	185.80	1.67	0.87	0.87
24.62	238.69	190.49	1.00	190.49	1.65	0.88	0.88
24.69	240.50	191.86	1.00	191.86	1.64	0.88	0.88
24.76	237.26	188.98	1.00	188.98	1.64	0.87	0.87
24.83	227.48	180.56	1.00	180.56	1.66	0.87	0.87
24.90	214.78	169.73	1.00	169.73	1.68	0.85	0.85
24.98	204.25	160.78	1.00	160.78	1.70	0.84	0.84
25.01	196.87	154.59	1.02	157.14	1.71	0.84	0.84
25.08	193.06	151.66	1.00	151.66	1.69	0.83	0.83
25.15	191.60	151.11	1.00	151.11	1.63	0.83	0.83
25.23	191.29	150.64	1.00	150.64	1.57	0.83	0.83

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.30	190.76	150.00	1.00	150.00	1.55	0.83	0.83
25.37	190.26	149.38	1.00	149.38	1.59	0.83	0.83
25.41	192.07	150.69	1.00	150.69	1.62	0.83	0.83
25.48	190.20	148.68	1.00	148.68	1.66	0.83	0.83
25.54	195.28	152.03	1.00	152.03	1.69	0.83	0.83
25.61	201.57	156.42	1.00	156.42	1.70	0.84	0.84
25.67	214.83	167.13	1.00	167.13	1.67	0.85	0.85
25.73	223.96	174.72	1.00	174.72	1.60	0.86	0.86
25.80	234.55	182.77	1.00	182.77	1.52	0.87	0.87
25.87	245.08	190.75	1.00	190.75	1.46	0.88	0.88
25.94	255.57	198.68	1.00	198.68	1.48	0.89	0.89
25.99	266.10	206.70	1.00	206.70	1.50	0.89	0.89
26.07	270.90	210.13	1.00	210.13	1.53	0.90	0.90
26.14	276.41	214.12	1.00	214.12	1.55	0.90	0.90
26.19	280.81	217.28	1.00	217.28	1.57	0.90	0.90
26.27	289.93	224.02	1.00	224.02	1.56	0.91	0.91
26.32	296.13	228.59	1.00	228.59	1.55	0.92	0.92
26.39	299.58	230.95	1.00	230.95	1.55	0.92	0.92
26.46	303.11	233.35	1.00	233.35	1.53	0.92	0.92
26.52	305.69	235.02	1.00	235.02	1.50	0.92	0.92
26.59	303.67	233.13	1.00	233.13	1.46	0.92	0.92
26.66	296.38	227.19	1.00	227.19	1.46	0.91	0.91
26.73	284.63	217.84	1.00	217.84	1.49	0.91	0.91
26.80	269.43	205.86	1.00	205.86	1.54	0.89	0.89
26.85	253.05	193.05	1.00	193.05	1.57	0.88	0.88
26.91	231.53	176.32	1.00	176.32	1.60	0.86	0.86
26.99	202.72	153.26	1.00	153.26	1.68	0.83	0.83
27.05	169.99	125.83	1.17	147.83	1.82	0.82	0.82
27.12	136.10	98.00	1.31	128.76	2.01	0.80	0.80
27.18	109.29	76.79	1.53	117.53	2.16	0.78	0.78
27.24	83.72	57.24	2.03	116.33	2.33	0.78	0.78
27.31	65.16	43.38	2.80	121.33	2.47	0.78	0.78
27.38	51.79	33.56	3.85	129.29	2.61	0.80	0.80
27.44	48.46	31.09	4.26	132.46	2.66	0.80	0.80
27.53	47.28	30.13	4.50	135.55	2.68	0.81	0.81
27.59	50.02	31.99	4.22	135.07	2.65	0.81	0.81
27.67	51.77	33.14	4.08	135.07	2.64	0.81	0.81
27.70	56.88	36.75	3.58	131.70	2.58	0.80	0.80
27.78	59.18	38.31	3.41	130.56	2.56	0.80	0.80
27.85	61.16	39.65	3.26	129.19	2.54	0.80	0.80
27.92	60.01	38.74	3.34	129.29	2.55	0.80	0.80
27.99	61.25	39.58	3.20	126.73	2.53	0.79	0.79
28.03	63.93	41.51	2.96	122.92	2.50	0.79	0.79
28.10	70.59	46.28	2.55	117.97	2.43	0.78	0.78
28.18	80.77	53.65	2.11	113.12	2.34	0.77	0.77
28.25	91.44	61.44	1.81	111.13	2.27	0.77	0.77
28.32	100.28	67.92	1.64	111.22	2.21	0.77	0.77
28.36	106.13	72.20	1.56	112.75	2.18	0.77	0.77

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.43	109.85	74.79	1.53	114.43	2.16	0.77	0.77
28.50	113.16	77.05	1.51	116.36	2.15	0.78	0.78
28.58	115.54	78.59	1.50	118.19	2.15	0.78	0.78
28.65	117.39	79.94	1.47	117.50	2.13	0.78	0.78
28.69	119.66	82.12	1.38	113.55	2.07	0.77	0.77
28.76	122.15	84.53	1.31	111.01	2.01	0.77	0.77
28.83	124.26	86.36	1.28	110.79	1.97	0.77	0.77
28.91	125.44	86.85	1.29	112.44	1.98	0.77	0.77
28.95	126.53	87.23	1.31	114.61	2.01	0.77	0.77
29.02	119.12	81.10	1.38	112.28	2.07	0.77	0.77
29.08	122.15	82.90	1.40	116.30	2.09	0.78	0.78
29.15	125.26	84.77	1.42	120.28	2.10	0.78	0.78
29.22	135.88	92.27	1.38	127.48	2.07	0.79	0.79
29.27	133.64	90.17	1.43	128.67	2.11	0.80	0.80
29.36	128.78	86.22	1.49	128.13	2.14	0.80	0.80
29.41	122.40	81.36	1.55	126.23	2.17	0.79	0.79
29.50	116.91	77.26	1.60	123.51	2.19	0.79	0.79
29.55	111.99	73.65	1.64	121.04	2.21	0.78	0.78
29.61	108.13	70.83	1.68	118.69	2.22	0.78	0.78
29.67	104.39	68.21	1.68	114.85	2.23	0.77	0.77
29.73	99.66	64.85	1.72	111.37	2.24	0.77	0.77
29.82	94.12	60.78	1.80	109.64	2.27	0.77	0.77
29.89	88.07	56.26	1.99	111.71	2.32	0.77	0.77
29.95	84.28	53.37	2.15	114.83	2.35	0.77	0.77
30.01	82.59	52.00	2.26	117.55	2.38	0.78	0.78
30.07	82.34	51.72	2.29	118.42	2.38	0.78	0.78
30.13	80.58	50.43	2.34	118.01	2.39	0.78	0.78
30.21	76.87	47.79	2.45	117.13	2.41	0.78	0.78
30.28	75.47	46.80	2.46	115.27	2.42	0.78	0.78
30.35	73.91	45.66	2.51	114.63	2.43	0.77	0.77
30.42	76.00	47.05	2.40	112.95	2.41	0.77	0.77
30.46	79.47	49.43	2.26	111.58	2.38	0.77	0.77
30.53	86.79	54.45	2.02	110.20	2.33	0.77	0.77
30.60	94.16	59.51	1.85	110.29	2.28	0.77	0.77
30.68	100.13	63.59	1.75	111.16	2.25	0.77	0.77
30.75	104.24	66.36	1.69	111.87	2.23	0.77	0.77
30.79	105.41	67.10	1.68	112.45	2.22	0.77	0.77
30.86	102.53	64.86	1.75	113.23	2.25	0.77	0.77
30.93	98.01	61.47	1.86	114.52	2.28	0.77	0.77
31.01	94.20	58.65	1.97	115.48	2.31	0.78	0.78
31.05	91.83	57.05	1.98	113.16	2.32	0.77	0.77
31.12	88.90	55.10	1.98	109.13	2.31	0.76	0.76
31.19	82.64	50.82	2.09	106.29	2.34	0.76	0.76
31.26	73.42	44.41	2.43	107.71	2.41	0.76	0.76
31.33	63.95	37.87	2.98	112.71	2.50	0.77	0.77
31.41	57.41	33.40	3.50	116.98	2.57	0.78	0.78
31.44	54.08	31.16	3.83	119.20	2.61	0.78	0.78
31.52	53.58	30.79	3.83	117.95	2.61	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.59	54.76	31.72	3.41	108.23	2.56	0.76	0.76
31.66	56.70	33.36	2.75	91.64	2.46	0.73	0.73
31.70	57.79	34.49	2.29	78.81	2.38	0.53	0.70
31.77	58.07	34.75	2.17	75.57	2.36	0.40	0.70
31.85	58.88	34.99	2.33	81.36	2.39	0.65	0.71
31.92	59.13	34.79	2.58	89.88	2.44	0.73	0.73
31.99	57.94	33.67	2.94	99.07	2.49	0.75	0.75
32.05	54.39	31.11	3.45	107.17	2.56	0.76	0.76
32.12	50.47	28.45	3.90	110.85	2.62	0.77	0.77
32.19	47.45	26.42	4.31	113.86	2.66	0.77	0.77
32.26	47.94	26.65	4.32	115.19	2.66	0.77	0.77
32.30	56.54	32.14	3.48	111.98	2.57	0.77	0.77
32.37	71.21	41.75	2.53	105.75	2.43	0.76	0.76
32.44	84.88	50.81	2.05	104.16	2.33	0.76	0.76
32.52	92.17	55.57	1.90	105.38	2.29	0.76	0.76
32.56	96.84	58.62	1.82	106.94	2.27	0.76	0.76
32.63	103.63	63.15	1.71	107.74	2.23	0.76	0.76
32.70	110.24	67.51	1.63	109.89	2.21	0.77	0.77
32.77	113.41	69.39	1.62	112.73	2.20	0.77	0.77
32.85	113.41	69.04	1.67	115.46	2.22	0.78	0.78
32.89	114.13	69.29	1.70	117.87	2.23	0.78	0.78
32.96	117.28	71.25	1.68	119.38	2.22	0.78	0.78
33.03	122.85	74.87	1.62	121.30	2.20	0.78	0.78
33.10	129.92	79.52	1.56	123.85	2.18	0.79	0.79
33.18	137.21	84.32	1.50	126.87	2.15	0.79	0.79
33.22	147.11	91.04	1.44	131.30	2.12	0.80	0.80
33.29	158.54	98.78	1.39	136.96	2.08	0.81	0.81
33.36	170.91	107.19	1.34	143.99	2.04	0.82	0.82
33.44	179.53	113.00	1.32	149.30	2.02	0.83	0.83
33.47	185.64	117.14	1.31	153.23	2.00	0.83	0.83
33.55	189.19	119.45	1.30	155.35	1.99	0.83	0.83
33.62	190.90	120.49	1.30	156.20	1.99	0.84	0.84
33.69	189.19	119.15	1.30	154.78	1.99	0.83	0.83
33.76	183.65	115.10	1.31	151.00	2.01	0.83	0.83
33.84	176.33	109.79	1.33	146.38	2.03	0.82	0.82
33.87	165.62	102.16	1.38	140.63	2.07	0.81	0.81
33.95	152.98	93.17	1.45	135.14	2.12	0.81	0.81
34.02	137.80	82.56	1.58	130.71	2.19	0.80	0.80
34.09	125.36	74.00	1.74	128.92	2.25	0.80	0.80
34.13	114.05	66.39	1.94	128.61	2.30	0.80	0.80
34.21	105.37	60.63	2.11	127.93	2.35	0.80	0.80
34.28	99.31	56.77	2.20	124.63	2.36	0.79	0.79
34.35	97.72	55.92	2.12	118.72	2.35	0.78	0.78
34.39	98.63	56.87	1.95	111.10	2.31	0.77	0.77
34.47	99.47	57.69	1.82	105.19	2.27	0.76	0.76
34.54	103.71	60.78	1.66	100.76	2.22	0.75	0.75
34.61	122.11	73.63	1.40	103.02	2.09	0.75	0.75
34.69	151.11	94.33	1.25	118.30	1.93	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.73	186.24	120.69	1.09	131.63	1.75	0.80	0.80
34.79	222.06	147.44	1.00	147.44	1.60	0.82	0.82
34.85	268.37	178.32	1.00	178.32	1.46	0.86	0.86
34.92	321.72	213.84	1.00	213.84	1.35	0.90	0.90
34.99	366.98	243.86	1.00	243.86	1.31	0.93	0.93
35.06	381.28	253.15	1.00	253.15	1.33	0.94	0.94
35.12	406.29	269.61	1.00	269.61	1.35	0.95	0.95
35.18	433.95	287.77	1.00	287.77	1.35	0.97	0.97
35.25	478.11	316.88	1.00	316.88	1.32	0.99	0.99
35.31	502.03	332.47	1.00	332.47	1.30	1.00	1.00
35.38	520.97	344.68	1.00	344.68	1.29	1.01	1.01
35.45	539.31	356.52	1.00	356.52	1.26	1.02	1.02
35.51	556.75	367.72	1.00	367.72	1.26	1.03	1.03
35.58	571.77	377.30	1.00	377.30	1.34	1.03	1.03
35.64	587.50	387.29	1.00	387.29	1.45	1.04	1.04
35.71	604.78	398.31	1.00	398.31	1.54	1.05	1.05
35.78	619.49	407.58	1.00	407.58	1.57	1.05	1.05
35.84	622.54	409.19	1.00	409.19	1.56	1.05	1.05
35.91	631.17	414.45	1.00	414.45	1.53	1.06	1.06
35.97	649.63	426.16	1.00	426.16	1.50	1.06	1.06
36.03	673.09	441.18	1.00	441.18	1.48	1.07	1.07
36.10	687.29	450.03	1.00	450.03	1.47	1.08	1.08
36.17	657.77	430.18	1.00	430.18	1.48	1.07	1.07
36.23	627.22	409.74	1.00	409.74	1.49	1.05	1.05
36.30	587.72	383.44	1.00	383.44	1.50	1.04	1.04
36.37	579.66	377.76	1.00	377.76	1.48	1.03	1.03
36.43	575.80	374.86	1.00	374.86	1.45	1.03	1.03
36.49	577.01	375.29	1.00	375.29	1.40	1.03	1.03
36.56	572.06	371.64	1.00	371.64	1.36	1.03	1.03
36.63	570.31	370.15	1.00	370.15	1.33	1.03	1.03
36.70	567.95	368.22	1.00	368.22	1.31	1.03	1.03
36.76	576.17	373.20	1.00	373.20	1.30	1.03	1.03
36.83	576.02	372.72	1.00	372.72	1.30	1.03	1.03
36.89	576.73	372.84	1.00	372.84	1.30	1.03	1.03
36.96	579.75	374.42	1.00	374.42	1.29	1.03	1.03
37.02	583.05	376.24	1.00	376.24	1.29	1.03	1.03
37.08	583.86	376.39	1.00	376.39	1.28	1.03	1.03
37.15	578.10	372.28	1.00	372.28	1.28	1.03	1.03
37.21	573.61	369.04	1.00	369.04	1.28	1.03	1.03
37.28	570.81	366.86	1.00	366.86	1.28	1.03	1.03
37.35	570.44	366.27	1.00	366.27	1.29	1.03	1.03
37.41	570.47	365.92	1.00	365.92	1.29	1.03	1.03
37.48	570.71	365.75	1.00	365.75	1.30	1.03	1.03
37.54	575.92	368.73	1.00	368.73	1.31	1.03	1.03
37.62	588.72	376.56	1.00	376.56	1.31	1.03	1.03
37.68	599.03	382.80	1.00	382.80	1.31	1.04	1.04
37.74	610.64	389.91	1.00	389.91	1.29	1.04	1.04
37.81	621.48	396.48	1.00	396.48	1.22	1.05	1.05

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
37.87	631.51	402.51	1.00	402.51	1.15	1.05	1.05
37.94	633.69	403.52	1.00	403.52	1.15	1.05	1.05
38.00	635.90	404.58	1.00	404.58	1.23	1.05	1.05
38.07	635.38	403.85	1.00	403.85	1.31	1.05	1.05
38.13	637.91	405.06	1.00	405.06	1.37	1.05	1.05
38.20	635.89	403.39	1.00	403.39	1.39	1.05	1.05
38.27	639.11	405.03	1.00	405.03	1.39	1.05	1.05
38.33	641.82	406.36	1.00	406.36	1.39	1.05	1.05
38.40	640.58	405.14	1.00	405.14	1.39	1.05	1.05
38.46	640.91	405.01	1.00	405.01	1.38	1.05	1.05
38.54	635.37	401.05	1.00	401.05	1.39	1.05	1.05
38.59	615.50	388.14	1.00	388.14	1.41	1.04	1.04
38.67	595.42	375.03	1.00	375.03	1.42	1.03	1.03
38.73	581.03	365.59	1.00	365.59	1.40	1.03	1.03
38.80	582.37	366.09	1.00	366.09	1.36	1.03	1.03
38.86	588.22	369.46	1.00	369.46	1.34	1.03	1.03
38.93	599.59	376.25	1.00	376.25	1.33	1.03	1.03
38.99	613.13	384.46	1.00	384.46	1.31	1.04	1.04
39.05	620.08	388.47	1.00	388.47	1.29	1.04	1.04
39.12	622.96	389.92	1.00	389.92	1.26	1.04	1.04
39.19	616.14	385.24	1.00	385.24	1.25	1.04	1.04
39.25	618.88	386.65	1.00	386.65	1.23	1.04	1.04
39.31	624.34	389.72	1.00	389.72	1.25	1.04	1.04
39.38	643.43	401.30	1.00	401.30	1.25	1.05	1.05
39.45	662.93	413.09	1.00	413.09	1.23	1.06	1.06
39.52	679.47	423.05	1.00	423.05	1.19	1.06	1.06
39.58	687.91	427.96	1.00	427.96	1.17	1.06	1.06
39.64	701.46	436.03	1.00	436.03	1.16	1.07	1.07
39.71	716.63	445.08	1.00	445.08	1.16	1.08	1.08
39.78	744.29	461.87	1.00	461.87	1.13	1.08	1.08
39.84	747.81	463.65	1.00	463.65	1.14	1.09	1.09
39.91	748.49	463.68	1.00	463.68	1.18	1.09	1.09
39.98	738.28	456.88	1.00	456.88	1.22	1.08	1.08
40.04	725.94	448.81	1.00	448.81	1.26	1.08	1.08
40.10	725.15	447.93	1.00	447.93	1.29	1.08	1.08
40.17	719.42	443.95	1.00	443.95	1.32	1.07	1.07
40.23	731.16	450.83	1.00	450.83	1.34	1.08	1.08
40.30	730.68	450.12	1.00	450.12	1.22	1.08	1.08
40.37	735.19	452.52	1.00	452.52	1.02	1.08	1.08
40.44	734.32	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.50	735.69	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.57	746.25	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.63	773.56	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.70	798.76	-1.00	1.00	-1.00	-1.00	0.00	0.00

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$

Abbreviations

q_t:	Total cone resistance
K_c:	Cone resistance correction factor due to fines
$Q_{tn,cs}$:	Adjusted and corrected cone resistance due to fines
I_c:	Soil behavior type index
$S_{u(liq)}/\sigma'_v$:	Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$:	Calculated peak undrained strength ratio

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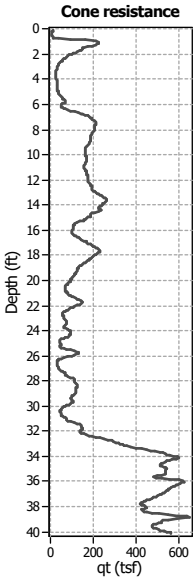
LIQUEFACTION ANALYSIS REPORT

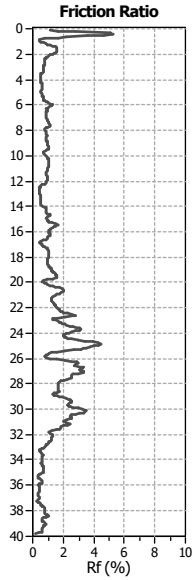
Project title : **Location :**

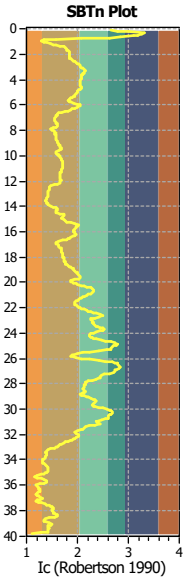
CPT file : CPT-4

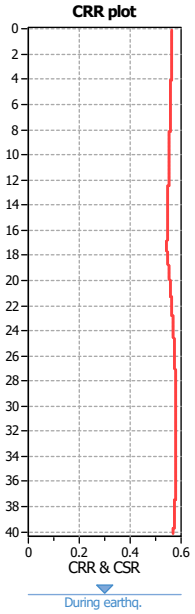
Input parameters and analysis data

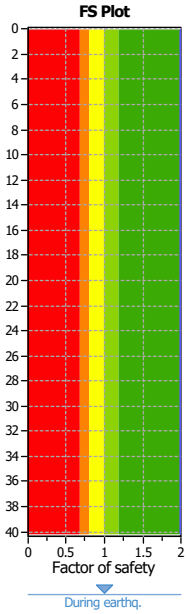
Analysis method:	NCEER (1998)	G.W.T. (in-situ):	45.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	45.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	8.07	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.72	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

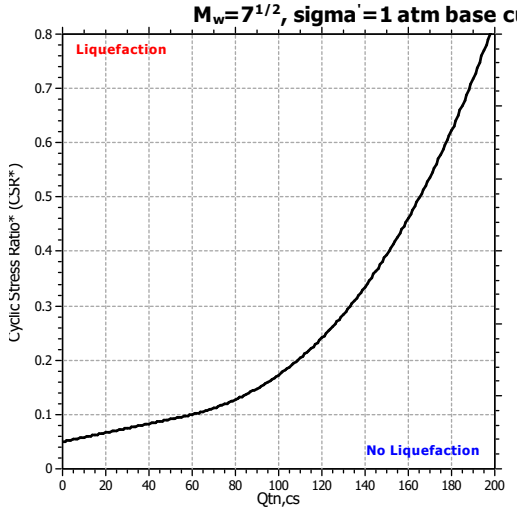


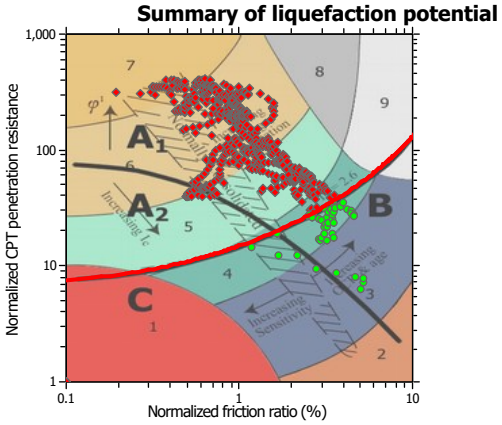






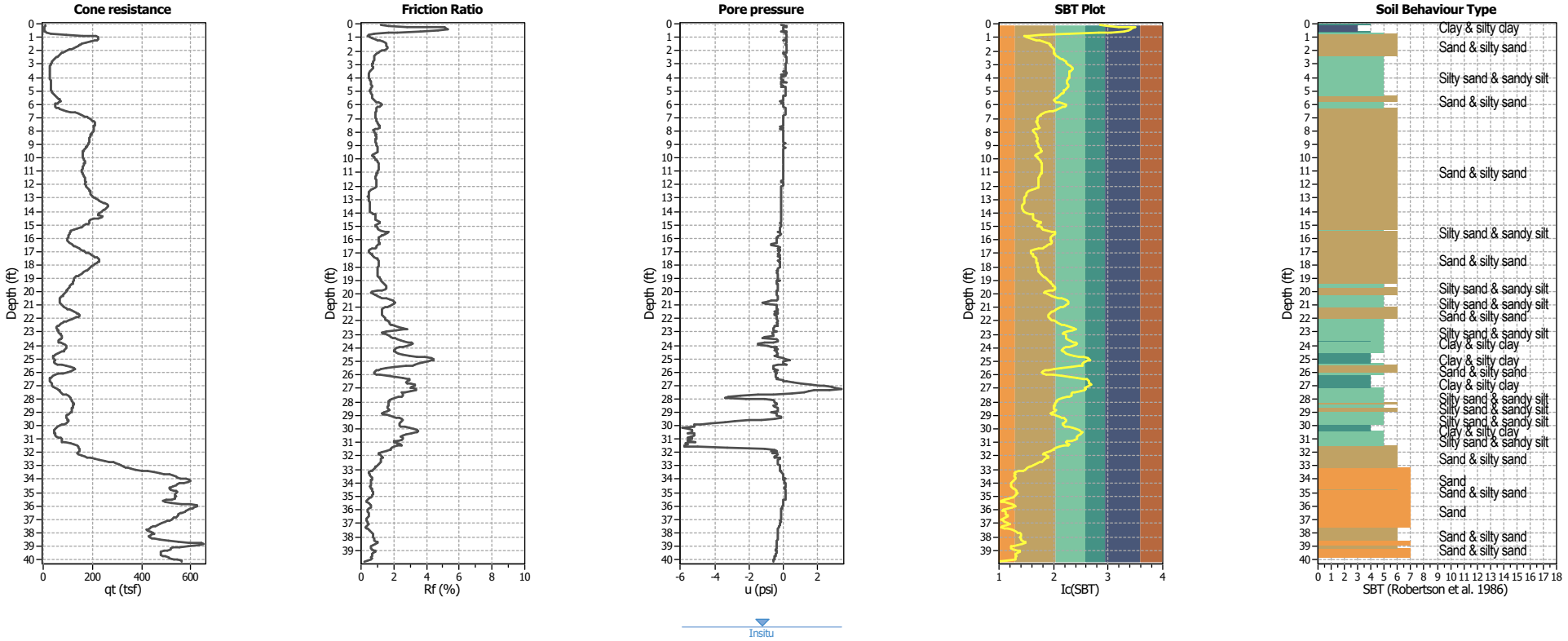






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



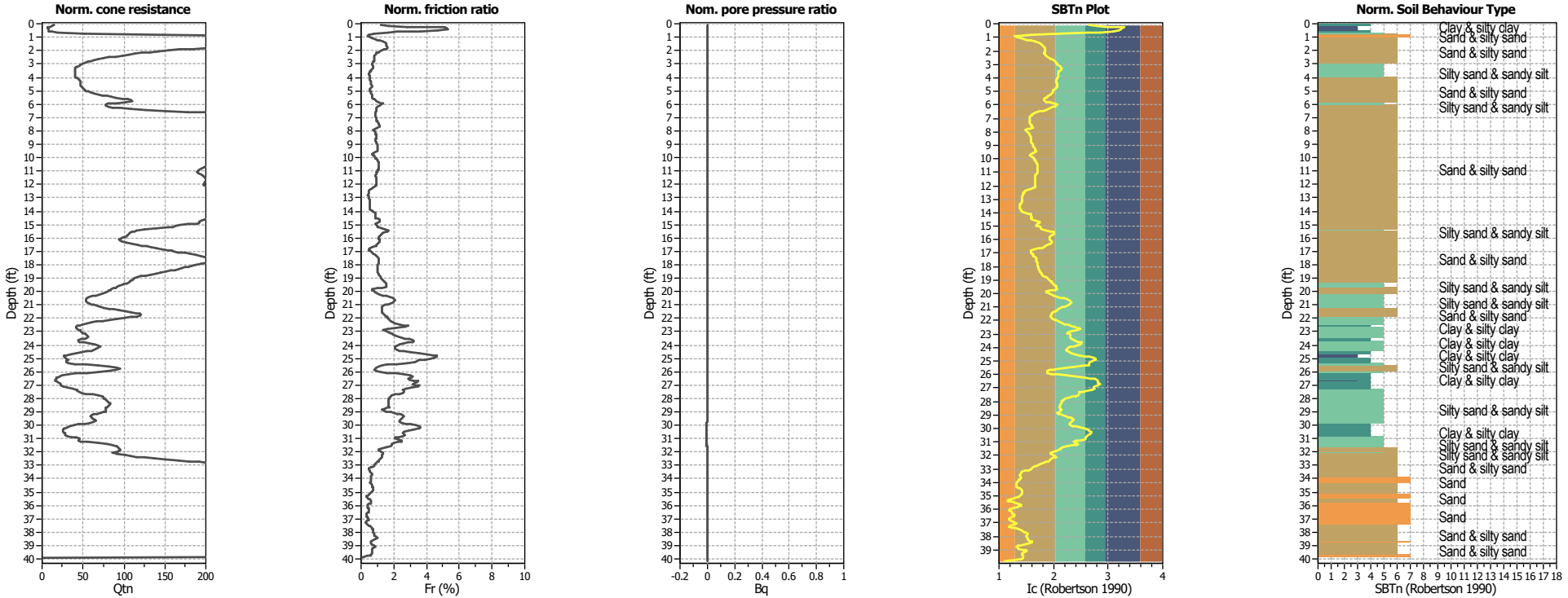
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	45.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	45.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



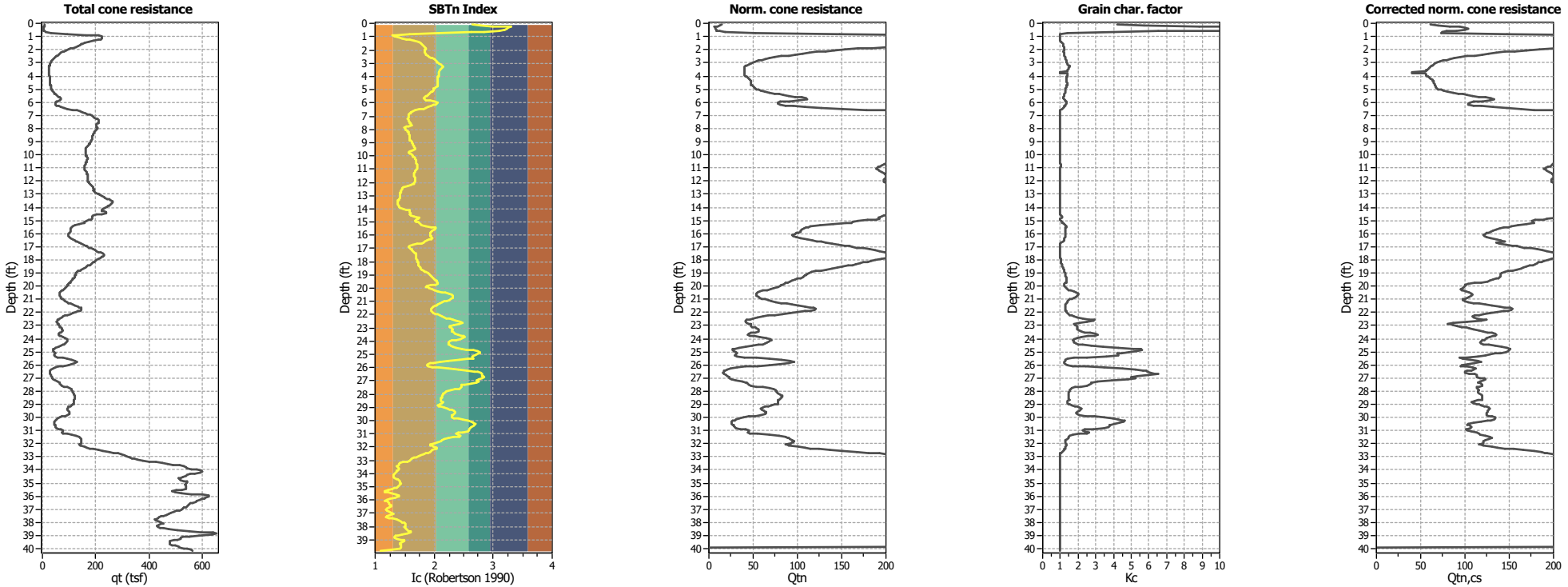
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	45.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	45.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

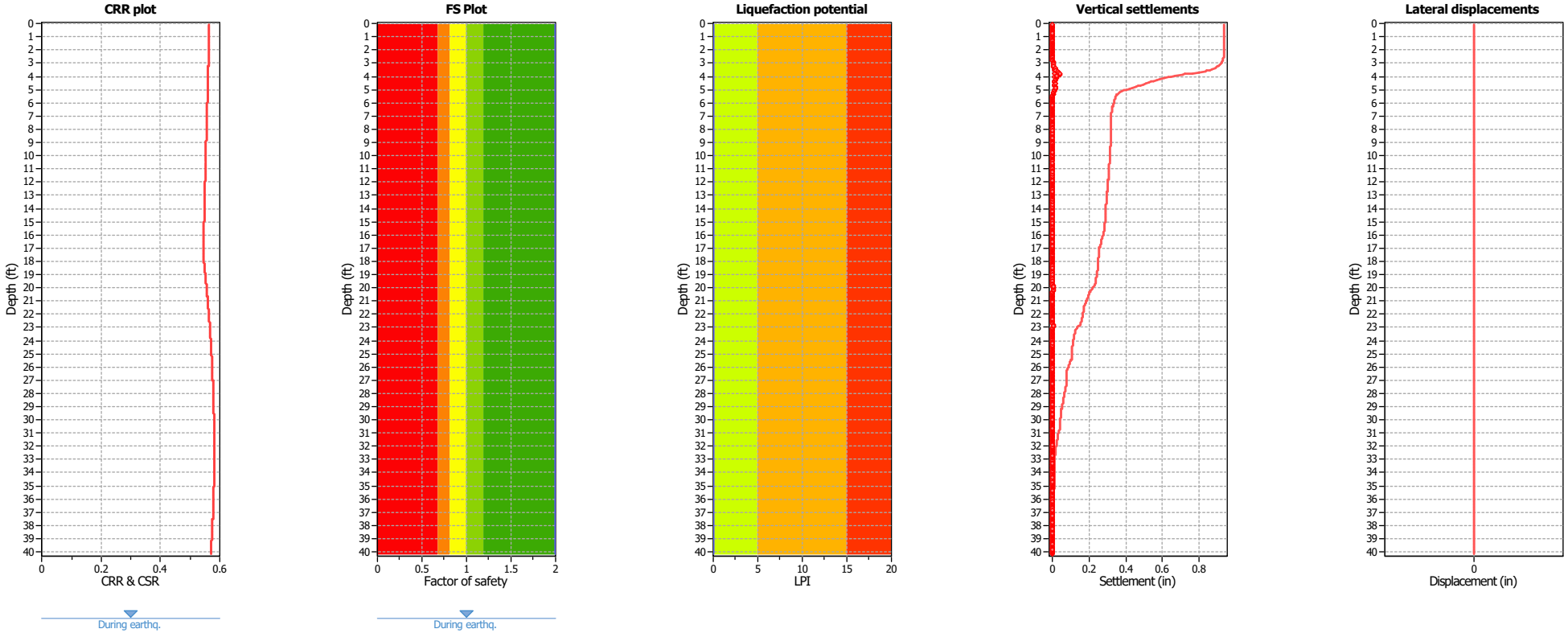
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	45.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	45.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	45.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	45.00 ft	Fill height:	N/A	Limit depth:	N/A

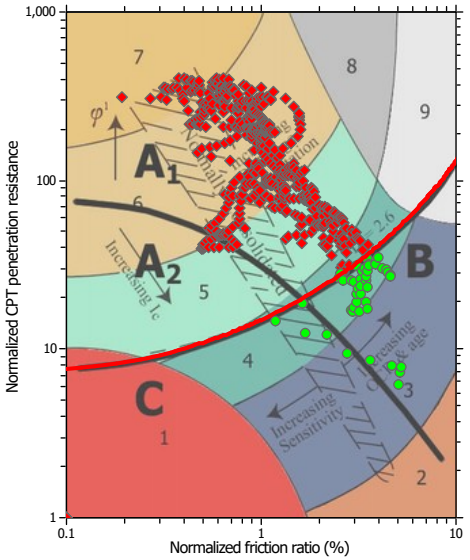
F.S. color scheme

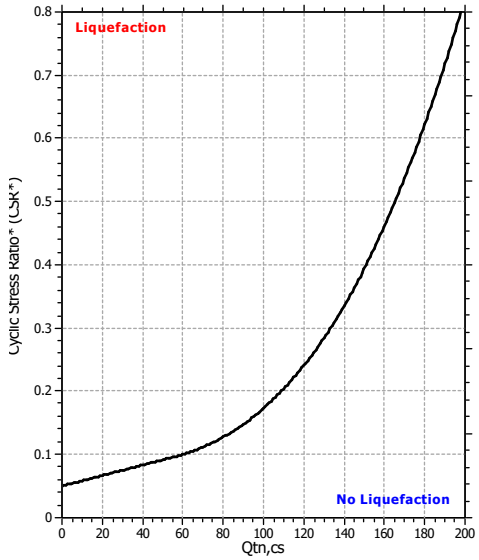
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

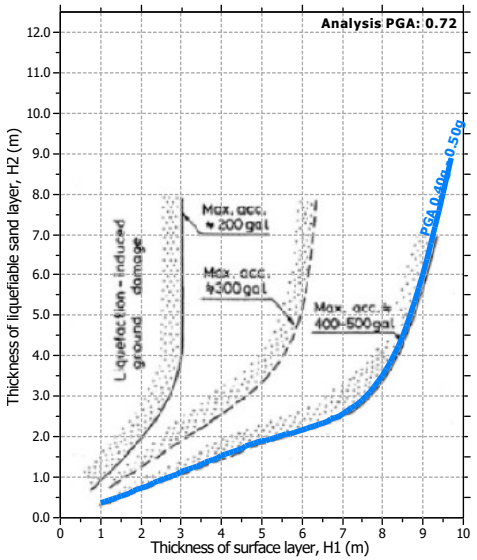
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



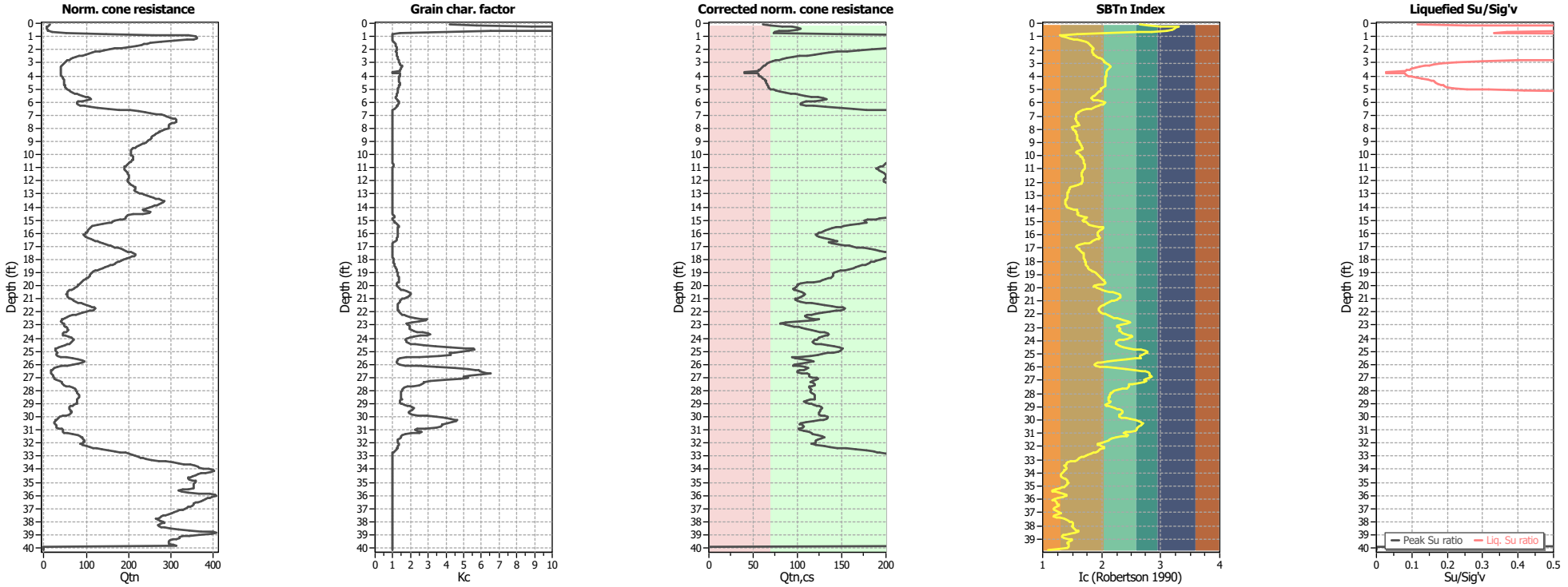




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	45.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	45.00 ft	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	45.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	45.00 ft	Fill height:	N/A	Limit depth:	N/A

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.07	8.14	0.09	-0.10	37.75	99.22
2	0.14	10.67	0.14	0.20	45.39	100.25
3	0.20	4.02	0.16	0.20	58.61	101.35
4	0.27	2.90	0.20	0.00	81.29	101.60
5	0.34	4.59	0.23	0.00	77.21	103.29
6	0.40	5.99	0.28	0.00	75.46	104.12
7	0.46	3.93	0.26	0.00	72.34	103.48
8	0.54	4.96	0.16	0.20	65.63	102.33
9	0.60	7.11	0.16	-0.10	49.03	102.06
10	0.67	10.67	0.18	0.20	36.84	104.12
11	0.73	16.94	0.24	0.10	15.39	109.12
12	0.79	70.29	0.39	0.20	4.03	115.24
13	0.87	188.87	0.69	0.20	0.98	119.80
14	0.93	223.13	0.95	0.20	0.26	123.10
15	0.99	224.35	1.27	0.20	0.74	125.11
16	1.05	223.22	1.53	0.10	1.54	126.74
17	1.12	225.56	1.89	0.20	2.36	128.12
18	1.19	223.32	2.24	0.00	3.22	129.18
19	1.25	212.65	2.45	0.20	4.21	129.81
20	1.33	195.43	2.59	0.20	5.44	129.89
21	1.39	166.13	2.57	0.20	6.65	129.66
22	1.46	155.65	2.47	0.10	7.57	129.21
23	1.52	149.38	2.36	0.20	7.78	128.83
24	1.58	148.54	2.29	0.10	7.87	128.53
25	1.65	144.14	2.24	0.20	8.05	128.27
26	1.71	136.93	2.18	0.20	8.52	127.84
27	1.79	124.48	2.03	0.20	8.99	127.09
28	1.85	114.00	1.76	0.20	9.27	125.94
29	1.92	104.64	1.47	0.20	9.27	124.51
30	1.98	95.65	1.22	0.20	9.13	122.93
31	2.04	87.98	1.00	0.20	8.98	121.35
32	2.11	81.61	0.83	0.20	8.87	119.85
33	2.17	75.62	0.72	0.00	8.88	118.54
34	2.24	70.66	0.64	0.00	9.04	117.42
35	2.30	65.89	0.57	0.10	9.28	116.37
36	2.37	61.12	0.51	0.10	9.65	115.35
37	2.43	56.16	0.45	0.10	10.16	114.35
38	2.50	51.38	0.41	0.20	10.81	113.27
39	2.58	46.14	0.36	0.20	11.55	112.26
40	2.64	42.49	0.33	0.20	12.31	111.32
41	2.71	39.50	0.31	0.20	13.03	110.59
42	2.77	36.97	0.28	0.20	13.68	109.93
43	2.83	34.91	0.27	0.20	14.14	109.19
44	2.90	33.13	0.24	0.20	14.29	108.26
45	2.95	31.73	0.20	0.10	14.61	107.37
46	3.04	29.39	0.20	0.10	15.11	106.76
47	3.11	28.27	0.20	0.10	16.03	106.57
48	3.17	27.05	0.20	0.10	16.69	106.38

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.24	26.02	0.19	0.10	17.38	106.16
50	3.28	24.90	0.19	0.10	17.43	105.64
51	3.38	25.08	0.16	0.10	17.12	105.10
52	3.44	25.36	0.16	0.10	16.47	104.40
53	3.51	24.99	0.14	0.10	15.99	103.98
54	3.54	25.55	0.14	0.00	15.60	103.39
55	3.64	24.99	0.12	0.20	15.32	103.01
56	3.70	24.94	0.12	0.20	5.00	102.74
57	3.77	24.94	0.12	-0.10	5.00	102.72
58	3.81	24.90	0.12	0.10	15.36	102.81
59	3.90	24.90	0.13	0.10	15.27	102.99
60	3.97	25.83	0.13	-0.10	15.13	103.19
61	4.00	26.11	0.13	-0.10	14.79	103.38
62	4.07	26.86	0.13	-0.10	14.63	103.65
63	4.14	27.42	0.14	-0.10	14.45	104.18
64	4.21	28.64	0.16	0.00	14.42	104.82
65	4.27	29.30	0.17	-0.10	14.40	105.41
66	4.34	29.67	0.18	0.20	14.46	105.76
67	4.40	29.67	0.18	-0.10	14.57	105.95
68	4.47	29.58	0.18	-0.10	14.70	106.08
69	4.54	29.58	0.19	-0.10	14.81	106.24
70	4.60	29.76	0.19	0.00	14.88	106.43
71	4.67	30.04	0.20	-0.10	14.84	106.65
72	4.73	30.61	0.20	0.10	14.54	106.64
73	4.80	31.17	0.19	0.10	13.84	106.29
74	4.87	32.01	0.17	0.10	13.20	106.00
75	4.93	32.76	0.18	0.10	12.74	106.03
76	5.00	33.79	0.18	0.10	12.63	106.60
77	5.06	35.10	0.20	0.10	12.48	107.32
78	5.13	36.88	0.23	0.10	12.29	108.17
79	5.19	39.03	0.25	0.10	11.83	109.13
80	5.25	43.15	0.28	0.10	11.30	110.15
81	5.32	46.52	0.32	0.10	10.75	111.12
82	5.38	49.51	0.34	0.00	10.26	111.84
83	5.45	52.32	0.35	0.00	9.72	112.49
84	5.51	56.44	0.39	0.00	9.24	113.33
85	5.58	61.30	0.45	0.00	8.85	114.39
86	5.65	66.08	0.50	0.00	8.69	115.50
87	5.71	69.26	0.57	0.00	8.90	116.56
88	5.78	69.63	0.66	-0.20	9.48	117.43
89	5.84	68.23	0.72	0.00	11.16	117.76
90	5.91	53.16	0.72	-0.10	12.98	117.53
91	5.97	49.51	0.67	0.00	14.54	116.81
92	6.04	49.32	0.60	0.00	14.39	116.02
93	6.11	47.92	0.53	0.00	13.68	115.31
94	6.17	49.14	0.50	0.00	12.76	114.92
95	6.24	53.44	0.50	0.10	11.61	115.10
96	6.30	59.15	0.54	0.10	10.50	115.88

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.37	66.83	0.62	0.10	9.52	117.20
98	6.43	78.15	0.74	0.10	8.43	118.75
99	6.50	92.85	0.87	0.10	7.11	120.27
100	6.57	111.75	0.98	0.10	5.82	121.58
101	6.63	129.82	1.08	0.10	4.96	122.71
102	6.70	142.08	1.20	0.10	4.55	123.73
103	6.76	150.59	1.35	0.10	4.35	124.62
104	6.83	161.17	1.45	0.00	4.17	125.37
105	6.90	171.56	1.54	0.00	3.92	125.96
106	6.97	180.45	1.62	0.00	3.75	126.46
107	7.03	186.63	1.70	0.00	3.75	126.86
108	7.10	186.35	1.76	0.00	3.70	127.25
109	7.17	197.58	1.84	0.00	3.68	127.65
110	7.24	203.10	1.94	0.00	3.63	128.06
111	7.28	206.00	2.02	0.00	3.72	128.46
112	7.36	209.00	2.14	0.00	3.87	128.83
113	7.42	210.87	2.23	0.00	4.05	129.16
114	7.49	210.68	2.30	0.00	4.24	129.38
115	7.56	209.18	2.34	0.00	4.41	129.46
116	7.63	206.10	2.33	0.00	4.52	129.43
117	7.70	204.79	2.29	-0.20	4.60	129.32
118	7.74	202.07	2.26	0.00	3.89	128.26
119	7.81	202.82	1.41	-0.20	3.27	127.32
120	7.89	204.22	1.57	0.00	2.65	126.43
121	7.95	206.38	1.65	0.00	2.90	126.93
122	8.01	207.69	1.73	0.00	3.07	127.26
123	8.10	207.41	1.79	0.00	3.48	127.38
124	8.15	188.87	1.79	0.00	3.67	127.36
125	8.22	197.30	1.75	0.00	3.84	127.25
126	8.28	195.61	1.74	0.00	3.79	127.26
127	8.35	192.81	1.78	0.00	3.96	127.27
128	8.41	190.37	1.77	0.00	4.09	127.22
129	8.48	188.22	1.73	0.00	4.11	127.04
130	8.55	186.35	1.67	0.00	4.10	126.87
131	8.61	186.25	1.67	0.00	4.09	126.78
132	8.68	186.44	1.67	0.00	4.10	126.78
133	8.74	187.00	1.67	0.00	4.15	126.84
134	8.81	186.91	1.72	0.00	4.26	126.95
135	8.87	185.41	1.75	0.00	4.44	127.08
136	8.94	184.10	1.77	0.10	4.61	127.14
137	9.00	182.14	1.78	0.00	4.75	127.15
138	9.07	180.08	1.77	0.00	4.89	127.13
139	9.13	178.20	1.77	0.00	5.03	127.10
140	9.20	175.58	1.77	0.00	5.18	127.05
141	9.26	172.59	1.76	0.10	5.33	126.95
142	9.33	169.41	1.73	0.00	5.47	126.82
143	9.39	166.60	1.71	0.00	5.60	126.68
144	9.45	163.70	1.69	0.00	5.74	126.56

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.52	161.26	1.68	0.00	5.60	126.11
146	9.59	159.49	1.43	0.00	4.89	125.01
147	9.66	161.40	1.03	0.00	4.19	123.93
148	9.72	160.33	1.12	0.00	3.85	123.45
149	9.79	161.54	1.19	0.00	4.16	123.95
150	9.85	162.76	1.27	0.00	4.45	124.38
151	9.92	160.98	1.33	0.00	4.72	124.78
152	9.99	162.43	1.40	0.00	4.99	125.12
153	10.04	162.11	1.46	0.00	5.19	125.50
154	10.11	164.82	1.55	0.00	5.41	125.95
155	10.18	167.07	1.66	0.00	5.61	126.41
156	10.24	168.66	1.74	0.00	5.79	126.76
157	10.30	168.66	1.78	0.00	5.96	126.96
158	10.40	167.25	1.81	0.00	6.10	127.05
159	10.43	166.88	1.81	0.00	6.16	127.00
160	10.53	165.48	1.75	0.00	6.17	126.87
161	10.59	163.70	1.72	0.00	6.18	126.70
162	10.65	162.11	1.70	0.00	6.23	126.58
163	10.72	160.52	1.68	0.00	6.30	126.47
164	10.79	158.64	1.67	0.00	6.36	126.34
165	10.86	157.15	1.63	0.00	6.40	126.22
166	10.89	156.58	1.61	0.00	6.34	126.08
167	10.96	157.10	1.58	0.00	6.26	125.93
168	11.03	156.49	1.54	0.00	6.13	125.76
169	11.09	157.05	1.51	0.00	6.02	125.63
170	11.15	158.46	1.49	0.00	5.82	125.56
171	11.25	162.39	1.47	0.00	5.64	125.55
172	11.31	164.73	1.47	0.00	5.48	125.59
173	11.38	166.60	1.49	0.00	5.43	125.70
174	11.44	168.10	1.52	0.00	5.44	125.84
175	11.51	169.41	1.55	0.00	5.47	125.97
176	11.57	169.88	1.57	0.00	5.50	126.09
177	11.64	170.90	1.59	0.00	5.54	126.20
178	11.71	171.65	1.61	-0.10	5.56	126.28
179	11.77	172.03	1.61	0.00	5.57	126.30
180	11.84	172.03	1.60	-0.10	5.57	126.28
181	11.90	171.47	1.60	0.00	5.59	126.23
182	11.97	170.62	1.58	0.00	5.56	126.16
183	12.03	171.56	1.56	0.00	5.48	126.07
184	12.09	172.96	1.54	0.00	5.33	125.98
185	12.16	174.65	1.51	-0.10	5.15	125.92
186	12.23	178.20	1.50	-0.10	4.46	125.22
187	12.30	182.60	1.10	-0.10	3.49	124.04
188	12.36	185.88	0.87	-0.10	2.59	122.75
189	12.43	189.06	0.92	-0.10	2.24	122.36
190	12.50	191.96	0.93	-0.10	2.22	122.52
191	12.56	192.90	0.92	-0.10	2.17	122.51
192	12.61	192.24	0.91	-0.10	2.12	122.38

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.68	192.24	0.89	-0.10	2.05	122.17
194	12.74	191.59	0.85	-0.10	1.90	121.89
195	12.81	194.58	0.81	-0.10	1.76	121.85
196	12.87	200.57	0.86	-0.10	1.74	122.25
197	12.94	206.19	0.97	-0.10	1.74	122.74
198	13.00	210.68	0.97	-0.10	1.79	123.26
199	13.06	214.71	1.04	-0.10	1.80	123.73
200	13.13	222.66	1.13	-0.10	1.81	124.26
201	13.20	229.40	1.17	-0.10	1.76	124.69
202	13.27	235.39	1.21	-0.10	1.64	125.02
203	13.34	245.97	1.25	-0.10	1.54	125.30
204	13.39	249.52	1.28	-0.10	1.40	125.56
205	13.47	258.42	1.31	-0.10	1.34	125.79
206	13.53	262.91	1.35	-0.10	1.26	125.96
207	13.58	265.15	1.35	-0.10	1.27	126.06
208	13.65	262.53	1.36	-0.10	1.37	126.12
209	13.73	257.39	1.39	-0.10	1.53	126.17
210	13.80	253.92	1.40	-0.10	1.64	126.07
211	13.87	249.52	1.32	-0.10	1.64	125.81
212	13.91	246.72	1.26	-0.10	1.85	125.94
213	13.98	242.69	1.48	-0.10	2.53	126.89
214	14.05	237.26	1.92	-0.10	3.38	127.80
215	14.12	226.41	1.93	-0.10	4.15	128.43
216	14.19	221.45	2.02	-0.10	4.25	128.17
217	14.26	221.82	1.75	-0.10	4.22	128.19
218	14.32	229.59	1.94	-0.10	4.29	128.67
219	14.38	237.54	2.36	-0.10	4.19	129.23
220	14.45	252.52	2.14	-0.13	4.23	129.19
221	14.50	225.66	1.91	-0.13	4.52	128.54
222	14.57	193.93	1.95	-0.14	5.51	128.31
223	14.64	192.90	2.14	-0.14	6.63	128.57
224	14.70	185.97	2.27	-0.14	7.03	128.77
225	14.77	184.66	2.15	-0.12	6.90	128.40
226	14.83	186.63	1.84	-0.20	6.12	127.55
227	14.91	190.00	1.57	-0.10	5.66	126.65
228	14.97	175.87	1.54	-0.10	5.88	126.06
229	15.03	159.20	1.54	-0.10	6.63	125.93
230	15.11	158.36	1.58	-0.10	7.19	125.98
231	15.17	158.55	1.63	-0.20	7.39	126.09
232	15.23	155.93	1.61	-0.20	7.98	126.14
233	15.29	141.70	1.68	-0.20	9.56	126.18
234	15.36	116.34	1.82	-0.21	11.65	126.32
235	15.44	112.22	1.91	-0.22	13.40	126.39
236	15.49	111.10	1.89	-0.22	13.39	126.02
237	15.55	109.41	1.57	-0.30	12.98	125.34
238	15.62	106.70	1.46	-0.21	12.37	124.43
239	15.68	104.73	1.34	-0.10	12.03	123.79
240	15.75	104.17	1.23	-0.20	11.54	123.13

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.84	104.08	1.12	-0.30	11.16	122.59
242	15.91	102.58	1.09	-0.30	10.99	122.18
243	15.98	100.61	1.05	-0.40	11.15	121.95
244	16.04	97.99	1.05	-0.40	11.38	121.81
245	16.08	96.87	1.05	-0.40	11.66	121.76
246	16.15	95.37	1.05	-0.40	11.90	121.84
247	16.21	95.84	1.09	-0.40	11.94	122.04
248	16.28	99.59	1.12	-0.40	11.56	122.31
249	16.34	106.23	1.13	-0.40	10.79	122.54
250	16.41	113.53	1.13	-0.70	9.93	122.77
251	16.50	120.92	1.16	-0.70	9.22	123.00
252	16.57	126.26	1.17	-0.30	8.68	123.16
253	16.60	129.82	1.16	-0.30	7.91	123.03
254	16.67	137.77	1.05	-0.20	6.44	121.88
255	16.73	143.95	0.63	-0.30	5.04	120.78
256	16.83	152.93	0.72	-0.20	4.05	120.11
257	16.89	162.20	0.80	-0.30	3.96	120.94
258	16.93	167.54	0.85	-0.20	4.19	121.87
259	17.01	165.76	1.01	-0.28	4.45	122.78
260	17.07	174.84	1.13	-0.28	4.71	123.78
261	17.13	183.91	1.26	-0.24	4.76	124.73
262	17.19	191.78	1.42	-0.30	4.93	125.73
263	17.26	198.52	1.62	-0.20	5.32	126.87
264	17.33	203.85	1.93	-0.30	5.69	127.86
265	17.39	209.28	2.09	-0.20	5.94	128.66
266	17.45	216.67	2.21	-0.20	5.88	129.24
267	17.53	229.59	2.36	-0.20	5.87	129.72
268	17.60	229.59	2.46	-0.20	5.92	130.08
269	17.66	229.59	2.53	-0.30	6.07	130.26
270	17.73	230.06	2.54	-0.20	6.14	130.22
271	17.79	224.63	2.43	-0.25	6.17	129.95
272	17.86	217.51	2.30	-0.20	6.26	129.52
273	17.93	209.56	2.20	-0.20	6.37	129.07
274	18.00	202.82	2.10	-0.20	6.49	128.67
275	18.06	197.67	2.01	-0.20	6.57	128.29
276	18.13	193.18	1.93	-0.20	6.62	127.97
277	18.18	190.56	1.88	-0.20	6.70	127.71
278	18.25	185.97	1.84	-0.30	6.83	127.49
279	18.33	181.29	1.80	-0.30	6.99	127.27
280	18.38	177.74	1.76	-0.30	7.17	127.02
281	18.44	172.21	1.71	-0.40	7.35	126.71
282	18.53	165.85	1.64	-0.30	7.62	126.41
283	18.59	160.61	1.61	-0.40	7.98	126.16
284	18.66	154.06	1.60	-0.30	8.45	125.99
285	18.73	147.32	1.59	-0.30	9.02	125.82
286	18.79	140.67	1.57	-0.30	9.60	125.63
287	18.86	134.40	1.55	-0.30	10.18	125.46
288	18.92	129.72	1.55	-0.30	10.70	125.34

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.99	126.35	1.55	-0.30	11.13	125.27
290	19.06	124.29	1.55	-0.30	11.50	125.32
291	19.13	123.45	1.61	-0.40	11.87	125.50
292	19.19	122.89	1.67	-0.20	12.24	125.72
293	19.23	122.24	1.70	-0.40	12.64	125.95
294	19.32	120.64	1.78	-0.40	13.09	126.08
295	19.39	117.84	1.79	-0.40	13.56	126.16
296	19.42	115.96	1.80	-0.30	13.99	126.05
297	19.52	111.10	1.74	-0.30	14.31	125.81
298	19.59	108.38	1.67	-0.30	14.52	125.44
299	19.65	105.95	1.59	-0.30	14.62	125.08
300	19.71	103.42	1.54	-0.30	13.49	123.62
301	19.78	100.61	0.83	-0.30	11.71	121.36
302	19.85	97.53	0.56	-0.30	9.73	118.53
303	19.92	95.37	0.62	-0.30	9.49	117.78
304	19.95	94.72	0.65	-0.40	10.15	118.38
305	20.02	94.25	0.72	-0.40	10.83	118.91
306	20.08	91.82	0.78	-0.37	11.92	119.44
307	20.16	85.45	0.84	-0.37	13.25	119.89
308	20.23	82.08	0.91	-0.37	14.92	120.40
309	20.29	77.87	1.01	-0.33	16.71	120.97
310	20.36	73.19	1.12	-0.30	18.76	121.52
311	20.42	68.98	1.21	-0.30	20.75	121.95
312	20.49	65.98	1.28	-0.30	22.41	122.23
313	20.55	63.74	1.32	-0.35	23.14	122.43
314	20.62	65.98	1.33	-0.40	23.47	122.53
315	20.68	64.95	1.34	-0.70	23.23	122.56
316	20.75	65.98	1.32	-0.90	22.95	122.49
317	20.82	67.48	1.29	-1.20	22.07	122.36
318	20.88	70.29	1.23	-1.00	20.89	122.16
319	20.95	73.19	1.17	-0.40	19.51	121.92
320	21.01	76.56	1.11	-0.40	18.10	121.68
321	21.08	80.77	1.07	-0.40	16.78	121.60
322	21.14	85.92	1.08	-0.40	15.70	121.81
323	21.21	91.72	1.14	-0.40	14.86	122.30
324	21.28	98.46	1.22	-0.30	14.16	122.95
325	21.34	105.58	1.31	-0.40	13.49	123.69
326	21.41	114.37	1.43	-0.30	12.86	124.47
327	21.48	123.36	1.56	-0.50	12.29	125.28
328	21.54	132.06	1.69	-0.30	11.85	126.05
329	21.61	140.11	1.84	-0.30	11.59	126.76
330	21.67	145.73	1.98	-0.50	11.55	127.35
331	21.74	147.69	2.08	-0.50	11.72	127.76
332	21.80	146.76	2.14	-0.40	12.08	127.92
333	21.87	141.98	2.14	-0.40	12.63	127.87
334	21.93	134.40	2.10	-0.40	13.42	127.60
335	22.00	124.48	2.02	-0.40	14.41	127.14
336	22.07	113.53	1.91	-0.40	15.56	126.51

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.13	103.14	1.77	-0.30	16.79	125.77
338	22.20	93.41	1.64	-0.30	18.09	125.02
339	22.26	84.98	1.54	-0.30	19.48	124.31
340	22.33	77.59	1.46	-0.40	21.06	123.75
341	22.39	71.13	1.43	-0.30	23.05	123.44
342	22.46	64.86	1.48	-0.40	25.51	123.38
343	22.52	59.71	1.55	-0.30	28.14	123.43
344	22.59	55.60	1.59	-0.50	30.18	123.40
345	22.65	53.72	1.57	-0.50	30.00	122.68
346	22.72	54.29	1.16	-0.60	27.39	121.03
347	22.79	54.66	0.72	-0.60	23.66	119.14
348	22.85	58.59	0.76	-0.60	21.18	118.24
349	22.91	62.43	0.82	-0.60	20.84	118.94
350	22.98	63.46	0.91	-0.40	21.69	119.67
351	23.04	59.71	1.01	-0.65	22.48	120.56
352	23.11	65.61	1.15	-0.65	22.93	121.41
353	23.17	69.17	1.26	-0.65	22.61	122.28
354	23.24	71.51	1.37	-0.60	22.68	123.04
355	23.30	73.85	1.51	-0.60	23.05	123.85
356	23.37	76.00	1.69	-1.10	23.69	124.59
357	23.43	75.91	1.83	-1.20	24.82	125.06
358	23.50	71.13	1.87	-0.40	26.56	125.16
359	23.57	64.77	1.86	-0.40	28.88	125.03
360	23.64	59.53	1.88	-0.30	30.74	124.90
361	23.70	59.25	1.89	-0.30	31.36	124.96
362	23.77	62.24	1.93	-0.60	30.26	125.19
363	23.83	68.23	1.97	-1.10	28.00	125.57
364	23.90	77.40	2.01	-1.50	25.19	125.98
365	23.97	87.89	2.04	-1.50	22.68	126.32
366	24.03	94.62	2.03	-0.90	21.05	126.44
367	24.10	95.65	1.97	-0.70	20.32	126.32
368	24.16	93.97	1.90	-0.40	20.25	126.07
369	24.23	91.54	1.85	-0.50	20.57	125.85
370	24.30	89.10	1.85	-0.30	21.09	125.71
371	24.36	86.76	1.84	-0.50	21.92	125.69
372	24.43	83.49	1.89	-0.40	23.32	125.80
373	24.49	78.06	2.01	-0.40	25.62	125.88
374	24.56	69.17	2.05	-0.40	29.11	125.78
375	24.63	58.22	2.05	-0.30	33.51	125.38
376	24.69	49.32	1.98	-0.40	38.24	124.76
377	24.76	42.87	1.86	-0.30	42.38	124.04
378	24.82	38.37	1.75	-0.50	44.58	123.52
379	24.89	39.31	1.74	-0.30	44.87	123.42
380	24.95	41.56	1.81	0.00	43.45	123.68
381	25.02	44.27	1.86	0.10	41.27	123.89
382	25.09	47.73	1.78	0.40	39.12	123.75
383	25.15	47.92	1.62	0.30	37.89	123.18
384	25.22	44.46	1.46	0.00	38.09	122.40

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.28	41.46	1.35	0.00	38.17	121.70
386	25.34	42.87	1.27	0.00	34.41	121.43
387	25.41	56.06	1.20	0.20	27.56	121.56
388	25.48	74.41	1.16	-0.30	20.66	121.98
389	25.55	95.00	1.16	-0.60	15.87	122.45
390	25.61	112.41	1.17	-0.60	12.84	122.85
391	25.68	124.86	1.16	-0.60	11.04	123.01
392	25.74	131.22	1.12	-0.60	10.15	122.97
393	25.81	130.75	1.09	-0.50	9.88	122.58
394	25.88	123.45	0.99	-0.30	10.26	121.98
395	25.95	111.66	0.91	-0.50	11.94	121.81
396	26.01	96.12	1.13	-0.37	15.25	122.14
397	26.08	79.09	1.29	-0.40	20.44	122.50
398	26.13	60.46	1.32	-0.43	26.74	122.08
399	26.21	45.30	1.21	-0.43	33.60	121.09
400	26.27	37.16	1.10	-0.43	39.45	119.87
401	26.34	32.57	0.99	-0.42	43.00	118.76
402	26.40	30.04	0.89	-0.40	45.07	117.70
403	26.46	27.61	0.79	-0.30	46.13	116.73
404	26.53	26.39	0.72	-0.40	46.23	116.12
405	26.59	27.47	0.72	0.00	47.13	116.11
406	26.66	26.02	0.80	0.00	48.23	116.82
407	26.72	27.33	0.94	0.20	48.99	117.77
408	26.79	30.04	1.03	0.60	46.64	118.62
409	26.86	34.35	1.04	1.00	43.56	119.24
410	26.92	37.25	1.09	1.60	41.78	119.73
411	26.99	37.20	1.17	2.10	41.83	120.24
412	27.05	37.20	1.25	2.40	43.05	120.76
413	27.12	37.16	1.36	2.80	41.15	121.51
414	27.19	47.17	1.46	3.00	36.33	122.44
415	27.26	60.09	1.54	3.40	31.69	123.25
416	27.32	64.30	1.59	2.70	29.38	123.74
417	27.39	64.39	1.62	1.80	28.93	124.05
418	27.46	66.08	1.69	1.50	28.94	124.38
419	27.52	68.04	1.79	1.20	28.43	124.79
420	27.59	72.26	1.84	0.50	27.17	125.18
421	27.65	79.27	1.87	-0.60	24.71	125.54
422	27.72	91.44	1.87	-1.50	21.80	125.90
423	27.78	103.98	1.89	-2.50	19.54	126.22
424	27.84	109.13	1.92	-3.20	18.34	126.43
425	27.91	110.35	1.93	-3.40	17.85	126.48
426	27.98	111.66	1.89	-2.20	17.57	126.43
427	28.05	112.13	1.86	-1.10	17.28	126.36
428	28.11	113.44	1.86	-0.60	17.10	126.40
429	28.18	115.22	1.90	-0.50	16.94	126.59
430	28.25	118.21	1.97	-0.50	16.75	126.82
431	28.31	121.02	2.00	-0.40	16.48	127.00
432	28.37	123.17	2.00	-0.40	16.28	127.07

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.44	123.08	2.00	-0.40	16.29	127.07
434	28.51	121.21	2.00	-0.60	16.50	127.06
435	28.57	119.80	2.01	-0.50	16.86	127.07
436	28.64	118.12	2.04	-0.30	17.34	127.19
437	28.70	116.62	2.12	-0.30	16.74	126.51
438	28.77	115.59	1.49	-0.30	15.76	125.59
439	28.83	115.40	1.38	-0.30	14.79	124.75
440	28.90	116.15	1.58	-0.30	15.32	125.26
441	28.97	116.99	1.80	-0.70	16.44	126.18
442	29.03	116.25	2.02	-0.70	18.08	126.84
443	29.08	105.48	2.15	-0.38	19.70	127.27
444	29.14	103.98	2.25	-0.38	21.38	127.48
445	29.20	100.24	2.32	-0.38	22.82	127.63
446	29.29	92.66	2.39	-0.40	24.07	127.70
447	29.35	92.80	2.41	-0.10	24.84	127.68
448	29.42	92.94	2.36	-0.10	24.32	127.68
449	29.48	97.62	2.34	-0.50	23.64	127.70
450	29.55	100.05	2.37	-1.30	23.00	127.81
451	29.62	101.55	2.40	-2.00	22.62	127.89
452	29.68	103.33	2.38	-2.80	22.44	127.86
453	29.74	101.74	2.32	-3.40	22.78	127.68
454	29.81	95.09	2.28	-4.20	24.17	127.39
455	29.87	84.89	2.25	-4.79	26.81	126.99
456	29.94	72.91	2.20	-5.20	30.26	126.46
457	30.00	63.36	2.09	-5.20	33.80	125.81
458	30.07	56.91	1.98	-5.20	36.47	125.12
459	30.14	53.07	1.84	-5.89	38.29	124.42
460	30.20	49.51	1.71	-5.49	39.34	123.72
461	30.27	47.17	1.58	-5.49	40.20	122.94
462	30.34	44.08	1.41	-5.29	39.85	122.04
463	30.40	44.32	1.22	-5.29	38.58	121.01
464	30.47	44.32	1.05	-5.29	37.11	120.33
465	30.54	44.55	1.09	-5.59	36.00	120.38
466	30.60	48.67	1.20	-5.20	35.58	120.90
467	30.67	49.70	1.25	-5.20	35.36	121.33
468	30.73	48.76	1.27	-5.20	35.25	121.53
469	30.80	50.73	1.29	-5.39	33.69	121.83
470	30.86	58.68	1.33	-5.59	30.04	122.44
471	30.93	71.79	1.41	-5.29	26.63	123.17
472	30.99	78.71	1.50	-5.29	25.44	123.87
473	31.06	75.25	1.64	-5.59	26.51	124.45
474	31.13	71.13	1.79	-5.59	28.09	124.95
475	31.19	73.94	1.90	-5.09	27.44	125.60
476	31.26	87.89	2.02	-5.49	24.05	126.50
477	31.32	111.57	2.20	-5.69	20.43	127.51
478	31.39	129.54	2.38	-5.59	18.04	128.37
479	31.45	138.05	2.51	-5.74	16.94	128.95
480	31.52	142.45	2.59	-5.79	16.50	129.21

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.59	143.48	2.56	-5.00	16.21	129.21
482	31.66	143.57	2.48	-3.30	14.80	128.24
483	31.73	145.73	1.63	-1.10	12.99	126.94
484	31.79	148.63	1.45	-0.50	11.42	125.62
485	31.86	147.13	1.55	-0.40	11.39	125.57
486	31.89	145.63	1.60	-0.70	12.01	125.95
487	31.96	143.48	1.71	-0.40	12.54	126.27
488	32.02	143.67	1.78	-0.63	13.97	126.43
489	32.09	120.64	1.82	-0.40	13.98	126.65
490	32.17	148.44	1.85	-0.30	13.55	126.93
491	32.24	158.92	1.93	-0.40	12.08	127.49
492	32.30	167.07	2.06	-0.50	11.56	128.06
493	32.36	176.89	2.19	-0.50	11.10	128.69
494	32.42	190.18	2.36	-0.20	10.45	129.39
495	32.48	208.53	2.55	-0.20	9.59	130.08
496	32.55	229.12	2.66	-0.30	8.64	130.66
497	32.61	248.87	2.75	-0.30	7.56	131.12
498	32.70	275.64	2.80	-0.30	6.76	131.41
499	32.74	283.41	2.80	-0.30	6.00	131.48
500	32.82	295.95	2.67	-0.30	5.39	131.35
501	32.89	307.46	2.56	-0.30	4.78	131.19
502	32.95	317.38	2.51	-0.20	4.30	131.07
503	33.02	327.30	2.47	-0.20	4.01	131.18
504	33.09	338.63	2.60	-0.20	3.42	130.71
505	33.15	343.87	1.98	-0.20	2.50	129.56
506	33.20	353.70	1.39	-0.20	1.69	128.56
507	33.28	372.98	1.77	-0.20	1.51	129.06
508	33.34	398.06	2.26	-0.20	1.57	130.38
509	33.41	429.51	2.32	-0.13	1.37	131.07
510	33.47	451.60	2.26	-0.12	1.22	131.73
511	33.53	472.19	2.77	-0.08	1.37	132.81
512	33.60	490.72	3.35	0.00	1.57	133.84
513	33.66	507.94	3.40	0.00	1.49	134.41
514	33.73	540.51	3.40	0.00	1.28	134.52
515	33.80	539.11	3.40	0.00	1.15	134.56
516	33.86	537.70	3.38	0.00	1.06	134.53
517	33.92	555.21	3.33	0.10	0.84	134.54
518	33.99	585.44	3.32	0.00	0.62	134.65
519	34.06	599.19	3.41	0.03	0.54	134.94
520	34.13	605.09	3.64	0.04	0.57	135.07
521	34.20	593.58	3.49	0.04	0.55	134.79
522	34.26	572.99	3.06	0.04	0.56	134.29
523	34.32	551.93	3.07	0.10	0.73	134.15
524	34.39	542.38	3.40	0.10	1.04	134.45
525	34.45	540.23	3.54	0.10	1.33	134.84
526	34.52	535.18	3.65	0.10	1.58	134.94
527	34.59	507.19	3.63	0.04	1.70	134.90
528	34.65	515.33	3.54	0.10	1.82	134.91

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.72	515.33	3.70	0.08	1.83	135.01
530	34.78	515.33	3.76	0.10	1.90	135.26
531	34.85	529.93	3.90	0.10	1.82	135.43
532	34.91	544.91	3.88	0.10	1.62	135.41
533	34.98	549.96	3.64	0.10	1.40	135.06
534	35.04	536.11	3.35	0.10	1.10	134.38
535	35.11	535.46	2.94	0.10	0.79	133.62
536	35.17	538.83	2.69	0.10	0.24	132.39
537	35.24	538.64	1.96	0.10	0.00	130.68
538	35.30	539.11	1.35	0.10	0.00	129.43
539	35.37	536.86	1.75	0.10	0.00	129.42
540	35.44	538.17	1.96	0.10	0.00	130.63
541	35.51	539.67	2.25	0.10	0.18	131.65
542	35.57	484.63	2.72	0.00	0.90	132.66
543	35.63	481.17	3.08	0.00	1.49	133.28
544	35.70	489.97	3.07	0.00	1.52	133.75
545	35.77	521.23	3.22	0.00	1.31	134.15
546	35.83	555.11	3.45	0.00	0.83	134.36
547	35.89	606.96	3.12	0.00	0.00	133.63
548	35.96	640.28	2.09	0.00	0.00	132.68
549	36.03	623.62	2.31	-0.05	0.00	132.20
550	36.09	612.20	2.63	-0.06	0.00	132.75
551	36.16	601.63	2.69	-0.07	0.00	132.98
552	36.23	604.53	2.57	-0.10	0.00	133.01
553	36.29	588.71	2.70	-0.10	0.00	132.94
554	36.35	581.79	2.64	-0.11	0.04	133.10
555	36.43	574.21	2.80	-0.12	0.16	133.18
556	36.49	567.19	2.82	-0.12	0.14	132.85
557	36.55	553.43	2.32	-0.11	0.00	131.76
558	36.62	549.87	1.74	-0.10	0.00	130.58
559	36.68	549.87	1.81	-0.10	0.00	129.81
560	36.75	546.97	1.75	-0.15	0.00	129.92
561	36.82	537.14	1.84	-0.16	0.00	130.15
562	36.88	534.80	1.99	-0.15	0.00	130.79
563	36.95	526.66	2.28	-0.15	0.14	131.60
564	37.01	522.07	2.58	-0.15	0.49	132.26
565	37.08	518.52	2.66	-0.20	0.56	132.13
566	37.14	500.64	2.20	-0.20	0.03	130.43
567	37.21	491.19	1.07	-0.10	0.00	128.45
568	37.28	490.06	1.29	-0.20	0.00	127.19
569	37.34	466.66	1.50	-0.20	0.00	128.51
570	37.41	464.98	1.86	-0.20	0.38	129.85
571	37.48	462.92	2.25	-0.25	1.06	131.02
572	37.54	433.91	2.54	-0.25	1.59	131.79
573	37.60	439.33	2.65	-0.25	1.98	132.23
574	37.67	439.62	2.76	-0.30	2.32	132.63
575	37.73	416.59	3.02	-0.30	2.71	133.00
576	37.80	417.62	3.13	-0.30	3.05	133.35

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	37.87	424.08	3.24	-0.30	3.08	133.63
578	37.93	434.65	3.34	-0.30	3.00	133.89
579	38.00	448.41	3.40	-0.30	2.92	134.15
580	38.06	454.78	3.52	-0.30	2.87	134.33
581	38.12	456.84	3.53	-0.30	3.05	134.28
582	38.19	421.65	3.40	-0.30	3.17	134.15
583	38.26	429.32	3.40	-0.30	3.49	134.31
584	38.33	431.85	3.84	-0.30	3.94	135.17
585	38.39	438.96	4.68	-0.30	4.32	135.96
586	38.46	451.03	4.69	-0.30	4.31	136.40
587	38.52	469.94	4.52	-0.30	3.43	135.91
588	38.59	505.04	3.58	-0.37	2.21	135.06
589	38.66	549.59	3.03	-0.36	1.27	134.66
590	38.72	597.42	3.64	-0.35	0.87	135.13
591	38.78	638.13	3.99	-0.36	0.71	136.03
592	38.85	689.23	4.12	-0.36	0.79	136.46
593	38.91	630.27	4.28	-0.38	1.15	136.76
594	38.98	590.96	4.63	-0.38	2.09	137.21
595	39.05	547.53	5.30	-0.39	2.82	137.28
596	39.12	519.08	4.84	-0.41	2.84	136.66
597	39.18	517.30	3.52	-0.41	2.35	135.56
598	39.24	518.70	3.48	-0.42	1.83	134.65
599	39.31	518.33	3.45	-0.42	1.88	134.35
600	39.37	482.39	3.18	-0.41	1.91	133.96
601	39.44	478.27	3.04	-0.41	1.97	133.59
602	39.51	477.71	3.06	-0.41	1.93	133.46
603	39.57	477.71	3.03	-0.42	1.95	133.46
604	39.64	477.15	3.05	-0.44	1.89	133.38
605	39.70	480.89	2.95	-0.48	1.74	133.33
606	39.77	497.55	2.93	-0.51	0.21	130.34
607	39.84	511.40	0.00	-0.51	0.00	125.30
608	39.90	518.80	0.00	-0.51	N/A	87.36
609	39.97	516.83	0.00	-0.50	N/A	87.36
610	40.03	557.64	0.00	-0.60	N/A	87.36
611	40.09	556.42	0.00	-0.60	N/A	87.36
612	40.16	569.71	0.00	-0.60	N/A	87.36

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.07	0.00	0.00	0.00	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
2	0.14	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
3	0.20	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
4	0.27	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
5	0.34	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
6	0.40	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
7	0.46	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
8	0.54	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
9	0.60	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
10	0.67	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
11	0.73	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
12	0.79	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
13	0.87	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
14	0.93	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
15	0.99	0.05	0.00	0.05	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
16	1.05	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
17	1.12	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
18	1.19	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
19	1.25	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
20	1.33	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
21	1.39	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
22	1.46	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
23	1.52	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
24	1.58	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
25	1.65	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
26	1.71	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
27	1.79	0.10	0.00	0.10	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
28	1.85	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
29	1.92	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
30	1.98	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
31	2.04	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
32	2.11	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
33	2.17	0.13	0.00	0.13	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
34	2.24	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
35	2.30	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
36	2.37	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
37	2.43	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
38	2.50	0.15	0.00	0.15	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
39	2.58	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
40	2.64	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
41	2.71	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
42	2.77	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
43	2.83	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
44	2.90	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
45	2.95	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
46	3.04	0.18	0.00	0.18	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
47	3.11	0.18	0.00	0.18	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
48	3.17	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.24	0.19	0.00	0.19	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
50	3.28	0.19	0.00	0.19	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
51	3.38	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
52	3.44	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
53	3.51	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
54	3.54	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
55	3.64	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
56	3.70	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
57	3.77	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
58	3.81	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
59	3.90	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
60	3.97	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
61	4.00	0.23	0.00	0.23	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
62	4.07	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
63	4.14	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
64	4.21	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
65	4.27	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
66	4.34	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
67	4.40	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
68	4.47	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
69	4.54	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
70	4.60	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
71	4.67	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
72	4.73	0.27	0.00	0.27	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
73	4.80	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
74	4.87	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
75	4.93	0.28	0.00	0.28	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
76	5.00	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
77	5.06	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
78	5.13	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
79	5.19	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
80	5.25	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
81	5.32	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
82	5.38	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
83	5.45	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
84	5.51	0.31	0.00	0.31	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
85	5.58	0.31	0.00	0.31	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
86	5.65	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
87	5.71	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
88	5.78	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
89	5.84	0.33	0.00	0.33	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
90	5.91	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
91	5.97	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
92	6.04	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
93	6.11	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
94	6.17	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
95	6.24	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
96	6.30	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.37	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
98	6.43	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
99	6.50	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
100	6.57	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
101	6.63	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
102	6.70	0.38	0.00	0.38	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
103	6.76	0.38	0.00	0.38	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
104	6.83	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
105	6.90	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
106	6.97	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
107	7.03	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
108	7.10	0.40	0.00	0.40	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
109	7.17	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
110	7.24	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
111	7.28	0.41	0.00	0.41	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
112	7.36	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
113	7.42	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
114	7.49	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
115	7.56	0.43	0.00	0.43	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
116	7.63	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
117	7.70	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
118	7.74	0.44	0.00	0.44	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
119	7.81	0.45	0.00	0.45	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
120	7.89	0.45	0.00	0.45	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
121	7.95	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
122	8.01	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
123	8.10	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
124	8.15	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
125	8.22	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
126	8.28	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
127	8.35	0.48	0.00	0.48	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
128	8.41	0.49	0.00	0.49	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
129	8.48	0.49	0.00	0.49	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
130	8.55	0.50	0.00	0.50	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
131	8.61	0.50	0.00	0.50	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
132	8.68	0.50	0.00	0.50	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
133	8.74	0.51	0.00	0.51	0.98	0.460	0.83	0.554	1.00	1.00	2.000	No
134	8.81	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
135	8.87	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
136	8.94	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
137	9.00	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
138	9.07	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
139	9.13	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
140	9.20	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
141	9.26	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
142	9.33	0.54	0.00	0.54	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
143	9.39	0.55	0.00	0.55	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
144	9.45	0.55	0.00	0.55	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.52	0.56	0.00	0.56	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
146	9.59	0.56	0.00	0.56	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
147	9.66	0.57	0.00	0.57	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
148	9.72	0.57	0.00	0.57	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
149	9.79	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
150	9.85	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
151	9.92	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
152	9.99	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
153	10.04	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
154	10.11	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
155	10.18	0.60	0.00	0.60	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
156	10.24	0.60	0.00	0.60	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
157	10.30	0.61	0.00	0.61	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
158	10.40	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
159	10.43	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
160	10.53	0.62	0.00	0.62	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
161	10.59	0.62	0.00	0.62	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
162	10.65	0.63	0.00	0.63	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
163	10.72	0.63	0.00	0.63	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
164	10.79	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
165	10.86	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
166	10.89	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
167	10.96	0.65	0.00	0.65	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
168	11.03	0.65	0.00	0.65	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
169	11.09	0.66	0.00	0.66	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
170	11.15	0.66	0.00	0.66	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
171	11.25	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
172	11.31	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
173	11.38	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
174	11.44	0.68	0.00	0.68	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
175	11.51	0.68	0.00	0.68	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
176	11.57	0.69	0.00	0.69	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
177	11.64	0.69	0.00	0.69	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
178	11.71	0.69	0.00	0.69	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
179	11.77	0.70	0.00	0.70	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
180	11.84	0.70	0.00	0.70	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
181	11.90	0.71	0.00	0.71	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
182	11.97	0.71	0.00	0.71	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
183	12.03	0.71	0.00	0.71	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
184	12.09	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
185	12.16	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
186	12.23	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
187	12.30	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
188	12.36	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
189	12.43	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
190	12.50	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
191	12.56	0.75	0.00	0.75	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
192	12.61	0.75	0.00	0.75	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.68	0.75	0.00	0.75	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
194	12.74	0.76	0.00	0.76	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
195	12.81	0.76	0.00	0.76	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
196	12.87	0.77	0.00	0.77	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
197	12.94	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
198	13.00	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
199	13.06	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
200	13.13	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
201	13.20	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
202	13.27	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
203	13.34	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
204	13.39	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
205	13.47	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
206	13.53	0.81	0.00	0.81	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
207	13.58	0.81	0.00	0.81	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
208	13.65	0.82	0.00	0.82	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
209	13.73	0.82	0.00	0.82	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
210	13.80	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
211	13.87	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
212	13.91	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
213	13.98	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
214	14.05	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
215	14.12	0.85	0.00	0.85	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
216	14.19	0.85	0.00	0.85	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
217	14.26	0.85	0.00	0.85	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
218	14.32	0.86	0.00	0.86	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
219	14.38	0.86	0.00	0.86	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
220	14.45	0.87	0.00	0.87	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
221	14.50	0.87	0.00	0.87	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
222	14.57	0.87	0.00	0.87	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
223	14.64	0.88	0.00	0.88	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
224	14.70	0.88	0.00	0.88	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
225	14.77	0.89	0.00	0.89	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
226	14.83	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
227	14.91	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
228	14.97	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
229	15.03	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
230	15.11	0.91	0.00	0.91	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
231	15.17	0.91	0.00	0.91	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
232	15.23	0.92	0.00	0.92	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
233	15.29	0.92	0.00	0.92	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
234	15.36	0.92	0.00	0.92	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
235	15.44	0.93	0.00	0.93	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
236	15.49	0.93	0.00	0.93	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
237	15.55	0.94	0.00	0.94	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
238	15.62	0.94	0.00	0.94	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
239	15.68	0.94	0.00	0.94	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
240	15.75	0.95	0.00	0.95	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.84	0.95	0.00	0.95	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
242	15.91	0.96	0.00	0.96	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
243	15.98	0.96	0.00	0.96	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
244	16.04	0.97	0.00	0.97	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
245	16.08	0.97	0.00	0.97	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
246	16.15	0.97	0.00	0.97	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
247	16.21	0.98	0.00	0.98	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
248	16.28	0.98	0.00	0.98	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
249	16.34	0.98	0.00	0.98	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
250	16.41	0.99	0.00	0.99	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
251	16.50	0.99	0.00	0.99	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
252	16.57	1.00	0.00	1.00	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
253	16.60	1.00	0.00	1.00	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
254	16.67	1.00	0.00	1.00	0.96	0.452	0.83	0.545	1.00	1.00	2.000	No
255	16.73	1.01	0.00	1.01	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
256	16.83	1.01	0.00	1.01	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
257	16.89	1.02	0.00	1.02	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
258	16.93	1.02	0.00	1.02	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
259	17.01	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
260	17.07	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
261	17.13	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
262	17.19	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
263	17.26	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
264	17.33	1.05	0.00	1.05	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
265	17.39	1.05	0.00	1.05	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
266	17.45	1.05	0.00	1.05	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
267	17.53	1.06	0.00	1.06	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
268	17.60	1.06	0.00	1.06	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
269	17.66	1.07	0.00	1.07	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
270	17.73	1.07	0.00	1.07	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
271	17.79	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
272	17.86	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
273	17.93	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
274	18.00	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
275	18.06	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
276	18.13	1.10	0.00	1.10	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
277	18.18	1.10	0.00	1.10	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
278	18.25	1.11	0.00	1.11	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
279	18.33	1.11	0.00	1.11	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
280	18.38	1.11	0.00	1.11	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
281	18.44	1.12	0.00	1.12	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
282	18.53	1.12	0.00	1.12	0.96	0.450	0.83	0.542	0.99	1.00	2.000	No
283	18.59	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
284	18.66	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
285	18.73	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
286	18.79	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
287	18.86	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
288	18.92	1.15	0.00	1.15	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.99	1.15	0.00	1.15	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
290	19.06	1.16	0.00	1.16	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
291	19.13	1.16	0.00	1.16	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
292	19.19	1.16	0.00	1.16	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
293	19.23	1.17	0.00	1.17	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
294	19.32	1.17	0.00	1.17	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
295	19.39	1.18	0.00	1.18	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
296	19.42	1.18	0.00	1.18	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
297	19.52	1.19	0.00	1.19	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
298	19.59	1.19	0.00	1.19	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
299	19.65	1.19	0.00	1.19	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
300	19.71	1.20	0.00	1.20	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
301	19.78	1.20	0.00	1.20	0.96	0.448	0.83	0.541	0.97	1.00	2.000	No
302	19.85	1.21	0.00	1.21	0.96	0.448	0.83	0.541	0.97	1.00	2.000	No
303	19.92	1.21	0.00	1.21	0.96	0.448	0.83	0.541	0.97	1.00	2.000	No
304	19.95	1.21	0.00	1.21	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
305	20.02	1.21	0.00	1.21	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
306	20.08	1.22	0.00	1.22	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
307	20.16	1.22	0.00	1.22	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
308	20.23	1.23	0.00	1.23	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
309	20.29	1.23	0.00	1.23	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
310	20.36	1.24	0.00	1.24	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
311	20.42	1.24	0.00	1.24	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
312	20.49	1.24	0.00	1.24	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
313	20.55	1.25	0.00	1.25	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
314	20.62	1.25	0.00	1.25	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
315	20.68	1.26	0.00	1.26	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
316	20.75	1.26	0.00	1.26	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
317	20.82	1.26	0.00	1.26	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
318	20.88	1.27	0.00	1.27	0.95	0.447	0.83	0.539	0.96	1.00	2.000	No
319	20.95	1.27	0.00	1.27	0.95	0.447	0.83	0.539	0.96	1.00	2.000	No
320	21.01	1.28	0.00	1.28	0.95	0.447	0.83	0.539	0.96	1.00	2.000	No
321	21.08	1.28	0.00	1.28	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
322	21.14	1.28	0.00	1.28	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
323	21.21	1.29	0.00	1.29	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
324	21.28	1.29	0.00	1.29	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
325	21.34	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
326	21.41	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
327	21.48	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
328	21.54	1.31	0.00	1.31	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
329	21.61	1.31	0.00	1.31	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
330	21.67	1.32	0.00	1.32	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
331	21.74	1.32	0.00	1.32	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
332	21.80	1.32	0.00	1.32	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
333	21.87	1.33	0.00	1.33	0.95	0.445	0.83	0.538	0.96	1.00	2.000	No
334	21.93	1.33	0.00	1.33	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
335	22.00	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
336	22.07	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.13	1.35	0.00	1.35	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
338	22.20	1.35	0.00	1.35	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
339	22.26	1.35	0.00	1.35	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
340	22.33	1.36	0.00	1.36	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
341	22.39	1.36	0.00	1.36	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
342	22.46	1.37	0.00	1.37	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
343	22.52	1.37	0.00	1.37	0.95	0.445	0.83	0.536	0.95	1.00	2.000	No
344	22.59	1.37	0.00	1.37	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
345	22.65	1.38	0.00	1.38	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
346	22.72	1.38	0.00	1.38	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
347	22.79	1.39	0.00	1.39	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
348	22.85	1.39	0.00	1.39	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
349	22.91	1.39	0.00	1.39	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
350	22.98	1.40	0.00	1.40	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
351	23.04	1.40	0.00	1.40	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
352	23.11	1.41	0.00	1.41	0.95	0.444	0.83	0.535	0.94	1.00	2.000	No
353	23.17	1.41	0.00	1.41	0.95	0.444	0.83	0.535	0.94	1.00	2.000	No
354	23.24	1.41	0.00	1.41	0.95	0.444	0.83	0.535	0.94	1.00	2.000	No
355	23.30	1.42	0.00	1.42	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
356	23.37	1.42	0.00	1.42	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
357	23.43	1.43	0.00	1.43	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
358	23.50	1.43	0.00	1.43	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
359	23.57	1.43	0.00	1.43	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
360	23.64	1.44	0.00	1.44	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
361	23.70	1.44	0.00	1.44	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
362	23.77	1.45	0.00	1.45	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
363	23.83	1.45	0.00	1.45	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
364	23.90	1.45	0.00	1.45	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
365	23.97	1.46	0.00	1.46	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
366	24.03	1.46	0.00	1.46	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
367	24.10	1.47	0.00	1.47	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
368	24.16	1.47	0.00	1.47	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
369	24.23	1.48	0.00	1.48	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
370	24.30	1.48	0.00	1.48	0.94	0.442	0.83	0.533	0.94	1.00	2.000	No
371	24.36	1.48	0.00	1.48	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
372	24.43	1.49	0.00	1.49	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
373	24.49	1.49	0.00	1.49	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
374	24.56	1.50	0.00	1.50	0.94	0.441	0.83	0.533	0.93	1.00	2.000	No
375	24.63	1.50	0.00	1.50	0.94	0.441	0.83	0.533	0.93	1.00	2.000	No
376	24.69	1.50	0.00	1.50	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
377	24.76	1.51	0.00	1.51	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
378	24.82	1.51	0.00	1.51	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
379	24.89	1.52	0.00	1.52	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
380	24.95	1.52	0.00	1.52	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
381	25.02	1.52	0.00	1.52	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
382	25.09	1.53	0.00	1.53	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
383	25.15	1.53	0.00	1.53	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
384	25.22	1.54	0.00	1.54	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.28	1.54	0.00	1.54	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
386	25.34	1.54	0.00	1.54	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
387	25.41	1.55	0.00	1.55	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
388	25.48	1.55	0.00	1.55	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
389	25.55	1.56	0.00	1.56	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
390	25.61	1.56	0.00	1.56	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
391	25.68	1.57	0.00	1.57	0.94	0.440	0.83	0.530	0.92	1.00	2.000	No
392	25.74	1.57	0.00	1.57	0.94	0.440	0.83	0.530	0.92	1.00	2.000	No
393	25.81	1.57	0.00	1.57	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
394	25.88	1.58	0.00	1.58	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
395	25.95	1.58	0.00	1.58	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
396	26.01	1.59	0.00	1.59	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
397	26.08	1.59	0.00	1.59	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
398	26.13	1.59	0.00	1.59	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
399	26.21	1.60	0.00	1.60	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
400	26.27	1.60	0.00	1.60	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
401	26.34	1.61	0.00	1.61	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
402	26.40	1.61	0.00	1.61	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
403	26.46	1.61	0.00	1.61	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
404	26.53	1.62	0.00	1.62	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
405	26.59	1.62	0.00	1.62	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
406	26.66	1.62	0.00	1.62	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
407	26.72	1.63	0.00	1.63	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
408	26.79	1.63	0.00	1.63	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
409	26.86	1.64	0.00	1.64	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
410	26.92	1.64	0.00	1.64	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
411	26.99	1.64	0.00	1.64	0.93	0.437	0.83	0.528	0.92	1.00	2.000	No
412	27.05	1.65	0.00	1.65	0.93	0.437	0.83	0.527	0.92	1.00	2.000	No
413	27.12	1.65	0.00	1.65	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
414	27.19	1.66	0.00	1.66	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
415	27.26	1.66	0.00	1.66	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
416	27.32	1.66	0.00	1.66	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
417	27.39	1.67	0.00	1.67	0.93	0.436	0.83	0.527	0.91	1.00	2.000	No
418	27.46	1.67	0.00	1.67	0.93	0.436	0.83	0.527	0.91	1.00	2.000	No
419	27.52	1.68	0.00	1.68	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
420	27.59	1.68	0.00	1.68	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
421	27.65	1.68	0.00	1.68	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
422	27.72	1.69	0.00	1.69	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
423	27.78	1.69	0.00	1.69	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
424	27.84	1.70	0.00	1.70	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
425	27.91	1.70	0.00	1.70	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
426	27.98	1.71	0.00	1.71	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
427	28.05	1.71	0.00	1.71	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
428	28.11	1.71	0.00	1.71	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
429	28.18	1.72	0.00	1.72	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
430	28.25	1.72	0.00	1.72	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
431	28.31	1.73	0.00	1.73	0.93	0.435	0.83	0.524	0.91	1.00	2.000	No
432	28.37	1.73	0.00	1.73	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.44	1.73	0.00	1.73	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
434	28.51	1.74	0.00	1.74	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
435	28.57	1.74	0.00	1.74	0.93	0.434	0.83	0.524	0.91	1.00	2.000	No
436	28.64	1.75	0.00	1.75	0.93	0.434	0.83	0.524	0.90	1.00	2.000	No
437	28.70	1.75	0.00	1.75	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
438	28.77	1.76	0.00	1.76	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
439	28.83	1.76	0.00	1.76	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
440	28.90	1.76	0.00	1.76	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
441	28.97	1.77	0.00	1.77	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
442	29.03	1.77	0.00	1.77	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
443	29.08	1.78	0.00	1.78	0.93	0.433	0.83	0.522	0.90	1.00	2.000	No
444	29.14	1.78	0.00	1.78	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
445	29.20	1.78	0.00	1.78	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
446	29.29	1.79	0.00	1.79	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
447	29.35	1.79	0.00	1.79	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
448	29.42	1.80	0.00	1.80	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
449	29.48	1.80	0.00	1.80	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
450	29.55	1.80	0.00	1.80	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
451	29.62	1.81	0.00	1.81	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
452	29.68	1.81	0.00	1.81	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
453	29.74	1.82	0.00	1.82	0.92	0.431	0.83	0.521	0.90	1.00	2.000	No
454	29.81	1.82	0.00	1.82	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
455	29.87	1.83	0.00	1.83	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
456	29.94	1.83	0.00	1.83	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
457	30.00	1.83	0.00	1.83	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
458	30.07	1.84	0.00	1.84	0.92	0.431	0.83	0.520	0.90	1.00	2.000	No
459	30.14	1.84	0.00	1.84	0.92	0.431	0.83	0.519	0.90	1.00	2.000	No
460	30.20	1.85	0.00	1.85	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
461	30.27	1.85	0.00	1.85	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
462	30.34	1.85	0.00	1.85	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
463	30.40	1.86	0.00	1.86	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
464	30.47	1.86	0.00	1.86	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
465	30.54	1.87	0.00	1.87	0.92	0.430	0.83	0.518	0.89	1.00	2.000	No
466	30.60	1.87	0.00	1.87	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
467	30.67	1.87	0.00	1.87	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
468	30.73	1.88	0.00	1.88	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
469	30.80	1.88	0.00	1.88	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
470	30.86	1.89	0.00	1.89	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
471	30.93	1.89	0.00	1.89	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
472	30.99	1.89	0.00	1.89	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
473	31.06	1.90	0.00	1.90	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
474	31.13	1.90	0.00	1.90	0.91	0.428	0.83	0.517	0.89	1.00	2.000	No
475	31.19	1.91	0.00	1.91	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
476	31.26	1.91	0.00	1.91	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
477	31.32	1.92	0.00	1.92	0.91	0.428	0.83	0.516	0.89	1.00	2.000	No
478	31.39	1.92	0.00	1.92	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
479	31.45	1.92	0.00	1.92	0.91	0.427	0.83	0.516	0.89	1.00	2.000	No
480	31.52	1.93	0.00	1.93	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.59	1.93	0.00	1.93	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
482	31.66	1.94	0.00	1.94	0.91	0.427	0.83	0.515	0.89	1.00	2.000	No
483	31.73	1.94	0.00	1.94	0.91	0.426	0.83	0.515	0.89	1.00	2.000	No
484	31.79	1.94	0.00	1.94	0.91	0.426	0.83	0.514	0.89	1.00	2.000	No
485	31.86	1.95	0.00	1.95	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
486	31.89	1.95	0.00	1.95	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
487	31.96	1.96	0.00	1.96	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
488	32.02	1.96	0.00	1.96	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
489	32.09	1.96	0.00	1.96	0.91	0.426	0.83	0.513	0.88	1.00	2.000	No
490	32.17	1.97	0.00	1.97	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
491	32.24	1.97	0.00	1.97	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
492	32.30	1.98	0.00	1.98	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
493	32.36	1.98	0.00	1.98	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
494	32.42	1.99	0.00	1.99	0.91	0.425	0.83	0.512	0.88	1.00	2.000	No
495	32.48	1.99	0.00	1.99	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
496	32.55	1.99	0.00	1.99	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
497	32.61	2.00	0.00	2.00	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
498	32.70	2.00	0.00	2.00	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
499	32.74	2.01	0.00	2.01	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
500	32.82	2.01	0.00	2.01	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
501	32.89	2.02	0.00	2.02	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
502	32.95	2.02	0.00	2.02	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
503	33.02	2.02	0.00	2.02	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
504	33.09	2.03	0.00	2.03	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
505	33.15	2.03	0.00	2.03	0.90	0.423	0.83	0.510	0.88	1.00	2.000	No
506	33.20	2.04	0.00	2.04	0.90	0.422	0.83	0.510	0.88	1.00	2.000	No
507	33.28	2.04	0.00	2.04	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
508	33.34	2.05	0.00	2.05	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
509	33.41	2.05	0.00	2.05	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
510	33.47	2.05	0.00	2.05	0.90	0.422	0.83	0.509	0.88	1.00	2.000	No
511	33.53	2.06	0.00	2.06	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
512	33.60	2.06	0.00	2.06	0.90	0.421	0.83	0.508	0.88	1.00	2.000	No
513	33.66	2.07	0.00	2.07	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
514	33.73	2.07	0.00	2.07	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
515	33.80	2.08	0.00	2.08	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
516	33.86	2.08	0.00	2.08	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
517	33.92	2.08	0.00	2.08	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
518	33.99	2.09	0.00	2.09	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
519	34.06	2.09	0.00	2.09	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
520	34.13	2.10	0.00	2.10	0.90	0.420	0.83	0.506	0.87	1.00	2.000	No
521	34.20	2.10	0.00	2.10	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
522	34.26	2.11	0.00	2.11	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
523	34.32	2.11	0.00	2.11	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
524	34.39	2.12	0.00	2.12	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
525	34.45	2.12	0.00	2.12	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
526	34.52	2.12	0.00	2.12	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
527	34.59	2.13	0.00	2.13	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
528	34.65	2.13	0.00	2.13	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.72	2.14	0.00	2.14	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
530	34.78	2.14	0.00	2.14	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No
531	34.85	2.15	0.00	2.15	0.89	0.417	0.83	0.504	0.87	1.00	2.000	No
532	34.91	2.15	0.00	2.15	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
533	34.98	2.15	0.00	2.15	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
534	35.04	2.16	0.00	2.16	0.89	0.417	0.83	0.503	0.87	1.00	2.000	No
535	35.11	2.16	0.00	2.16	0.89	0.416	0.83	0.503	0.87	1.00	2.000	No
536	35.17	2.17	0.00	2.17	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
537	35.24	2.17	0.00	2.17	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
538	35.30	2.18	0.00	2.18	0.89	0.416	0.83	0.502	0.87	1.00	2.000	No
539	35.37	2.18	0.00	2.18	0.89	0.416	0.83	0.501	0.87	1.00	2.000	No
540	35.44	2.19	0.00	2.19	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
541	35.51	2.19	0.00	2.19	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
542	35.57	2.19	0.00	2.19	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
543	35.63	2.20	0.00	2.20	0.89	0.415	0.83	0.500	0.86	1.00	2.000	No
544	35.70	2.20	0.00	2.20	0.89	0.414	0.83	0.500	0.86	1.00	2.000	No
545	35.77	2.21	0.00	2.21	0.89	0.414	0.83	0.500	0.86	1.00	2.000	No
546	35.83	2.21	0.00	2.21	0.88	0.414	0.83	0.500	0.86	1.00	2.000	No
547	35.89	2.22	0.00	2.22	0.88	0.414	0.83	0.499	0.86	1.00	2.000	No
548	35.96	2.22	0.00	2.22	0.88	0.414	0.83	0.499	0.86	1.00	2.000	No
549	36.03	2.22	0.00	2.22	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
550	36.09	2.23	0.00	2.23	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
551	36.16	2.23	0.00	2.23	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
552	36.23	2.24	0.00	2.24	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
553	36.29	2.24	0.00	2.24	0.88	0.412	0.83	0.498	0.86	1.00	2.000	No
554	36.35	2.25	0.00	2.25	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
555	36.43	2.25	0.00	2.25	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
556	36.49	2.26	0.00	2.26	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
557	36.55	2.26	0.00	2.26	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
558	36.62	2.26	0.00	2.26	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
559	36.68	2.27	0.00	2.27	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
560	36.75	2.27	0.00	2.27	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
561	36.82	2.28	0.00	2.28	0.88	0.411	0.83	0.495	0.86	1.00	2.000	No
562	36.88	2.28	0.00	2.28	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
563	36.95	2.29	0.00	2.29	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
564	37.01	2.29	0.00	2.29	0.88	0.410	0.83	0.495	0.86	1.00	2.000	No
565	37.08	2.29	0.00	2.29	0.88	0.410	0.83	0.494	0.86	1.00	2.000	No
566	37.14	2.30	0.00	2.30	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
567	37.21	2.30	0.00	2.30	0.87	0.409	0.83	0.494	0.86	1.00	2.000	No
568	37.28	2.31	0.00	2.31	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
569	37.34	2.31	0.00	2.31	0.87	0.409	0.83	0.493	0.86	1.00	2.000	No
570	37.41	2.32	0.00	2.32	0.87	0.408	0.83	0.493	0.86	1.00	2.000	No
571	37.48	2.32	0.00	2.32	0.87	0.408	0.83	0.493	0.85	1.00	2.000	No
572	37.54	2.32	0.00	2.32	0.87	0.408	0.83	0.492	0.85	1.00	2.000	No
573	37.60	2.33	0.00	2.33	0.87	0.408	0.83	0.492	0.85	1.00	2.000	No
574	37.67	2.33	0.00	2.33	0.87	0.407	0.83	0.492	0.85	1.00	2.000	No
575	37.73	2.34	0.00	2.34	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No
576	37.80	2.34	0.00	2.34	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	37.87	2.35	0.00	2.35	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No
578	37.93	2.35	0.00	2.35	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
579	38.00	2.35	0.00	2.35	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
580	38.06	2.36	0.00	2.36	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
581	38.12	2.36	0.00	2.36	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
582	38.19	2.37	0.00	2.37	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
583	38.26	2.37	0.00	2.37	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
584	38.33	2.38	0.00	2.38	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
585	38.39	2.38	0.00	2.38	0.86	0.405	0.83	0.488	0.85	1.00	2.000	No
586	38.46	2.39	0.00	2.39	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
587	38.52	2.39	0.00	2.39	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
588	38.59	2.39	0.00	2.39	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
589	38.66	2.40	0.00	2.40	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
590	38.72	2.40	0.00	2.40	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
591	38.78	2.41	0.00	2.41	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
592	38.85	2.41	0.00	2.41	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
593	38.91	2.42	0.00	2.42	0.86	0.403	0.83	0.486	0.85	1.00	2.000	No
594	38.98	2.42	0.00	2.42	0.86	0.402	0.83	0.486	0.85	1.00	2.000	No
595	39.05	2.43	0.00	2.43	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
596	39.12	2.43	0.00	2.43	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
597	39.18	2.43	0.00	2.43	0.86	0.402	0.83	0.485	0.85	1.00	2.000	No
598	39.24	2.44	0.00	2.44	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
599	39.31	2.44	0.00	2.44	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
600	39.37	2.45	0.00	2.45	0.86	0.401	0.83	0.484	0.85	1.00	2.000	No
601	39.44	2.45	0.00	2.45	0.86	0.401	0.83	0.483	0.85	1.00	2.000	No
602	39.51	2.46	0.00	2.46	0.86	0.400	0.83	0.483	0.84	1.00	2.000	No
603	39.57	2.46	0.00	2.46	0.85	0.400	0.83	0.483	0.84	1.00	2.000	No
604	39.64	2.47	0.00	2.47	0.85	0.400	0.83	0.482	0.84	1.00	2.000	No
605	39.70	2.47	0.00	2.47	0.85	0.399	0.83	0.482	0.84	1.00	2.000	No
606	39.77	2.47	0.00	2.47	0.85	0.399	0.83	0.482	0.84	1.00	2.000	No
607	39.84	2.48	0.00	2.48	0.85	0.399	0.83	0.481	0.84	1.00	2.000	No
608	39.90	2.48	0.00	2.48	0.85	0.399	0.83	0.481	0.84	1.00	2.000	No
609	39.97	2.48	0.00	2.48	0.85	0.398	0.83	0.481	0.84	1.00	2.000	No
610	40.03	2.49	0.00	2.49	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
611	40.09	2.49	0.00	2.49	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
612	40.16	2.49	0.00	2.49	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.07	8.98	2.65	1.18	0.80	14.43	4.19	60.42	4.000	No	Yes	2.00
2	0.14	7.61	2.79	1.70	0.84	12.22	5.72	69.93	4.000	No	Yes	2.00
3	0.20	5.87	3.00	2.80	1.00	9.41	8.81	82.92	4.000	No	Yes	2.00
4	0.27	3.84	3.30	5.10	1.00	6.14	15.26	93.73	4.000	No	Yes	2.00
5	0.34	4.49	3.25	5.22	1.00	7.19	13.99	100.60	4.000	No	Yes	2.00
6	0.40	4.84	3.23	5.29	1.00	7.74	13.46	104.17	4.000	No	Yes	2.00
7	0.46	4.96	3.19	4.69	1.00	7.93	12.54	99.49	4.000	No	Yes	2.00
8	0.54	5.33	3.10	3.65	1.00	8.53	10.65	90.83	4.000	No	Yes	2.00
9	0.60	7.58	2.85	2.19	0.86	12.13	6.52	79.13	4.000	No	Yes	2.00
10	0.67	11.57	2.63	1.65	0.80	18.54	4.02	74.53	4.000	No	Yes	2.00
11	0.73	32.64	2.09	0.82	0.63	52.37	1.40	73.27	4.000	No	No	2.00
12	0.79	92.04	1.58	0.47	0.50	147.80	1.00	147.80	4.000	No	No	2.00
13	0.87	160.77	1.35	0.42	0.50	258.22	1.00	258.22	4.000	No	No	2.00
14	0.93	212.12	1.29	0.46	0.50	340.72	1.00	340.72	4.000	No	No	2.00
15	0.99	223.57	1.33	0.56	0.50	359.11	1.00	359.11	4.000	No	No	2.00
16	1.05	224.38	1.40	0.70	0.50	360.40	1.00	360.40	4.000	No	No	2.00
17	1.12	224.03	1.47	0.84	0.50	359.85	1.00	359.85	4.000	No	No	2.00
18	1.19	220.51	1.53	0.99	0.50	354.18	1.00	354.18	4.000	No	No	2.00
19	1.25	210.47	1.59	1.15	0.50	338.04	1.00	338.04	4.000	No	No	2.00
20	1.33	191.41	1.66	1.32	0.51	307.40	1.00	307.40	4.000	No	No	2.00
21	1.39	172.41	1.73	1.47	0.53	276.87	1.04	289.21	4.000	No	No	2.00
22	1.46	157.06	1.77	1.57	0.54	252.20	1.12	282.56	4.000	No	No	2.00
23	1.52	151.19	1.78	1.57	0.54	242.77	1.13	275.18	4.000	No	No	2.00
24	1.58	147.36	1.79	1.56	0.54	236.60	1.14	269.49	4.000	No	No	2.00
25	1.65	143.21	1.80	1.56	0.55	229.93	1.15	264.18	4.000	No	No	2.00
26	1.71	135.19	1.82	1.59	0.55	217.04	1.17	254.44	4.000	No	No	2.00
27	1.79	125.14	1.84	1.59	0.56	200.89	1.19	239.46	4.000	No	No	2.00
28	1.85	114.38	1.85	1.53	0.56	183.59	1.20	220.76	4.000	No	No	2.00
29	1.92	104.77	1.85	1.42	0.56	168.14	1.20	202.15	4.000	No	No	2.00
30	1.98	96.09	1.85	1.28	0.56	154.20	1.20	184.64	4.000	No	No	2.00
31	2.04	88.42	1.84	1.16	0.56	141.86	1.19	169.05	4.000	No	No	2.00
32	2.11	81.74	1.83	1.05	0.56	131.12	1.19	155.69	4.000	No	No	2.00
33	2.17	75.96	1.83	0.96	0.56	121.84	1.19	144.70	4.000	No	No	2.00
34	2.24	70.72	1.84	0.91	0.56	113.42	1.19	135.42	4.000	No	No	2.00
35	2.30	65.89	1.85	0.87	0.56	105.65	1.20	127.05	4.000	No	No	2.00
36	2.37	61.06	1.87	0.83	0.57	97.87	1.21	118.91	4.000	No	No	2.00
37	2.43	56.22	1.89	0.81	0.58	90.10	1.23	110.86	4.000	No	No	2.00
38	2.50	51.23	1.92	0.79	0.58	82.07	1.25	102.44	4.000	No	No	2.00
39	2.58	46.67	1.95	0.78	0.59	74.74	1.27	94.76	4.000	No	No	2.00
40	2.64	42.71	1.98	0.78	0.60	68.38	1.29	88.10	4.000	No	No	2.00
41	2.71	39.66	2.00	0.78	0.61	63.46	1.31	83.11	4.000	No	No	2.00
42	2.77	37.13	2.03	0.77	0.62	59.39	1.33	79.05	4.000	No	No	2.00
43	2.83	35.01	2.04	0.76	0.62	55.98	1.35	75.42	4.000	No	No	2.00
44	2.90	33.26	2.05	0.71	0.62	53.16	1.35	71.93	4.000	No	No	2.00
45	2.95	31.42	2.06	0.68	0.63	50.20	1.37	68.55	4.000	No	No	2.00
46	3.04	29.80	2.08	0.67	0.63	47.59	1.39	65.99	4.000	No	No	2.00
47	3.11	28.24	2.11	0.71	0.64	45.08	1.43	64.44	4.000	No	No	2.00
48	3.17	27.11	2.13	0.73	0.65	43.27	1.46	63.39	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.24	25.99	2.15	0.75	0.65	41.46	1.50	62.39	4.000	No	No	2.00
50	3.28	25.33	2.15	0.72	0.65	40.40	1.51	60.93	4.000	No	No	2.00
51	3.38	25.11	2.14	0.68	0.65	40.04	1.49	59.64	4.000	No	No	2.00
52	3.44	25.14	2.12	0.61	0.64	40.08	1.45	58.24	4.000	No	No	2.00
53	3.51	25.30	2.11	0.57	0.64	40.33	1.43	57.58	4.000	No	No	2.00
54	3.54	25.18	2.09	0.53	0.64	40.13	1.41	56.53	4.000	No	No	2.00
55	3.64	25.16	2.08	0.51	0.63	40.09	1.40	55.96	4.000	No	No	2.00
56	3.70	24.96	2.08	0.49	0.63	39.76	1.00	39.76	4.000	No	No	2.00
57	3.77	24.93	2.08	0.49	0.63	39.70	1.00	39.70	4.000	No	No	2.00
58	3.81	24.91	2.08	0.50	0.63	39.68	1.40	55.46	4.000	No	No	2.00
59	3.90	25.21	2.08	0.50	0.63	40.15	1.39	55.95	4.000	No	No	2.00
60	3.97	25.61	2.08	0.51	0.63	40.79	1.39	56.58	4.000	No	No	2.00
61	4.00	26.27	2.07	0.50	0.63	41.83	1.37	57.44	4.000	No	No	2.00
62	4.07	26.80	2.06	0.51	0.63	42.68	1.37	58.31	4.000	No	No	2.00
63	4.14	27.64	2.05	0.52	0.62	44.03	1.36	59.85	4.000	No	No	2.00
64	4.21	28.45	2.05	0.55	0.62	45.33	1.36	61.55	4.000	No	No	2.00
65	4.27	29.20	2.05	0.58	0.62	46.53	1.36	63.15	4.000	No	No	2.00
66	4.34	29.55	2.05	0.60	0.62	47.08	1.36	64.01	4.000	No	No	2.00
67	4.40	29.64	2.06	0.61	0.63	47.22	1.36	64.40	4.000	No	No	2.00
68	4.47	29.61	2.06	0.62	0.63	47.17	1.37	64.58	4.000	No	No	2.00
69	4.54	29.64	2.07	0.63	0.63	47.21	1.37	64.85	4.000	No	No	2.00
70	4.60	29.79	2.07	0.65	0.63	47.45	1.38	65.32	4.000	No	No	2.00
71	4.67	30.14	2.07	0.66	0.63	48.00	1.38	66.00	4.000	No	No	2.00
72	4.73	30.61	2.06	0.64	0.63	48.75	1.36	66.42	4.000	No	No	2.00
73	4.80	31.26	2.03	0.59	0.62	49.80	1.34	66.56	4.000	No	No	2.00
74	4.87	31.98	2.01	0.55	0.61	50.95	1.31	66.99	4.000	No	No	2.00
75	4.93	32.85	1.99	0.54	0.61	52.34	1.30	68.09	4.000	No	No	2.00
76	5.00	33.88	1.99	0.56	0.60	53.99	1.30	70.06	4.000	No	No	2.00
77	5.06	35.26	1.98	0.58	0.60	56.19	1.29	72.67	4.000	No	No	2.00
78	5.13	37.00	1.98	0.61	0.60	58.99	1.29	75.98	4.000	No	No	2.00
79	5.19	39.69	1.96	0.64	0.60	63.30	1.28	80.73	4.000	No	No	2.00
80	5.25	42.90	1.94	0.66	0.59	68.46	1.26	86.34	4.000	No	No	2.00
81	5.32	46.39	1.91	0.68	0.58	74.06	1.25	92.33	4.000	No	No	2.00
82	5.38	49.45	1.89	0.69	0.58	78.97	1.23	97.39	4.000	No	No	2.00
83	5.45	52.76	1.87	0.69	0.57	84.27	1.22	102.59	4.000	No	No	2.00
84	5.51	56.69	1.85	0.70	0.56	90.58	1.20	108.82	4.000	No	No	2.00
85	5.58	61.27	1.83	0.73	0.56	97.94	1.19	116.21	4.000	No	No	2.00
86	5.65	65.55	1.83	0.78	0.56	104.80	1.18	123.64	4.000	No	No	2.00
87	5.71	68.32	1.84	0.85	0.56	109.26	1.19	129.85	4.000	No	No	2.00
88	5.78	69.04	1.86	0.94	0.57	110.40	1.21	133.53	4.000	No	No	2.00
89	5.84	63.67	1.93	1.10	0.59	101.77	1.26	127.97	4.000	No	No	2.00
90	5.91	56.97	2.00	1.24	0.61	90.99	1.31	119.05	4.000	No	No	2.00
91	5.97	50.66	2.06	1.31	0.63	80.86	1.36	110.20	4.000	No	No	2.00
92	6.04	48.92	2.05	1.24	0.62	78.05	1.36	105.90	4.000	No	No	2.00
93	6.11	48.79	2.03	1.12	0.62	77.84	1.33	103.62	4.000	No	No	2.00
94	6.17	50.17	1.99	1.03	0.61	80.04	1.30	104.18	4.000	No	No	2.00
95	6.24	53.91	1.95	0.96	0.59	86.05	1.27	109.23	4.000	No	No	2.00
96	6.30	59.81	1.90	0.93	0.58	95.52	1.24	118.45	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.37	68.04	1.86	0.93	0.57	108.75	1.21	131.68	4.000	No	No	2.00
98	6.43	79.28	1.81	0.94	0.55	126.79	1.17	148.14	4.000	No	No	2.00
99	6.50	94.25	1.75	0.92	0.53	150.84	1.09	163.88	4.000	No	No	2.00
100	6.57	111.47	1.68	0.88	0.51	178.51	1.00	178.51	4.000	No	No	2.00
101	6.63	127.88	1.64	0.85	0.50	202.94	1.00	202.94	4.000	No	No	2.00
102	6.70	140.83	1.61	0.86	0.50	222.27	1.00	222.27	4.000	No	No	2.00
103	6.76	151.28	1.60	0.88	0.50	237.51	1.00	237.51	4.000	No	No	2.00
104	6.83	161.11	1.59	0.90	0.50	251.57	1.00	251.57	4.000	No	No	2.00
105	6.90	171.06	1.57	0.90	0.50	265.69	1.00	265.69	4.000	No	No	2.00
106	6.97	179.55	1.56	0.90	0.50	277.40	1.00	277.40	4.000	No	No	2.00
107	7.03	184.48	1.56	0.92	0.50	283.50	1.00	283.50	4.000	No	No	2.00
108	7.10	190.19	1.56	0.93	0.50	290.83	1.00	290.83	4.000	No	No	2.00
109	7.17	195.68	1.56	0.95	0.50	297.42	1.00	297.42	4.000	No	No	2.00
110	7.24	202.23	1.55	0.96	0.50	305.79	1.00	305.79	4.000	No	No	2.00
111	7.28	206.03	1.56	0.99	0.50	310.49	1.00	310.49	4.000	No	No	2.00
112	7.36	208.62	1.57	1.02	0.50	312.67	1.00	312.67	4.000	No	No	2.00
113	7.42	210.18	1.58	1.06	0.50	313.39	1.00	313.39	4.000	No	No	2.00
114	7.49	210.24	1.59	1.09	0.50	311.86	1.00	311.86	4.000	No	No	2.00
115	7.56	208.65	1.60	1.12	0.50	307.84	1.00	307.84	4.000	No	No	2.00
116	7.63	206.69	1.61	1.12	0.50	303.37	1.00	303.37	4.000	No	No	2.00
117	7.70	204.32	1.61	1.13	0.50	298.38	1.00	298.38	4.000	No	No	2.00
118	7.74	203.22	1.57	0.98	0.50	295.80	1.00	295.80	4.000	No	No	2.00
119	7.81	203.04	1.53	0.86	0.50	294.09	1.00	294.09	4.000	No	No	2.00
120	7.89	204.47	1.49	0.76	0.50	294.58	1.00	294.58	4.000	No	No	2.00
121	7.95	206.10	1.50	0.80	0.50	295.57	1.00	295.57	4.000	No	No	2.00
122	8.01	207.16	1.52	0.83	0.50	295.97	1.00	295.97	4.000	No	No	2.00
123	8.10	201.32	1.54	0.88	0.50	285.81	1.00	285.81	4.000	No	No	2.00
124	8.15	197.86	1.56	0.90	0.50	279.96	1.00	279.96	4.000	No	No	2.00
125	8.22	193.93	1.57	0.91	0.50	273.05	1.00	273.05	4.000	No	No	2.00
126	8.28	195.24	1.56	0.90	0.50	273.87	1.00	273.87	4.000	No	No	2.00
127	8.35	192.93	1.57	0.92	0.50	269.26	1.00	269.26	4.000	No	No	2.00
128	8.41	190.47	1.58	0.93	0.50	264.71	1.00	264.71	4.000	No	No	2.00
129	8.48	188.31	1.58	0.92	0.50	260.60	1.00	260.60	4.000	No	No	2.00
130	8.55	186.94	1.58	0.91	0.50	257.58	1.00	257.58	4.000	No	No	2.00
131	8.61	186.35	1.58	0.90	0.50	255.64	1.00	255.64	4.000	No	No	2.00
132	8.68	186.56	1.58	0.90	0.50	254.80	1.00	254.80	4.000	No	No	2.00
133	8.74	186.78	1.59	0.90	0.50	254.19	1.00	254.19	4.000	No	No	2.00
134	8.81	186.44	1.59	0.92	0.50	252.67	1.00	252.67	4.000	No	No	2.00
135	8.87	185.47	1.60	0.94	0.50	250.36	1.00	250.36	4.000	No	No	2.00
136	8.94	183.88	1.61	0.96	0.50	247.20	1.00	247.20	4.000	No	No	2.00
137	9.00	182.11	1.62	0.98	0.50	243.82	1.00	243.82	4.000	No	No	2.00
138	9.07	180.14	1.63	0.99	0.50	240.18	1.00	240.18	4.000	No	No	2.00
139	9.13	177.95	1.64	1.00	0.50	236.38	1.00	236.38	4.000	No	No	2.00
140	9.20	175.46	1.65	1.01	0.50	232.59	1.00	232.59	4.000	No	No	2.00
141	9.26	172.53	1.66	1.02	0.51	228.25	1.00	228.25	4.000	No	No	2.00
142	9.33	169.53	1.66	1.03	0.51	223.74	1.00	223.74	4.000	No	No	2.00
143	9.39	166.57	1.67	1.03	0.51	219.23	1.00	219.23	4.000	No	No	2.00
144	9.45	163.85	1.68	1.04	0.51	215.16	1.00	215.16	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.52	161.48	1.67	0.99	0.51	210.92	1.00	210.92	4.000	No	No	2.00
146	9.59	160.72	1.63	0.86	0.50	207.81	1.00	207.81	4.000	No	No	2.00
147	9.66	160.41	1.59	0.74	0.50	206.65	1.00	206.65	4.000	No	No	2.00
148	9.72	161.09	1.57	0.69	0.50	206.77	1.00	206.77	4.000	No	No	2.00
149	9.79	161.54	1.59	0.74	0.50	206.63	1.00	206.63	4.000	No	No	2.00
150	9.85	161.76	1.61	0.78	0.50	206.16	1.00	206.16	4.000	No	No	2.00
151	9.92	162.06	1.62	0.83	0.50	205.83	1.00	205.83	4.000	No	No	2.00
152	9.99	161.84	1.64	0.87	0.50	204.76	1.00	204.76	4.000	No	No	2.00
153	10.04	163.12	1.65	0.90	0.50	206.13	1.00	206.13	4.000	No	No	2.00
154	10.11	164.67	1.66	0.95	0.51	207.83	1.00	207.83	4.000	No	No	2.00
155	10.18	166.85	1.67	0.99	0.51	210.16	1.00	210.16	4.000	No	No	2.00
156	10.24	168.13	1.68	1.03	0.51	211.39	1.00	211.39	4.000	No	No	2.00
157	10.30	168.19	1.69	1.06	0.52	211.08	1.00	211.08	4.000	No	No	2.00
158	10.40	167.60	1.70	1.08	0.52	209.53	1.00	209.53	4.000	No	No	2.00
159	10.43	166.54	1.70	1.08	0.52	207.89	1.00	207.89	4.000	No	No	2.00
160	10.53	165.35	1.70	1.07	0.52	205.39	1.00	205.39	4.000	No	No	2.00
161	10.59	163.76	1.70	1.06	0.52	202.76	1.00	202.76	4.000	No	No	2.00
162	10.65	162.11	1.71	1.05	0.52	200.11	1.00	200.11	4.000	No	No	2.00
163	10.72	160.42	1.71	1.05	0.52	197.41	1.01	198.97	4.000	No	No	2.00
164	10.79	158.77	1.71	1.05	0.52	194.77	1.01	197.51	4.000	No	No	2.00
165	10.86	157.46	1.71	1.04	0.52	192.54	1.02	196.04	4.000	No	No	2.00
166	10.89	156.94	1.71	1.03	0.52	191.47	1.01	193.68	4.000	No	No	2.00
167	10.96	156.72	1.71	1.01	0.52	190.42	1.00	190.87	4.000	No	No	2.00
168	11.03	156.88	1.70	0.99	0.52	189.81	1.00	189.81	4.000	No	No	2.00
169	11.09	157.33	1.69	0.97	0.52	189.58	1.00	189.58	4.000	No	No	2.00
170	11.15	159.30	1.68	0.94	0.51	191.06	1.00	191.06	4.000	No	No	2.00
171	11.25	161.86	1.67	0.92	0.51	192.95	1.00	192.95	4.000	No	No	2.00
172	11.31	164.57	1.67	0.90	0.51	195.40	1.00	195.40	4.000	No	No	2.00
173	11.38	166.48	1.66	0.90	0.51	196.97	1.00	196.97	4.000	No	No	2.00
174	11.44	168.04	1.66	0.91	0.51	198.24	1.00	198.24	4.000	No	No	2.00
175	11.51	169.13	1.66	0.92	0.51	198.97	1.00	198.97	4.000	No	No	2.00
176	11.57	170.06	1.67	0.93	0.51	199.49	1.00	199.49	4.000	No	No	2.00
177	11.64	170.81	1.67	0.93	0.51	199.79	1.00	199.79	4.000	No	No	2.00
178	11.71	171.53	1.67	0.94	0.51	200.07	1.00	200.07	4.000	No	No	2.00
179	11.77	171.90	1.67	0.94	0.51	199.90	1.00	199.90	4.000	No	No	2.00
180	11.84	171.84	1.67	0.94	0.51	199.24	1.00	199.24	4.000	No	No	2.00
181	11.90	171.37	1.67	0.93	0.51	198.10	1.00	198.10	4.000	No	No	2.00
182	11.97	171.22	1.67	0.93	0.51	197.31	1.00	197.31	4.000	No	No	2.00
183	12.03	171.71	1.67	0.91	0.51	197.21	1.00	197.21	4.000	No	No	2.00
184	12.09	173.06	1.66	0.89	0.51	197.99	1.00	197.99	4.000	No	No	2.00
185	12.16	175.27	1.65	0.87	0.50	199.71	1.00	199.71	4.000	No	No	2.00
186	12.23	178.48	1.61	0.77	0.50	202.63	1.00	202.63	4.000	No	No	2.00
187	12.30	182.23	1.54	0.64	0.50	206.28	1.00	206.28	4.000	No	No	2.00
188	12.36	185.85	1.48	0.52	0.50	209.80	1.00	209.80	4.000	No	No	2.00
189	12.43	188.97	1.46	0.48	0.50	212.76	1.00	212.76	4.000	No	No	2.00
190	12.50	191.31	1.45	0.49	0.50	214.80	1.00	214.80	4.000	No	No	2.00
191	12.56	192.37	1.45	0.48	0.50	215.39	1.00	215.39	4.000	No	No	2.00
192	12.61	192.46	1.45	0.47	0.50	215.10	1.00	215.10	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.68	192.02	1.44	0.46	0.50	214.00	1.00	214.00	4.000	No	No	2.00
194	12.74	192.80	1.43	0.44	0.50	214.29	1.00	214.29	4.000	No	No	2.00
195	12.81	195.58	1.42	0.43	0.50	216.84	1.00	216.84	4.000	No	No	2.00
196	12.87	200.45	1.42	0.44	0.50	221.69	1.00	221.69	4.000	No	No	2.00
197	12.94	205.81	1.42	0.45	0.50	227.05	1.00	227.05	4.000	No	No	2.00
198	13.00	210.53	1.42	0.47	0.50	231.70	1.00	231.70	4.000	No	No	2.00
199	13.06	216.02	1.42	0.49	0.50	237.15	1.00	237.15	4.000	No	No	2.00
200	13.13	222.26	1.42	0.50	0.50	243.37	1.00	243.37	4.000	No	No	2.00
201	13.20	229.15	1.42	0.51	0.50	250.27	1.00	250.27	4.000	No	No	2.00
202	13.27	236.92	1.41	0.51	0.50	258.04	1.00	258.04	4.000	No	No	2.00
203	13.34	243.63	1.40	0.51	0.50	264.66	1.00	264.66	4.000	No	No	2.00
204	13.39	251.30	1.39	0.51	0.50	272.44	1.00	272.44	4.000	No	No	2.00
205	13.47	256.95	1.38	0.51	0.50	277.72	1.00	277.72	4.000	No	No	2.00
206	13.53	262.16	1.38	0.51	0.50	282.69	1.00	282.69	4.000	No	No	2.00
207	13.58	263.53	1.38	0.51	0.50	283.58	1.00	283.58	4.000	No	No	2.00
208	13.65	261.69	1.39	0.52	0.50	280.84	1.00	280.84	4.000	No	No	2.00
209	13.73	257.95	1.40	0.54	0.50	275.99	1.00	275.99	4.000	No	No	2.00
210	13.80	253.61	1.41	0.54	0.50	270.60	1.00	270.60	4.000	No	No	2.00
211	13.87	250.05	1.41	0.53	0.50	266.09	1.00	266.09	4.000	No	No	2.00
212	13.91	246.31	1.43	0.55	0.50	261.66	1.00	261.66	4.000	No	No	2.00
213	13.98	242.22	1.48	0.64	0.50	256.57	1.00	256.57	4.000	No	No	2.00
214	14.05	235.45	1.54	0.76	0.50	248.73	1.00	248.73	4.000	No	No	2.00
215	14.12	228.37	1.59	0.86	0.50	240.60	1.00	240.60	4.000	No	No	2.00
216	14.19	223.23	1.59	0.86	0.50	234.51	1.00	234.51	4.000	No	No	2.00
217	14.26	224.29	1.59	0.85	0.50	235.04	1.00	235.04	4.000	No	No	2.00
218	14.32	229.65	1.60	0.88	0.50	240.12	1.00	240.12	4.000	No	No	2.00
219	14.38	239.88	1.59	0.90	0.50	250.27	1.00	250.27	4.000	No	No	2.00
220	14.45	238.57	1.59	0.90	0.50	248.27	1.00	248.27	4.000	No	No	2.00
221	14.50	224.03	1.61	0.90	0.50	232.63	1.00	232.63	4.000	No	No	2.00
222	14.57	204.16	1.67	0.98	0.51	211.74	1.00	211.74	4.000	No	No	2.00
223	14.64	190.93	1.73	1.11	0.53	198.09	1.04	206.63	4.000	No	No	2.00
224	14.70	187.84	1.75	1.17	0.53	194.63	1.08	210.23	4.000	No	No	2.00
225	14.77	185.75	1.74	1.13	0.53	191.89	1.07	205.03	4.000	No	No	2.00
226	14.83	187.09	1.70	1.00	0.52	192.39	1.00	192.39	4.000	No	No	2.00
227	14.91	184.16	1.68	0.90	0.51	188.59	1.00	188.59	4.000	No	No	2.00
228	14.97	175.02	1.69	0.89	0.51	178.87	1.00	178.87	4.000	No	No	2.00
229	15.03	164.48	1.73	0.95	0.53	168.01	1.04	175.19	4.000	No	No	2.00
230	15.11	158.70	1.76	1.00	0.53	161.83	1.09	176.85	4.000	No	No	2.00
231	15.17	157.61	1.77	1.03	0.54	160.39	1.11	177.69	4.000	No	No	2.00
232	15.23	152.06	1.79	1.08	0.55	154.54	1.15	177.02	4.000	No	No	2.00
233	15.29	137.99	1.86	1.24	0.57	140.24	1.21	170.00	4.000	No	No	2.00
234	15.36	123.42	1.95	1.47	0.59	125.42	1.27	159.35	4.000	No	No	2.00
235	15.44	113.22	2.02	1.67	0.61	114.92	1.32	151.86	4.000	No	No	2.00
236	15.49	110.91	2.02	1.63	0.61	112.29	1.32	148.37	4.000	No	No	2.00
237	15.55	109.07	2.00	1.52	0.61	110.08	1.31	143.99	4.000	No	No	2.00
238	15.62	106.94	1.98	1.38	0.60	107.55	1.29	138.76	4.000	No	No	2.00
239	15.68	105.20	1.97	1.29	0.60	105.45	1.28	135.05	4.000	No	No	2.00
240	15.75	104.32	1.95	1.19	0.59	104.24	1.27	132.11	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.84	103.61	1.93	1.12	0.59	103.09	1.26	129.64	4.000	No	No	2.00
242	15.91	102.42	1.92	1.07	0.59	101.61	1.25	127.32	4.000	No	No	2.00
243	15.98	100.39	1.93	1.07	0.59	99.35	1.26	124.90	4.000	No	No	2.00
244	16.04	98.48	1.94	1.08	0.59	97.22	1.26	122.81	4.000	No	No	2.00
245	16.08	96.74	1.95	1.09	0.59	95.38	1.27	121.20	4.000	No	No	2.00
246	16.15	96.02	1.96	1.12	0.60	94.45	1.28	120.62	4.000	No	No	2.00
247	16.21	96.93	1.96	1.13	0.60	95.12	1.28	121.58	4.000	No	No	2.00
248	16.28	100.55	1.95	1.12	0.59	98.43	1.27	124.82	4.000	No	No	2.00
249	16.34	106.44	1.92	1.07	0.58	103.94	1.25	129.69	4.000	No	No	2.00
250	16.41	113.55	1.88	1.01	0.57	110.60	1.22	135.33	4.000	No	No	2.00
251	16.50	120.23	1.85	0.97	0.56	116.69	1.20	140.08	4.000	No	No	2.00
252	16.57	125.66	1.83	0.93	0.56	121.67	1.18	143.50	4.000	No	No	2.00
253	16.60	131.28	1.79	0.86	0.55	126.93	1.14	144.88	4.000	No	No	2.00
254	16.67	137.18	1.72	0.70	0.52	132.22	1.02	135.28	4.000	No	No	2.00
255	16.73	144.88	1.64	0.56	0.50	139.26	1.00	139.26	4.000	No	No	2.00
256	16.83	153.02	1.58	0.47	0.50	146.73	1.00	146.73	4.000	No	No	2.00
257	16.89	160.89	1.57	0.49	0.50	154.01	1.00	154.01	4.000	No	No	2.00
258	16.93	165.16	1.59	0.54	0.50	157.96	1.00	157.96	4.000	No	No	2.00
259	17.01	169.38	1.61	0.59	0.50	161.61	1.00	161.61	4.000	No	No	2.00
260	17.07	174.83	1.62	0.65	0.50	166.55	1.00	166.55	4.000	No	No	2.00
261	17.13	183.51	1.62	0.70	0.50	174.55	1.00	174.55	4.000	No	No	2.00
262	17.19	191.40	1.63	0.75	0.50	181.74	1.00	181.74	4.000	No	No	2.00
263	17.26	198.05	1.66	0.84	0.50	187.70	1.00	187.70	4.000	No	No	2.00
264	17.33	203.88	1.68	0.93	0.51	192.85	1.00	192.85	4.000	No	No	2.00
265	17.39	209.93	1.69	0.99	0.52	198.23	1.00	198.23	4.000	No	No	2.00
266	17.45	218.51	1.69	1.02	0.51	205.97	1.00	205.97	4.000	No	No	2.00
267	17.53	225.28	1.69	1.05	0.51	211.84	1.00	211.84	4.000	No	No	2.00
268	17.60	229.59	1.69	1.07	0.51	215.44	1.00	215.44	4.000	No	No	2.00
269	17.66	229.74	1.70	1.10	0.52	215.18	1.00	215.18	4.000	No	No	2.00
270	17.73	228.09	1.70	1.10	0.52	213.18	1.00	213.18	4.000	No	No	2.00
271	17.79	224.06	1.70	1.09	0.52	208.95	1.00	208.95	4.000	No	No	2.00
272	17.86	217.23	1.71	1.07	0.52	202.11	1.00	202.55	4.000	No	No	2.00
273	17.93	209.96	1.71	1.05	0.52	194.89	1.02	197.87	4.000	No	No	2.00
274	18.00	203.35	1.72	1.04	0.52	188.31	1.03	193.74	4.000	No	No	2.00
275	18.06	197.89	1.72	1.02	0.53	182.84	1.04	189.60	4.000	No	No	2.00
276	18.13	193.80	1.73	1.01	0.53	178.66	1.04	186.08	4.000	No	No	2.00
277	18.18	189.90	1.73	1.00	0.53	174.79	1.05	183.47	4.000	No	No	2.00
278	18.25	185.94	1.74	1.00	0.53	170.71	1.06	181.30	4.000	No	No	2.00
279	18.33	181.66	1.75	1.00	0.53	166.35	1.08	179.10	4.000	No	No	2.00
280	18.38	177.08	1.75	1.00	0.53	161.84	1.09	176.55	4.000	No	No	2.00
281	18.44	171.93	1.76	1.00	0.54	156.79	1.11	173.29	4.000	No	No	2.00
282	18.53	166.22	1.78	1.00	0.54	151.10	1.12	169.74	4.000	No	No	2.00
283	18.59	160.17	1.79	1.02	0.55	145.24	1.15	166.30	4.000	No	No	2.00
284	18.66	153.99	1.82	1.05	0.55	139.25	1.17	162.83	4.000	No	No	2.00
285	18.73	147.35	1.84	1.08	0.56	132.85	1.19	158.50	4.000	No	No	2.00
286	18.79	140.79	1.87	1.12	0.57	126.56	1.21	153.58	4.000	No	No	2.00
287	18.86	134.93	1.89	1.16	0.58	120.91	1.23	148.84	4.000	No	No	2.00
288	18.92	130.15	1.91	1.20	0.58	116.31	1.25	144.85	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.99	126.78	1.93	1.23	0.59	112.97	1.26	141.96	4.000	No	No	2.00
290	19.06	124.69	1.94	1.27	0.59	110.81	1.27	140.34	4.000	No	No	2.00
291	19.13	123.54	1.96	1.31	0.60	109.48	1.28	139.75	4.000	No	No	2.00
292	19.19	122.86	1.97	1.37	0.60	108.59	1.29	139.69	4.000	No	No	2.00
293	19.23	121.92	1.99	1.42	0.60	107.59	1.30	139.64	4.000	No	No	2.00
294	19.32	120.23	2.01	1.48	0.61	105.70	1.31	138.63	4.000	No	No	2.00
295	19.39	118.14	2.02	1.53	0.61	103.55	1.33	137.38	4.000	No	No	2.00
296	19.42	114.96	2.04	1.56	0.62	100.57	1.34	134.94	4.000	No	No	2.00
297	19.52	111.81	2.05	1.57	0.62	97.43	1.35	131.88	4.000	No	No	2.00
298	19.59	108.47	2.06	1.55	0.62	94.26	1.36	128.37	4.000	No	No	2.00
299	19.65	105.91	2.06	1.53	0.63	91.80	1.37	125.39	4.000	No	No	2.00
300	19.71	103.32	2.02	1.29	0.61	89.47	1.32	118.50	4.000	No	No	2.00
301	19.78	100.52	1.95	0.99	0.59	87.06	1.27	110.75	4.000	No	No	2.00
302	19.85	97.83	1.87	0.69	0.57	84.80	1.22	103.24	4.000	No	No	2.00
303	19.92	95.87	1.86	0.64	0.57	82.95	1.21	100.34	4.000	No	No	2.00
304	19.95	94.77	1.89	0.71	0.58	81.82	1.23	100.65	4.000	No	No	2.00
305	20.02	93.59	1.92	0.78	0.58	80.54	1.25	100.58	4.000	No	No	2.00
306	20.08	90.50	1.96	0.87	0.60	77.55	1.28	99.09	4.000	No	No	2.00
307	20.16	86.44	2.01	0.99	0.61	73.70	1.32	97.04	4.000	No	No	2.00
308	20.23	81.79	2.07	1.14	0.63	69.35	1.38	95.57	4.000	No	No	2.00
309	20.29	77.71	2.13	1.32	0.65	65.52	1.47	96.04	4.000	No	No	2.00
310	20.36	73.34	2.19	1.54	0.67	61.46	1.60	98.15	4.000	No	No	2.00
311	20.42	69.38	2.25	1.76	0.68	57.80	1.76	101.51	4.000	No	No	2.00
312	20.49	66.23	2.30	1.95	0.70	54.88	1.91	104.98	4.000	No	No	2.00
313	20.55	65.23	2.32	2.05	0.70	53.86	1.99	107.12	4.000	No	No	2.00
314	20.62	64.88	2.33	2.09	0.71	53.41	2.02	108.13	4.000	No	No	2.00
315	20.68	65.63	2.32	2.07	0.70	53.93	2.00	107.79	4.000	No	No	2.00
316	20.75	66.12	2.31	2.03	0.70	54.25	1.97	106.80	4.000	No	No	2.00
317	20.82	67.90	2.29	1.92	0.69	55.68	1.88	104.63	4.000	No	No	2.00
318	20.88	70.31	2.26	1.78	0.68	57.66	1.77	101.99	4.000	No	No	2.00
319	20.95	73.34	2.22	1.63	0.67	60.19	1.65	99.50	4.000	No	No	2.00
320	21.01	76.83	2.17	1.48	0.66	63.12	1.55	97.89	4.000	No	No	2.00
321	21.08	81.08	2.13	1.36	0.65	66.68	1.47	97.99	4.000	No	No	2.00
322	21.14	86.13	2.10	1.29	0.64	70.90	1.41	100.22	4.000	No	No	2.00
323	21.21	92.03	2.07	1.26	0.63	75.80	1.38	104.26	4.000	No	No	2.00
324	21.28	98.58	2.04	1.26	0.62	81.22	1.35	109.50	4.000	No	No	2.00
325	21.34	106.13	2.02	1.26	0.61	87.48	1.32	115.85	4.000	No	No	2.00
326	21.41	114.43	2.00	1.27	0.61	94.35	1.30	123.07	4.000	No	No	2.00
327	21.48	123.26	1.98	1.28	0.60	101.65	1.29	130.92	4.000	No	No	2.00
328	21.54	131.84	1.96	1.30	0.60	108.72	1.28	138.70	4.000	No	No	2.00
329	21.61	139.29	1.95	1.33	0.59	114.78	1.27	145.65	4.000	No	No	2.00
330	21.67	144.50	1.95	1.37	0.59	118.89	1.27	150.73	4.000	No	No	2.00
331	21.74	146.72	1.95	1.42	0.59	120.45	1.27	153.25	4.000	No	No	2.00
332	21.80	145.47	1.97	1.47	0.60	119.09	1.28	152.68	4.000	No	No	2.00
333	21.87	141.04	1.99	1.52	0.60	115.04	1.30	149.29	4.000	No	No	2.00
334	21.93	133.61	2.02	1.58	0.61	108.49	1.32	143.45	4.000	No	No	2.00
335	22.00	124.13	2.05	1.64	0.62	100.27	1.36	136.15	4.000	No	No	2.00
336	22.07	113.71	2.09	1.69	0.64	91.32	1.41	128.48	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.13	103.36	2.13	1.74	0.65	82.50	1.47	121.31	4.000	No	No	2.00
338	22.20	93.84	2.17	1.79	0.66	74.43	1.55	115.39	4.000	No	No	2.00
339	22.26	85.32	2.21	1.84	0.67	67.23	1.65	111.00	4.000	No	No	2.00
340	22.33	77.90	2.26	1.93	0.69	60.95	1.78	108.72	4.000	No	No	2.00
341	22.39	71.19	2.31	2.09	0.70	55.27	1.98	109.42	4.000	No	No	2.00
342	22.46	65.23	2.38	2.33	0.72	50.20	2.26	113.44	4.000	No	No	2.00
343	22.52	60.05	2.44	2.63	0.74	45.80	2.61	119.32	4.000	No	No	2.00
344	22.59	56.34	2.49	2.86	0.75	42.65	2.90	123.79	4.000	No	No	2.00
345	22.65	54.53	2.48	2.71	0.75	41.16	2.87	118.33	4.000	No	No	2.00
346	22.72	54.22	2.42	2.18	0.74	41.03	2.50	102.71	4.000	No	No	2.00
347	22.79	55.84	2.33	1.61	0.71	42.52	2.05	86.96	4.000	No	No	2.00
348	22.85	58.55	2.26	1.34	0.69	44.79	1.79	80.39	4.000	No	No	2.00
349	22.91	61.49	2.25	1.38	0.68	47.03	1.76	82.99	4.000	No	No	2.00
350	22.98	61.86	2.28	1.51	0.69	47.14	1.84	86.84	4.000	No	No	2.00
351	23.04	62.92	2.30	1.67	0.70	47.79	1.92	91.80	4.000	No	No	2.00
352	23.11	64.82	2.31	1.80	0.70	49.12	1.97	96.58	4.000	No	No	2.00
353	23.17	68.75	2.30	1.87	0.70	52.09	1.93	100.72	4.000	No	No	2.00
354	23.24	71.50	2.30	1.97	0.70	54.09	1.94	104.99	4.000	No	No	2.00
355	23.30	73.78	2.31	2.11	0.70	55.69	1.98	110.23	4.000	No	No	2.00
356	23.37	75.24	2.33	2.27	0.71	56.61	2.05	115.96	4.000	No	No	2.00
357	23.43	74.33	2.36	2.46	0.72	55.66	2.18	121.18	4.000	No	No	2.00
358	23.50	70.59	2.40	2.68	0.73	52.48	2.39	125.60	4.000	No	No	2.00
359	23.57	65.14	2.46	2.93	0.75	47.99	2.71	130.07	4.000	No	No	2.00
360	23.64	61.18	2.50	3.14	0.76	44.73	2.99	133.66	4.000	No	No	2.00
361	23.70	60.33	2.52	3.22	0.76	43.95	3.08	135.52	4.000	No	No	2.00
362	23.77	63.23	2.49	3.12	0.76	46.11	2.91	134.33	4.000	No	No	2.00
363	23.83	69.27	2.44	2.90	0.74	50.77	2.59	131.29	4.000	No	No	2.00
364	23.90	77.82	2.37	2.63	0.72	57.41	2.22	127.53	4.000	No	No	2.00
365	23.97	86.62	2.30	2.38	0.70	64.29	1.94	124.78	4.000	No	No	2.00
366	24.03	92.71	2.26	2.21	0.69	69.04	1.78	123.10	4.000	No	No	2.00
367	24.10	94.74	2.24	2.11	0.68	70.58	1.72	121.37	4.000	No	No	2.00
368	24.16	93.71	2.24	2.07	0.68	69.68	1.71	119.42	4.000	No	No	2.00
369	24.23	91.53	2.25	2.07	0.68	67.84	1.74	118.09	4.000	No	No	2.00
370	24.30	89.13	2.26	2.11	0.69	65.80	1.79	117.58	4.000	No	No	2.00
371	24.36	86.44	2.28	2.19	0.69	63.51	1.86	118.42	4.000	No	No	2.00
372	24.43	82.76	2.32	2.36	0.70	60.41	2.01	121.28	4.000	No	No	2.00
373	24.49	76.90	2.38	2.63	0.72	55.60	2.27	126.43	4.000	No	No	2.00
374	24.56	68.48	2.46	3.04	0.75	48.86	2.74	134.01	4.000	No	No	2.00
375	24.63	58.90	2.56	3.53	0.78	41.36	3.43	141.99	4.000	No	No	2.00
376	24.69	50.13	2.66	4.04	0.81	34.61	4.28	148.10	4.000	No	Yes	2.00
377	24.76	43.51	2.74	4.44	0.83	29.58	5.09	150.68	4.000	No	Yes	2.00
378	24.82	40.18	2.78	4.61	0.84	27.06	5.55	150.20	4.000	No	Yes	2.00
379	24.89	39.74	2.78	4.62	0.84	26.68	5.61	149.70	4.000	No	Yes	2.00
380	24.95	41.71	2.76	4.48	0.83	28.06	5.31	149.14	4.000	No	Yes	2.00
381	25.02	44.52	2.72	4.22	0.82	30.09	4.87	146.49	4.000	No	Yes	2.00
382	25.09	46.64	2.67	3.89	0.81	31.64	4.45	140.72	4.000	No	Yes	2.00
383	25.15	46.71	2.65	3.59	0.80	31.70	4.21	133.58	4.000	No	Yes	2.00
384	25.22	44.61	2.65	3.44	0.80	30.15	4.25	128.13	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.28	42.93	2.66	3.29	0.81	28.90	4.27	123.27	4.000	No	Yes	2.00
386	25.34	46.80	2.58	2.82	0.78	31.81	3.59	114.12	4.000	No	No	2.00
387	25.41	57.78	2.43	2.15	0.74	40.14	2.53	101.40	4.000	No	No	2.00
388	25.48	75.15	2.25	1.59	0.68	53.54	1.75	93.61	4.000	No	No	2.00
389	25.55	93.93	2.10	1.26	0.64	68.22	1.42	96.98	4.000	No	No	2.00
390	25.61	110.75	2.00	1.06	0.61	81.50	1.30	106.28	4.000	No	No	2.00
391	25.68	122.82	1.93	0.95	0.59	91.11	1.25	114.28	4.000	No	No	2.00
392	25.74	128.94	1.89	0.88	0.57	95.97	1.23	118.05	4.000	No	No	2.00
393	25.81	128.47	1.88	0.84	0.57	95.60	1.22	116.83	4.000	No	No	2.00
394	25.88	121.95	1.89	0.83	0.58	90.37	1.23	111.45	4.000	No	No	2.00
395	25.95	110.40	1.96	0.93	0.60	80.92	1.28	103.44	4.000	No	No	2.00
396	26.01	95.62	2.08	1.18	0.63	68.82	1.39	95.84	4.000	No	No	2.00
397	26.08	78.55	2.24	1.61	0.68	55.14	1.73	95.34	4.000	No	No	2.00
398	26.13	61.61	2.41	2.12	0.73	42.07	2.42	101.65	4.000	No	No	2.00
399	26.21	47.63	2.56	2.63	0.78	31.58	3.45	108.92	4.000	No	No	2.00
400	26.27	38.34	2.68	3.00	0.81	24.79	4.51	111.84	4.000	No	Yes	2.00
401	26.34	33.25	2.75	3.13	0.83	21.14	5.22	110.35	4.000	No	Yes	2.00
402	26.40	30.07	2.78	3.12	0.84	18.89	5.66	106.81	4.000	No	Yes	2.00
403	26.46	28.01	2.80	3.02	0.85	17.44	5.88	102.61	4.000	No	Yes	2.00
404	26.53	27.15	2.80	2.90	0.85	16.84	5.90	99.41	4.000	No	Yes	2.00
405	26.59	26.62	2.82	2.97	0.85	16.42	6.10	100.18	4.000	No	Yes	2.00
406	26.66	26.94	2.84	3.23	0.86	16.56	6.34	105.03	4.000	No	Yes	2.00
407	26.72	27.80	2.85	3.51	0.86	17.05	6.51	111.09	4.000	No	Yes	2.00
408	26.79	30.58	2.81	3.46	0.85	18.92	5.99	113.37	4.000	No	Yes	2.00
409	26.86	33.90	2.76	3.26	0.84	21.19	5.34	113.05	4.000	No	Yes	2.00
410	26.92	36.29	2.72	3.17	0.83	22.81	4.97	113.39	4.000	No	Yes	2.00
411	26.99	37.25	2.73	3.28	0.83	23.39	4.98	116.49	4.000	No	Yes	2.00
412	27.05	37.22	2.75	3.53	0.83	23.25	5.23	121.62	4.000	No	Yes	2.00
413	27.12	40.55	2.71	3.48	0.82	25.49	4.85	123.51	4.000	No	Yes	2.00
414	27.19	48.18	2.62	3.12	0.79	30.81	3.93	120.96	4.000	No	Yes	2.00
415	27.26	57.23	2.52	2.75	0.77	37.21	3.14	116.68	4.000	No	No	2.00
416	27.32	62.96	2.47	2.58	0.75	41.27	2.78	114.82	4.000	No	No	2.00
417	27.39	64.95	2.46	2.58	0.75	42.59	2.72	115.75	4.000	No	No	2.00
418	27.46	66.19	2.46	2.64	0.75	43.34	2.72	117.83	4.000	No	No	2.00
419	27.52	68.81	2.45	2.64	0.74	45.08	2.65	119.32	4.000	No	No	2.00
420	27.59	73.20	2.42	2.56	0.73	48.14	2.47	119.03	4.000	No	No	2.00
421	27.65	80.98	2.36	2.35	0.72	53.74	2.16	116.30	4.000	No	No	2.00
422	27.72	91.54	2.28	2.09	0.69	61.44	1.85	113.86	4.000	No	No	2.00
423	27.78	101.48	2.22	1.90	0.67	68.75	1.66	113.83	4.000	No	No	2.00
424	27.84	107.78	2.18	1.80	0.66	73.34	1.57	114.92	4.000	No	No	2.00
425	27.91	110.34	2.17	1.76	0.66	75.13	1.53	115.31	4.000	No	No	2.00
426	27.98	111.35	2.16	1.72	0.66	75.80	1.52	114.98	4.000	No	No	2.00
427	28.05	112.39	2.15	1.69	0.65	76.50	1.50	114.66	4.000	No	No	2.00
428	28.11	113.59	2.14	1.67	0.65	77.27	1.49	114.98	4.000	No	No	2.00
429	28.18	115.62	2.14	1.68	0.65	78.60	1.48	116.22	4.000	No	No	2.00
430	28.25	118.14	2.13	1.68	0.65	80.28	1.47	117.85	4.000	No	No	2.00
431	28.31	120.79	2.12	1.67	0.64	82.09	1.45	119.28	4.000	No	No	2.00
432	28.37	122.42	2.12	1.66	0.64	83.15	1.44	119.96	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.44	122.48	2.12	1.66	0.64	83.06	1.44	119.85	4.000	No	No	2.00
434	28.51	121.36	2.12	1.68	0.64	82.07	1.45	119.37	4.000	No	No	2.00
435	28.57	119.70	2.13	1.71	0.65	80.67	1.47	118.92	4.000	No	No	2.00
436	28.64	118.17	2.15	1.77	0.65	79.32	1.50	119.18	4.000	No	No	2.00
437	28.70	116.77	2.13	1.64	0.65	78.46	1.47	115.15	4.000	No	No	2.00
438	28.77	115.87	2.10	1.46	0.64	78.10	1.42	110.62	4.000	No	No	2.00
439	28.83	115.71	2.07	1.30	0.63	78.27	1.37	107.44	4.000	No	No	2.00
440	28.90	116.17	2.08	1.39	0.63	78.25	1.40	109.23	4.000	No	No	2.00
441	28.97	116.46	2.12	1.57	0.64	77.88	1.45	113.01	4.000	No	No	2.00
442	29.03	112.90	2.17	1.79	0.66	74.74	1.55	115.83	4.000	No	No	2.00
443	29.08	108.56	2.22	2.00	0.67	71.20	1.67	118.78	4.000	No	No	2.00
444	29.14	103.23	2.27	2.21	0.69	67.05	1.81	121.60	4.000	No	No	2.00
445	29.20	98.95	2.31	2.39	0.70	63.73	1.95	124.59	4.000	No	No	2.00
446	29.29	95.23	2.34	2.54	0.71	60.84	2.09	127.22	4.000	No	No	2.00
447	29.35	92.80	2.36	2.62	0.72	58.97	2.18	128.51	4.000	No	No	2.00
448	29.42	94.45	2.35	2.56	0.71	60.06	2.12	127.31	4.000	No	No	2.00
449	29.48	96.86	2.33	2.48	0.71	61.70	2.04	126.04	4.000	No	No	2.00
450	29.55	99.72	2.31	2.42	0.70	63.62	1.97	125.55	4.000	No	No	2.00
451	29.62	101.61	2.30	2.39	0.70	64.84	1.93	125.44	4.000	No	No	2.00
452	29.68	102.17	2.30	2.36	0.70	65.15	1.92	124.81	4.000	No	No	2.00
453	29.74	100.00	2.31	2.37	0.70	63.55	1.95	123.96	4.000	No	No	2.00
454	29.81	93.85	2.34	2.48	0.71	59.11	2.10	124.26	4.000	No	No	2.00
455	29.87	84.23	2.41	2.72	0.73	52.27	2.43	126.78	4.000	No	No	2.00
456	29.94	73.65	2.49	3.04	0.76	44.88	2.91	130.77	4.000	No	No	2.00
457	30.00	64.32	2.57	3.34	0.78	38.49	3.48	134.05	4.000	No	No	2.00
458	30.07	57.70	2.62	3.52	0.79	34.04	3.95	134.53	4.000	No	Yes	2.00
459	30.14	53.08	2.66	3.59	0.81	30.98	4.29	132.85	4.000	No	Yes	2.00
460	30.20	49.84	2.68	3.56	0.81	28.86	4.49	129.56	4.000	No	Yes	2.00
461	30.27	46.84	2.70	3.48	0.82	26.93	4.66	125.41	4.000	No	Yes	2.00
462	30.34	45.11	2.69	3.24	0.82	25.88	4.59	118.70	4.000	No	Yes	2.00
463	30.40	44.16	2.66	2.90	0.81	25.37	4.34	110.22	4.000	No	Yes	2.00
464	30.47	44.32	2.64	2.63	0.80	25.55	4.07	103.96	4.000	No	Yes	2.00
465	30.54	45.77	2.61	2.53	0.79	26.47	3.87	102.37	4.000	No	Yes	2.00
466	30.60	47.56	2.60	2.58	0.79	27.55	3.79	104.44	4.000	No	Yes	2.00
467	30.67	48.97	2.60	2.63	0.79	28.36	3.75	106.43	4.000	No	No	2.00
468	30.73	49.65	2.60	2.65	0.79	28.74	3.73	107.30	4.000	No	No	2.00
469	30.80	52.65	2.57	2.55	0.78	30.65	3.46	106.21	4.000	No	No	2.00
470	30.86	60.32	2.49	2.30	0.75	35.72	2.88	102.91	4.000	No	No	2.00
471	30.93	69.65	2.41	2.09	0.73	41.94	2.40	100.74	4.000	No	No	2.00
472	30.99	75.17	2.38	2.07	0.72	45.52	2.25	102.48	4.000	No	No	2.00
473	31.06	74.95	2.40	2.25	0.73	45.09	2.39	107.60	4.000	No	No	2.00
474	31.13	73.36	2.44	2.49	0.74	43.74	2.60	113.68	4.000	No	No	2.00
475	31.19	77.58	2.42	2.52	0.74	46.37	2.51	116.36	4.000	No	No	2.00
476	31.26	91.06	2.34	2.29	0.71	55.37	2.09	115.62	4.000	No	No	2.00
477	31.32	109.59	2.24	2.05	0.68	67.95	1.73	117.47	4.000	No	No	2.00
478	31.39	126.30	2.17	1.90	0.66	79.38	1.55	122.79	4.000	No	No	2.00
479	31.45	136.60	2.14	1.85	0.65	86.35	1.48	127.72	4.000	No	No	2.00
480	31.52	141.25	2.12	1.83	0.64	89.42	1.45	130.07	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.59	143.10	2.11	1.80	0.64	90.63	1.44	130.44	4.000	No	No	2.00
482	31.66	144.21	2.07	1.56	0.63	92.01	1.37	126.34	4.000	No	No	2.00
483	31.73	145.95	2.00	1.29	0.61	94.09	1.31	123.12	4.000	No	No	2.00
484	31.79	147.15	1.94	1.06	0.59	95.80	1.26	121.12	4.000	No	No	2.00
485	31.86	147.12	1.94	1.06	0.59	95.67	1.26	120.88	4.000	No	No	2.00
486	31.89	145.41	1.96	1.13	0.60	94.06	1.28	120.42	4.000	No	No	2.00
487	31.96	144.25	1.98	1.19	0.60	92.84	1.29	120.21	4.000	No	No	2.00
488	32.02	135.92	2.04	1.32	0.62	86.45	1.34	115.93	4.000	No	No	2.00
489	32.09	137.58	2.04	1.34	0.62	87.38	1.34	117.22	4.000	No	No	2.00
490	32.17	142.66	2.02	1.33	0.61	90.78	1.33	120.43	4.000	No	No	2.00
491	32.24	158.14	1.97	1.25	0.60	101.65	1.28	130.34	4.000	No	No	2.00
492	32.30	167.62	1.95	1.24	0.59	108.10	1.27	137.09	4.000	No	No	2.00
493	32.36	178.04	1.93	1.25	0.59	115.17	1.26	144.63	4.000	No	No	2.00
494	32.42	191.86	1.90	1.25	0.58	124.68	1.24	154.41	4.000	No	No	2.00
495	32.48	209.27	1.87	1.22	0.57	136.88	1.21	166.06	4.000	No	No	2.00
496	32.55	228.84	1.82	1.17	0.56	150.82	1.18	177.65	4.000	No	No	2.00
497	32.61	251.21	1.77	1.10	0.54	167.10	1.12	187.11	4.000	No	No	2.00
498	32.70	269.30	1.73	1.04	0.53	180.34	1.06	190.35	4.000	No	No	2.00
499	32.74	285.00	1.69	0.97	0.52	192.24	1.00	192.24	4.000	No	No	2.00
500	32.82	295.60	1.66	0.91	0.51	200.47	1.00	200.47	4.000	No	No	2.00
501	32.89	306.93	1.63	0.85	0.50	208.77	1.00	208.77	4.000	No	No	2.00
502	32.95	317.38	1.60	0.80	0.50	215.74	1.00	215.74	4.000	No	No	2.00
503	33.02	327.77	1.58	0.78	0.50	222.57	1.00	222.57	4.000	No	No	2.00
504	33.09	336.60	1.54	0.70	0.50	228.34	1.00	228.34	4.000	No	No	2.00
505	33.15	345.40	1.48	0.58	0.50	234.12	1.00	234.12	4.000	No	No	2.00
506	33.20	356.85	1.41	0.48	0.50	241.72	1.00	241.72	4.000	No	No	2.00
507	33.28	374.91	1.40	0.49	0.50	253.74	1.00	253.74	4.000	No	No	2.00
508	33.34	400.18	1.40	0.53	0.50	270.64	1.00	270.64	4.000	No	No	2.00
509	33.41	426.39	1.39	0.54	0.50	288.14	1.00	288.14	4.000	No	No	2.00
510	33.47	451.10	1.37	0.55	0.50	304.63	1.00	304.63	4.000	No	No	2.00
511	33.53	471.50	1.39	0.60	0.50	318.13	1.00	318.13	4.000	No	No	2.00
512	33.60	490.28	1.40	0.65	0.50	330.51	1.00	330.51	4.000	No	No	2.00
513	33.66	513.06	1.40	0.66	0.50	345.57	1.00	345.57	4.000	No	No	2.00
514	33.73	529.19	1.38	0.65	0.50	356.06	1.00	356.06	4.000	No	No	2.00
515	33.80	539.11	1.37	0.63	0.50	362.40	1.00	362.40	4.000	No	No	2.00
516	33.86	544.01	1.36	0.62	0.50	365.33	1.00	365.33	4.000	No	No	2.00
517	33.92	559.45	1.34	0.60	0.50	375.33	1.00	375.33	4.000	No	No	2.00
518	33.99	579.95	1.32	0.58	0.50	388.71	1.00	388.71	4.000	No	No	2.00
519	34.06	596.57	1.31	0.58	0.50	399.48	1.00	399.48	4.000	No	No	2.00
520	34.13	599.29	1.32	0.59	0.50	400.82	1.00	400.82	4.000	No	No	2.00
521	34.20	590.55	1.31	0.58	0.50	394.55	1.00	394.55	4.000	No	No	2.00
522	34.26	572.83	1.31	0.56	0.50	382.26	1.00	382.26	4.000	No	No	2.00
523	34.32	555.77	1.33	0.57	0.50	370.48	1.00	370.48	4.000	No	No	2.00
524	34.39	544.85	1.36	0.61	0.50	362.77	1.00	362.77	4.000	No	No	2.00
525	34.45	539.26	1.38	0.66	0.50	358.68	1.00	358.68	4.000	No	No	2.00
526	34.52	527.53	1.40	0.69	0.50	350.45	1.00	350.45	4.000	No	No	2.00
527	34.59	519.23	1.41	0.70	0.50	344.56	1.00	344.56	4.000	No	No	2.00
528	34.65	512.62	1.42	0.71	0.50	339.82	1.00	339.82	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.72	515.33	1.43	0.71	0.50	341.23	1.00	341.23	4.000	No	No	2.00
530	34.78	520.20	1.43	0.73	0.50	344.14	1.00	344.14	4.000	No	No	2.00
531	34.85	530.06	1.42	0.73	0.50	350.30	1.00	350.30	4.000	No	No	2.00
532	34.91	541.60	1.41	0.71	0.50	357.62	1.00	357.62	4.000	No	No	2.00
533	34.98	543.66	1.39	0.67	0.50	358.61	1.00	358.61	4.000	No	No	2.00
534	35.04	540.51	1.36	0.61	0.50	356.15	1.00	356.15	4.000	No	No	2.00
535	35.11	536.80	1.34	0.56	0.50	353.32	1.00	353.32	4.000	No	No	2.00
536	35.17	537.64	1.28	0.47	0.50	353.53	1.00	353.53	4.000	No	No	2.00
537	35.24	538.86	1.21	0.37	0.50	353.96	1.00	353.96	4.000	No	No	2.00
538	35.30	538.20	1.17	0.31	0.50	353.22	1.00	353.22	4.000	No	No	2.00
539	35.37	538.05	1.17	0.31	0.50	352.77	1.00	352.77	4.000	No	No	2.00
540	35.44	538.23	1.21	0.37	0.50	352.52	1.00	352.52	4.000	No	No	2.00
541	35.51	520.82	1.28	0.44	0.50	340.72	1.00	340.72	4.000	No	No	2.00
542	35.57	501.82	1.35	0.54	0.50	327.92	1.00	327.92	4.000	No	No	2.00
543	35.63	485.26	1.40	0.61	0.50	316.75	1.00	316.75	4.000	No	No	2.00
544	35.70	497.46	1.40	0.63	0.50	324.38	1.00	324.38	4.000	No	No	2.00
545	35.77	522.10	1.38	0.62	0.50	340.17	1.00	340.17	4.000	No	No	2.00
546	35.83	561.10	1.34	0.58	0.50	365.38	1.00	365.38	4.000	No	No	2.00
547	35.89	600.78	1.26	0.48	0.50	390.92	1.00	390.92	4.000	No	No	2.00
548	35.96	623.62	1.19	0.40	0.50	405.43	1.00	405.43	4.000	No	No	2.00
549	36.03	625.37	1.17	0.38	0.50	406.16	1.00	406.16	4.000	No	No	2.00
550	36.09	612.48	1.21	0.42	0.50	397.38	1.00	397.38	4.000	No	No	2.00
551	36.16	606.12	1.23	0.44	0.50	392.86	1.00	392.86	4.000	No	No	2.00
552	36.23	598.29	1.24	0.45	0.50	387.34	1.00	387.34	4.000	No	No	2.00
553	36.29	591.68	1.24	0.45	0.50	382.69	1.00	382.69	4.000	No	No	2.00
554	36.35	581.57	1.26	0.47	0.50	375.78	1.00	375.78	4.000	No	No	2.00
555	36.43	574.40	1.28	0.48	0.50	370.72	1.00	370.72	4.000	No	No	2.00
556	36.49	564.94	1.27	0.47	0.50	364.25	1.00	364.25	4.000	No	No	2.00
557	36.55	556.83	1.24	0.41	0.50	358.66	1.00	358.66	4.000	No	No	2.00
558	36.62	551.06	1.20	0.36	0.50	354.60	1.00	354.60	4.000	No	No	2.00
559	36.68	548.90	1.18	0.32	0.50	352.87	1.00	352.87	4.000	No	No	2.00
560	36.75	544.66	1.19	0.33	0.50	349.80	1.00	349.80	4.000	No	No	2.00
561	36.82	539.63	1.20	0.35	0.50	346.22	1.00	346.22	4.000	No	No	2.00
562	36.88	532.86	1.23	0.38	0.50	341.54	1.00	341.54	4.000	No	No	2.00
563	36.95	527.84	1.27	0.43	0.50	337.97	1.00	337.97	4.000	No	No	2.00
564	37.01	522.41	1.31	0.48	0.50	334.17	1.00	334.17	4.000	No	No	2.00
565	37.08	513.74	1.31	0.48	0.50	328.28	1.00	328.28	4.000	No	No	2.00
566	37.14	503.45	1.26	0.39	0.50	321.39	1.00	321.39	4.000	No	No	2.00
567	37.21	493.96	1.20	0.31	0.50	314.99	1.00	314.99	4.000	No	No	2.00
568	37.28	482.63	1.18	0.27	0.50	307.46	1.00	307.46	4.000	No	No	2.00
569	37.34	473.90	1.23	0.33	0.50	301.59	1.00	301.59	4.000	No	No	2.00
570	37.41	464.85	1.30	0.41	0.50	295.51	1.00	295.51	4.000	No	No	2.00
571	37.48	453.93	1.36	0.49	0.50	288.27	1.00	288.27	4.000	No	No	2.00
572	37.54	445.38	1.41	0.56	0.50	282.56	1.00	282.56	4.000	No	No	2.00
573	37.60	437.62	1.44	0.61	0.50	277.36	1.00	277.36	4.000	No	No	2.00
574	37.67	431.84	1.46	0.65	0.50	273.42	1.00	273.42	4.000	No	No	2.00
575	37.73	424.61	1.49	0.70	0.50	268.55	1.00	268.55	4.000	No	No	2.00
576	37.80	419.43	1.52	0.75	0.50	265.01	1.00	265.01	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	37.87	425.45	1.52	0.77	0.50	268.57	1.00	268.57	4.000	No	No	2.00
578	37.93	435.71	1.51	0.77	0.50	274.82	1.00	274.82	4.000	No	No	2.00
579	38.00	445.94	1.51	0.77	0.50	281.04	1.00	281.04	4.000	No	No	2.00
580	38.06	453.34	1.50	0.77	0.50	285.48	1.00	285.48	4.000	No	No	2.00
581	38.12	444.42	1.52	0.79	0.50	279.58	1.00	279.58	4.000	No	No	2.00
582	38.19	435.93	1.52	0.79	0.50	273.95	1.00	273.95	4.000	No	No	2.00
583	38.26	427.60	1.54	0.83	0.50	268.43	1.00	268.43	4.000	No	No	2.00
584	38.33	433.37	1.57	0.92	0.50	271.81	1.00	271.81	4.000	No	No	2.00
585	38.39	440.61	1.60	1.00	0.50	276.12	1.00	276.12	4.000	No	No	2.00
586	38.46	453.31	1.60	1.03	0.50	283.83	1.00	283.83	4.000	No	No	2.00
587	38.52	475.33	1.54	0.90	0.50	297.44	1.00	297.44	4.000	No	No	2.00
588	38.59	508.19	1.45	0.73	0.50	317.78	1.00	317.78	4.000	No	No	2.00
589	38.66	550.68	1.38	0.62	0.50	344.14	1.00	344.14	4.000	No	No	2.00
590	38.72	595.04	1.34	0.60	0.50	371.66	1.00	371.66	4.000	No	No	2.00
591	38.78	641.59	1.33	0.61	0.50	400.48	1.00	400.48	4.000	No	No	2.00
592	38.85	652.54	1.34	0.64	0.50	406.98	1.00	406.98	4.000	No	No	2.00
593	38.91	636.81	1.37	0.68	0.50	396.76	1.00	396.76	4.000	No	No	2.00
594	38.98	589.58	1.45	0.81	0.50	366.87	1.00	366.87	4.000	No	No	2.00
595	39.05	552.52	1.50	0.89	0.50	343.38	1.00	343.38	4.000	No	No	2.00
596	39.12	527.96	1.50	0.87	0.50	327.74	1.00	327.74	4.000	No	No	2.00
597	39.18	518.35	1.46	0.77	0.50	321.47	1.00	321.47	4.000	No	No	2.00
598	39.24	518.10	1.42	0.68	0.50	321.01	1.00	321.01	4.000	No	No	2.00
599	39.31	506.47	1.43	0.67	0.50	313.48	1.00	313.48	4.000	No	No	2.00
600	39.37	492.99	1.43	0.66	0.50	304.84	1.00	304.84	4.000	No	No	2.00
601	39.44	479.45	1.44	0.65	0.50	296.13	1.00	296.13	4.000	No	No	2.00
602	39.51	477.89	1.43	0.64	0.50	294.90	1.00	294.90	4.000	No	No	2.00
603	39.57	477.52	1.43	0.64	0.50	294.42	1.00	294.42	4.000	No	No	2.00
604	39.64	478.58	1.43	0.63	0.50	294.79	1.00	294.79	4.000	No	No	2.00
605	39.70	485.19	1.42	0.62	0.50	298.62	1.00	298.62	4.000	No	No	2.00
606	39.77	496.61	1.28	0.40	0.50	305.42	1.00	305.42	4.000	No	No	2.00
607	39.84	509.24	1.10	0.19	0.50	312.97	1.00	312.97	4.000	No	No	2.00
608	39.90	515.67	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
609	39.97	531.08	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
610	40.03	543.62	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
611	40.09	561.25	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
612	40.16	565.27	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.07	2.00	0.00	0.00	0.07	0.00	0.14	2.00	0.00	0.00	0.07	0.00
0.20	2.00	0.00	0.00	0.07	0.00	0.27	2.00	0.00	0.00	0.06	0.00
0.34	2.00	0.00	0.00	0.07	0.00	0.40	2.00	0.00	0.00	0.06	0.00
0.46	2.00	0.00	0.00	0.06	0.00	0.54	2.00	0.00	0.00	0.08	0.00
0.60	2.00	0.00	0.00	0.06	0.00	0.67	2.00	0.00	0.00	0.06	0.00
0.73	2.00	0.00	0.00	0.06	0.00	0.79	2.00	0.00	0.00	0.06	0.00
0.87	2.00	0.00	0.00	0.08	0.00	0.93	2.00	0.00	0.00	0.06	0.00
0.99	2.00	0.00	0.00	0.06	0.00	1.05	2.00	0.00	0.00	0.07	0.00
1.12	2.00	0.00	0.00	0.06	0.00	1.19	2.00	0.00	0.00	0.07	0.00
1.25	2.00	0.00	0.00	0.06	0.00	1.33	2.00	0.00	0.00	0.08	0.00
1.39	2.00	0.00	0.00	0.05	0.00	1.46	2.00	0.00	0.00	0.07	0.00
1.52	2.00	0.00	0.00	0.06	0.00	1.58	2.00	0.00	0.00	0.07	0.00
1.65	2.00	0.00	0.00	0.06	0.00	1.71	2.00	0.00	0.00	0.06	0.00
1.79	2.00	0.00	0.00	0.08	0.00	1.85	2.00	0.00	0.00	0.06	0.00
1.92	2.00	0.00	0.00	0.06	0.00	1.98	2.00	0.00	0.00	0.06	0.00
2.04	2.00	0.00	0.00	0.06	0.00	2.11	2.00	0.00	0.00	0.06	0.00
2.17	2.00	0.00	0.00	0.06	0.00	2.24	2.00	0.00	0.00	0.07	0.00
2.30	2.00	0.00	0.00	0.06	0.00	2.37	2.00	0.00	0.00	0.06	0.00
2.43	2.00	0.00	0.00	0.06	0.00	2.50	2.00	0.00	0.00	0.06	0.00
2.58	2.00	0.00	0.00	0.09	0.00	2.64	2.00	0.00	0.00	0.06	0.00
2.71	2.00	0.00	0.00	0.06	0.00	2.77	2.00	0.00	0.00	0.06	0.00
2.83	2.00	0.00	0.00	0.06	0.00	2.90	2.00	0.00	0.00	0.07	0.00
2.95	2.00	0.00	0.00	0.06	0.00	3.04	2.00	0.00	0.00	0.09	0.00
3.11	2.00	0.00	0.00	0.07	0.00	3.17	2.00	0.00	0.00	0.07	0.00
3.24	2.00	0.00	0.00	0.06	0.00	3.28	2.00	0.00	0.00	0.04	0.00
3.38	2.00	0.00	0.00	0.09	0.00	3.44	2.00	0.00	0.00	0.06	0.00
3.51	2.00	0.00	0.00	0.07	0.00	3.54	2.00	0.00	0.00	0.04	0.00
3.64	2.00	0.00	0.00	0.10	0.00	3.70	2.00	0.00	0.00	0.06	0.00
3.77	2.00	0.00	0.00	0.07	0.00	3.81	2.00	0.00	0.00	0.03	0.00
3.90	2.00	0.00	0.00	0.10	0.00	3.97	2.00	0.00	0.00	0.07	0.00
4.00	2.00	0.00	0.00	0.03	0.00	4.07	2.00	0.00	0.00	0.07	0.00
4.14	2.00	0.00	0.00	0.07	0.00	4.21	2.00	0.00	0.00	0.07	0.00
4.27	2.00	0.00	0.00	0.07	0.00	4.34	2.00	0.00	0.00	0.07	0.00
4.40	2.00	0.00	0.00	0.06	0.00	4.47	2.00	0.00	0.00	0.06	0.00
4.54	2.00	0.00	0.00	0.07	0.00	4.60	2.00	0.00	0.00	0.07	0.00
4.67	2.00	0.00	0.00	0.06	0.00	4.73	2.00	0.00	0.00	0.07	0.00
4.80	2.00	0.00	0.00	0.07	0.00	4.87	2.00	0.00	0.00	0.07	0.00
4.93	2.00	0.00	0.00	0.06	0.00	5.00	2.00	0.00	0.00	0.06	0.00
5.06	2.00	0.00	0.00	0.07	0.00	5.13	2.00	0.00	0.00	0.07	0.00
5.19	2.00	0.00	0.00	0.06	0.00	5.25	2.00	0.00	0.00	0.06	0.00
5.32	2.00	0.00	0.00	0.07	0.00	5.38	2.00	0.00	0.00	0.06	0.00
5.45	2.00	0.00	0.00	0.06	0.00	5.51	2.00	0.00	0.00	0.07	0.00
5.58	2.00	0.00	0.00	0.07	0.00	5.65	2.00	0.00	0.00	0.07	0.00
5.71	2.00	0.00	0.00	0.07	0.00	5.78	2.00	0.00	0.00	0.07	0.00
5.84	2.00	0.00	0.00	0.06	0.00	5.91	2.00	0.00	0.00	0.07	0.00
5.97	2.00	0.00	0.00	0.07	0.00	6.04	2.00	0.00	0.00	0.06	0.00
6.11	2.00	0.00	0.00	0.07	0.00	6.17	2.00	0.00	0.00	0.07	0.00
6.24	2.00	0.00	0.00	0.07	0.00	6.30	2.00	0.00	0.00	0.06	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.37	2.00	0.00	0.00	0.07	0.00	6.43	2.00	0.00	0.00	0.07	0.00
6.50	2.00	0.00	0.00	0.07	0.00	6.57	2.00	0.00	0.00	0.07	0.00
6.63	2.00	0.00	0.00	0.06	0.00	6.70	2.00	0.00	0.00	0.07	0.00
6.76	2.00	0.00	0.00	0.07	0.00	6.83	2.00	0.00	0.00	0.07	0.00
6.90	2.00	0.00	0.00	0.07	0.00	6.97	2.00	0.00	0.00	0.07	0.00
7.03	2.00	0.00	0.00	0.07	0.00	7.10	2.00	0.00	0.00	0.06	0.00
7.17	2.00	0.00	0.00	0.08	0.00	7.24	2.00	0.00	0.00	0.07	0.00
7.28	2.00	0.00	0.00	0.04	0.00	7.36	2.00	0.00	0.00	0.07	0.00
7.42	2.00	0.00	0.00	0.07	0.00	7.49	2.00	0.00	0.00	0.07	0.00
7.56	2.00	0.00	0.00	0.07	0.00	7.63	2.00	0.00	0.00	0.07	0.00
7.70	2.00	0.00	0.00	0.07	0.00	7.74	2.00	0.00	0.00	0.04	0.00
7.81	2.00	0.00	0.00	0.07	0.00	7.89	2.00	0.00	0.00	0.08	0.00
7.95	2.00	0.00	0.00	0.07	0.00	8.01	2.00	0.00	0.00	0.05	0.00
8.10	2.00	0.00	0.00	0.09	0.00	8.15	2.00	0.00	0.00	0.05	0.00
8.22	2.00	0.00	0.00	0.07	0.00	8.28	2.00	0.00	0.00	0.06	0.00
8.35	2.00	0.00	0.00	0.08	0.00	8.41	2.00	0.00	0.00	0.06	0.00
8.48	2.00	0.00	0.00	0.06	0.00	8.55	2.00	0.00	0.00	0.07	0.00
8.61	2.00	0.00	0.00	0.07	0.00	8.68	2.00	0.00	0.00	0.07	0.00
8.74	2.00	0.00	0.00	0.06	0.00	8.81	2.00	0.00	0.00	0.07	0.00
8.87	2.00	0.00	0.00	0.06	0.00	8.94	2.00	0.00	0.00	0.07	0.00
9.00	2.00	0.00	0.00	0.07	0.00	9.07	2.00	0.00	0.00	0.07	0.00
9.13	2.00	0.00	0.00	0.06	0.00	9.20	2.00	0.00	0.00	0.06	0.00
9.26	2.00	0.00	0.00	0.06	0.00	9.33	2.00	0.00	0.00	0.07	0.00
9.39	2.00	0.00	0.00	0.06	0.00	9.45	2.00	0.00	0.00	0.06	0.00
9.52	2.00	0.00	0.00	0.06	0.00	9.59	2.00	0.00	0.00	0.07	0.00
9.66	2.00	0.00	0.00	0.07	0.00	9.72	2.00	0.00	0.00	0.07	0.00
9.79	2.00	0.00	0.00	0.06	0.00	9.85	2.00	0.00	0.00	0.07	0.00
9.92	2.00	0.00	0.00	0.06	0.00	9.99	2.00	0.00	0.00	0.07	0.00
10.04	2.00	0.00	0.00	0.05	0.00	10.11	2.00	0.00	0.00	0.07	0.00
10.18	2.00	0.00	0.00	0.07	0.00	10.24	2.00	0.00	0.00	0.07	0.00
10.30	2.00	0.00	0.00	0.06	0.00	10.40	2.00	0.00	0.00	0.09	0.00
10.43	2.00	0.00	0.00	0.04	0.00	10.53	2.00	0.00	0.00	0.10	0.00
10.59	2.00	0.00	0.00	0.06	0.00	10.65	2.00	0.00	0.00	0.06	0.00
10.72	2.00	0.00	0.00	0.07	0.00	10.79	2.00	0.00	0.00	0.07	0.00
10.86	2.00	0.00	0.00	0.07	0.00	10.89	2.00	0.00	0.00	0.04	0.00
10.96	2.00	0.00	0.00	0.07	0.00	11.03	2.00	0.00	0.00	0.06	0.00
11.09	2.00	0.00	0.00	0.06	0.00	11.15	2.00	0.00	0.00	0.06	0.00
11.25	2.00	0.00	0.00	0.10	0.00	11.31	2.00	0.00	0.00	0.06	0.00
11.38	2.00	0.00	0.00	0.07	0.00	11.44	2.00	0.00	0.00	0.06	0.00
11.51	2.00	0.00	0.00	0.06	0.00	11.57	2.00	0.00	0.00	0.07	0.00
11.64	2.00	0.00	0.00	0.07	0.00	11.71	2.00	0.00	0.00	0.06	0.00
11.77	2.00	0.00	0.00	0.07	0.00	11.84	2.00	0.00	0.00	0.06	0.00
11.90	2.00	0.00	0.00	0.07	0.00	11.97	2.00	0.00	0.00	0.06	0.00
12.03	2.00	0.00	0.00	0.06	0.00	12.09	2.00	0.00	0.00	0.06	0.00
12.16	2.00	0.00	0.00	0.07	0.00	12.23	2.00	0.00	0.00	0.07	0.00
12.30	2.00	0.00	0.00	0.07	0.00	12.36	2.00	0.00	0.00	0.07	0.00
12.43	2.00	0.00	0.00	0.06	0.00	12.50	2.00	0.00	0.00	0.07	0.00
12.56	2.00	0.00	0.00	0.07	0.00	12.61	2.00	0.00	0.00	0.04	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.68	2.00	0.00	0.00	0.07	0.00	12.74	2.00	0.00	0.00	0.07	0.00
12.81	2.00	0.00	0.00	0.06	0.00	12.87	2.00	0.00	0.00	0.06	0.00
12.94	2.00	0.00	0.00	0.06	0.00	13.00	2.00	0.00	0.00	0.06	0.00
13.06	2.00	0.00	0.00	0.06	0.00	13.13	2.00	0.00	0.00	0.07	0.00
13.20	2.00	0.00	0.00	0.07	0.00	13.27	2.00	0.00	0.00	0.07	0.00
13.34	2.00	0.00	0.00	0.07	0.00	13.39	2.00	0.00	0.00	0.05	0.00
13.47	2.00	0.00	0.00	0.08	0.00	13.53	2.00	0.00	0.00	0.06	0.00
13.58	2.00	0.00	0.00	0.05	0.00	13.65	2.00	0.00	0.00	0.07	0.00
13.73	2.00	0.00	0.00	0.08	0.00	13.80	2.00	0.00	0.00	0.07	0.00
13.87	2.00	0.00	0.00	0.07	0.00	13.91	2.00	0.00	0.00	0.04	0.00
13.98	2.00	0.00	0.00	0.07	0.00	14.05	2.00	0.00	0.00	0.07	0.00
14.12	2.00	0.00	0.00	0.07	0.00	14.19	2.00	0.00	0.00	0.07	0.00
14.26	2.00	0.00	0.00	0.07	0.00	14.32	2.00	0.00	0.00	0.06	0.00
14.38	2.00	0.00	0.00	0.06	0.00	14.45	2.00	0.00	0.00	0.07	0.00
14.50	2.00	0.00	0.00	0.05	0.00	14.57	2.00	0.00	0.00	0.06	0.00
14.64	2.00	0.00	0.00	0.07	0.00	14.70	2.00	0.00	0.00	0.06	0.00
14.77	2.00	0.00	0.00	0.07	0.00	14.83	2.00	0.00	0.00	0.06	0.00
14.91	2.00	0.00	0.00	0.08	0.00	14.97	2.00	0.00	0.00	0.06	0.00
15.03	2.00	0.00	0.00	0.05	0.00	15.11	2.00	0.00	0.00	0.08	0.00
15.17	2.00	0.00	0.00	0.06	0.00	15.23	2.00	0.00	0.00	0.06	0.00
15.29	2.00	0.00	0.00	0.06	0.00	15.36	2.00	0.00	0.00	0.07	0.00
15.44	2.00	0.00	0.00	0.07	0.00	15.49	2.00	0.00	0.00	0.06	0.00
15.55	2.00	0.00	0.00	0.06	0.00	15.62	2.00	0.00	0.00	0.07	0.00
15.68	2.00	0.00	0.00	0.07	0.00	15.75	2.00	0.00	0.00	0.06	0.00
15.84	2.00	0.00	0.00	0.09	0.00	15.91	2.00	0.00	0.00	0.07	0.00
15.98	2.00	0.00	0.00	0.07	0.00	16.04	2.00	0.00	0.00	0.07	0.00
16.08	2.00	0.00	0.00	0.04	0.00	16.15	2.00	0.00	0.00	0.07	0.00
16.21	2.00	0.00	0.00	0.06	0.00	16.28	2.00	0.00	0.00	0.07	0.00
16.34	2.00	0.00	0.00	0.07	0.00	16.41	2.00	0.00	0.00	0.06	0.00
16.50	2.00	0.00	0.00	0.10	0.00	16.57	2.00	0.00	0.00	0.07	0.00
16.60	2.00	0.00	0.00	0.03	0.00	16.67	2.00	0.00	0.00	0.07	0.00
16.73	2.00	0.00	0.00	0.07	0.00	16.83	2.00	0.00	0.00	0.09	0.00
16.89	2.00	0.00	0.00	0.07	0.00	16.93	2.00	0.00	0.00	0.03	0.00
17.01	2.00	0.00	0.00	0.08	0.00	17.07	2.00	0.00	0.00	0.06	0.00
17.13	2.00	0.00	0.00	0.06	0.00	17.19	2.00	0.00	0.00	0.06	0.00
17.26	2.00	0.00	0.00	0.07	0.00	17.33	2.00	0.00	0.00	0.07	0.00
17.39	2.00	0.00	0.00	0.06	0.00	17.45	2.00	0.00	0.00	0.06	0.00
17.53	2.00	0.00	0.00	0.08	0.00	17.60	2.00	0.00	0.00	0.07	0.00
17.66	2.00	0.00	0.00	0.06	0.00	17.73	2.00	0.00	0.00	0.06	0.00
17.79	2.00	0.00	0.00	0.07	0.00	17.86	2.00	0.00	0.00	0.07	0.00
17.93	2.00	0.00	0.00	0.07	0.00	18.00	2.00	0.00	0.00	0.07	0.00
18.06	2.00	0.00	0.00	0.07	0.00	18.13	2.00	0.00	0.00	0.07	0.00
18.18	2.00	0.00	0.00	0.05	0.00	18.25	2.00	0.00	0.00	0.08	0.00
18.33	2.00	0.00	0.00	0.08	0.00	18.38	2.00	0.00	0.00	0.05	0.00
18.44	2.00	0.00	0.00	0.06	0.00	18.53	2.00	0.00	0.00	0.09	0.00
18.59	2.00	0.00	0.00	0.06	0.00	18.66	2.00	0.00	0.00	0.07	0.00
18.73	2.00	0.00	0.00	0.07	0.00	18.79	2.00	0.00	0.00	0.07	0.00
18.86	2.00	0.00	0.00	0.07	0.00	18.92	2.00	0.00	0.00	0.06	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.99	2.00	0.00	0.00	0.07	0.00	19.06	2.00	0.00	0.00	0.07	0.00
19.13	2.00	0.00	0.00	0.07	0.00	19.19	2.00	0.00	0.00	0.07	0.00
19.23	2.00	0.00	0.00	0.03	0.00	19.32	2.00	0.00	0.00	0.10	0.00
19.39	2.00	0.00	0.00	0.07	0.00	19.42	2.00	0.00	0.00	0.03	0.00
19.52	2.00	0.00	0.00	0.10	0.00	19.59	2.00	0.00	0.00	0.06	0.00
19.65	2.00	0.00	0.00	0.07	0.00	19.71	2.00	0.00	0.00	0.06	0.00
19.78	2.00	0.00	0.00	0.07	0.00	19.85	2.00	0.00	0.00	0.07	0.00
19.92	2.00	0.00	0.00	0.07	0.00	19.95	2.00	0.00	0.00	0.03	0.00
20.02	2.00	0.00	0.00	0.07	0.00	20.08	2.00	0.00	0.00	0.07	0.00
20.16	2.00	0.00	0.00	0.07	0.00	20.23	2.00	0.00	0.00	0.07	0.00
20.29	2.00	0.00	0.00	0.07	0.00	20.36	2.00	0.00	0.00	0.06	0.00
20.42	2.00	0.00	0.00	0.07	0.00	20.49	2.00	0.00	0.00	0.06	0.00
20.55	2.00	0.00	0.00	0.07	0.00	20.62	2.00	0.00	0.00	0.07	0.00
20.68	2.00	0.00	0.00	0.06	0.00	20.75	2.00	0.00	0.00	0.06	0.00
20.82	2.00	0.00	0.00	0.07	0.00	20.88	2.00	0.00	0.00	0.07	0.00
20.95	2.00	0.00	0.00	0.06	0.00	21.01	2.00	0.00	0.00	0.07	0.00
21.08	2.00	0.00	0.00	0.07	0.00	21.14	2.00	0.00	0.00	0.06	0.00
21.21	2.00	0.00	0.00	0.07	0.00	21.28	2.00	0.00	0.00	0.07	0.00
21.34	2.00	0.00	0.00	0.06	0.00	21.41	2.00	0.00	0.00	0.07	0.00
21.48	2.00	0.00	0.00	0.06	0.00	21.54	2.00	0.00	0.00	0.06	0.00
21.61	2.00	0.00	0.00	0.07	0.00	21.67	2.00	0.00	0.00	0.07	0.00
21.74	2.00	0.00	0.00	0.06	0.00	21.80	2.00	0.00	0.00	0.06	0.00
21.87	2.00	0.00	0.00	0.07	0.00	21.93	2.00	0.00	0.00	0.07	0.00
22.00	2.00	0.00	0.00	0.07	0.00	22.07	2.00	0.00	0.00	0.07	0.00
22.13	2.00	0.00	0.00	0.07	0.00	22.20	2.00	0.00	0.00	0.07	0.00
22.26	2.00	0.00	0.00	0.07	0.00	22.33	2.00	0.00	0.00	0.07	0.00
22.39	2.00	0.00	0.00	0.06	0.00	22.46	2.00	0.00	0.00	0.07	0.00
22.52	2.00	0.00	0.00	0.06	0.00	22.59	2.00	0.00	0.00	0.07	0.00
22.65	2.00	0.00	0.00	0.07	0.00	22.72	2.00	0.00	0.00	0.06	0.00
22.79	2.00	0.00	0.00	0.07	0.00	22.85	2.00	0.00	0.00	0.07	0.00
22.91	2.00	0.00	0.00	0.06	0.00	22.98	2.00	0.00	0.00	0.07	0.00
23.04	2.00	0.00	0.00	0.06	0.00	23.11	2.00	0.00	0.00	0.07	0.00
23.17	2.00	0.00	0.00	0.07	0.00	23.24	2.00	0.00	0.00	0.07	0.00
23.30	2.00	0.00	0.00	0.06	0.00	23.37	2.00	0.00	0.00	0.07	0.00
23.43	2.00	0.00	0.00	0.06	0.00	23.50	2.00	0.00	0.00	0.07	0.00
23.57	2.00	0.00	0.00	0.06	0.00	23.64	2.00	0.00	0.00	0.07	0.00
23.70	2.00	0.00	0.00	0.07	0.00	23.77	2.00	0.00	0.00	0.07	0.00
23.83	2.00	0.00	0.00	0.06	0.00	23.90	2.00	0.00	0.00	0.07	0.00
23.97	2.00	0.00	0.00	0.07	0.00	24.03	2.00	0.00	0.00	0.07	0.00
24.10	2.00	0.00	0.00	0.07	0.00	24.16	2.00	0.00	0.00	0.06	0.00
24.23	2.00	0.00	0.00	0.07	0.00	24.30	2.00	0.00	0.00	0.06	0.00
24.36	2.00	0.00	0.00	0.07	0.00	24.43	2.00	0.00	0.00	0.07	0.00
24.49	2.00	0.00	0.00	0.07	0.00	24.56	2.00	0.00	0.00	0.07	0.00
24.63	2.00	0.00	0.00	0.07	0.00	24.69	2.00	0.00	0.00	0.07	0.00
24.76	2.00	0.00	0.00	0.07	0.00	24.82	2.00	0.00	0.00	0.06	0.00
24.89	2.00	0.00	0.00	0.06	0.00	24.95	2.00	0.00	0.00	0.07	0.00
25.02	2.00	0.00	0.00	0.06	0.00	25.09	2.00	0.00	0.00	0.07	0.00
25.15	2.00	0.00	0.00	0.06	0.00	25.22	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.28	2.00	0.00	0.00	0.06	0.00	25.34	2.00	0.00	0.00	0.06	0.00
25.41	2.00	0.00	0.00	0.07	0.00	25.48	2.00	0.00	0.00	0.07	0.00
25.55	2.00	0.00	0.00	0.07	0.00	25.61	2.00	0.00	0.00	0.07	0.00
25.68	2.00	0.00	0.00	0.07	0.00	25.74	2.00	0.00	0.00	0.07	0.00
25.81	2.00	0.00	0.00	0.07	0.00	25.88	2.00	0.00	0.00	0.07	0.00
25.95	2.00	0.00	0.00	0.07	0.00	26.01	2.00	0.00	0.00	0.07	0.00
26.08	2.00	0.00	0.00	0.07	0.00	26.13	2.00	0.00	0.00	0.06	0.00
26.21	2.00	0.00	0.00	0.08	0.00	26.27	2.00	0.00	0.00	0.06	0.00
26.34	2.00	0.00	0.00	0.06	0.00	26.40	2.00	0.00	0.00	0.06	0.00
26.46	2.00	0.00	0.00	0.06	0.00	26.53	2.00	0.00	0.00	0.07	0.00
26.59	2.00	0.00	0.00	0.06	0.00	26.66	2.00	0.00	0.00	0.06	0.00
26.72	2.00	0.00	0.00	0.07	0.00	26.79	2.00	0.00	0.00	0.07	0.00
26.86	2.00	0.00	0.00	0.07	0.00	26.92	2.00	0.00	0.00	0.07	0.00
26.99	2.00	0.00	0.00	0.07	0.00	27.05	2.00	0.00	0.00	0.07	0.00
27.12	2.00	0.00	0.00	0.07	0.00	27.19	2.00	0.00	0.00	0.07	0.00
27.26	2.00	0.00	0.00	0.07	0.00	27.32	2.00	0.00	0.00	0.07	0.00
27.39	2.00	0.00	0.00	0.06	0.00	27.46	2.00	0.00	0.00	0.07	0.00
27.52	2.00	0.00	0.00	0.07	0.00	27.59	2.00	0.00	0.00	0.07	0.00
27.65	2.00	0.00	0.00	0.06	0.00	27.72	2.00	0.00	0.00	0.07	0.00
27.78	2.00	0.00	0.00	0.06	0.00	27.84	2.00	0.00	0.00	0.06	0.00
27.91	2.00	0.00	0.00	0.07	0.00	27.98	2.00	0.00	0.00	0.07	0.00
28.05	2.00	0.00	0.00	0.07	0.00	28.11	2.00	0.00	0.00	0.06	0.00
28.18	2.00	0.00	0.00	0.07	0.00	28.25	2.00	0.00	0.00	0.07	0.00
28.31	2.00	0.00	0.00	0.06	0.00	28.37	2.00	0.00	0.00	0.07	0.00
28.44	2.00	0.00	0.00	0.07	0.00	28.51	2.00	0.00	0.00	0.07	0.00
28.57	2.00	0.00	0.00	0.07	0.00	28.64	2.00	0.00	0.00	0.07	0.00
28.70	2.00	0.00	0.00	0.07	0.00	28.77	2.00	0.00	0.00	0.07	0.00
28.83	2.00	0.00	0.00	0.06	0.00	28.90	2.00	0.00	0.00	0.07	0.00
28.97	2.00	0.00	0.00	0.07	0.00	29.03	2.00	0.00	0.00	0.07	0.00
29.08	2.00	0.00	0.00	0.05	0.00	29.14	2.00	0.00	0.00	0.05	0.00
29.20	2.00	0.00	0.00	0.06	0.00	29.29	2.00	0.00	0.00	0.09	0.00
29.35	2.00	0.00	0.00	0.07	0.00	29.42	2.00	0.00	0.00	0.07	0.00
29.48	2.00	0.00	0.00	0.07	0.00	29.55	2.00	0.00	0.00	0.07	0.00
29.62	2.00	0.00	0.00	0.07	0.00	29.68	2.00	0.00	0.00	0.06	0.00
29.74	2.00	0.00	0.00	0.06	0.00	29.81	2.00	0.00	0.00	0.06	0.00
29.87	2.00	0.00	0.00	0.07	0.00	29.94	2.00	0.00	0.00	0.07	0.00
30.00	2.00	0.00	0.00	0.07	0.00	30.07	2.00	0.00	0.00	0.07	0.00
30.14	2.00	0.00	0.00	0.06	0.00	30.20	2.00	0.00	0.00	0.07	0.00
30.27	2.00	0.00	0.00	0.07	0.00	30.34	2.00	0.00	0.00	0.07	0.00
30.40	2.00	0.00	0.00	0.06	0.00	30.47	2.00	0.00	0.00	0.07	0.00
30.54	2.00	0.00	0.00	0.07	0.00	30.60	2.00	0.00	0.00	0.06	0.00
30.67	2.00	0.00	0.00	0.07	0.00	30.73	2.00	0.00	0.00	0.07	0.00
30.80	2.00	0.00	0.00	0.07	0.00	30.86	2.00	0.00	0.00	0.06	0.00
30.93	2.00	0.00	0.00	0.07	0.00	30.99	2.00	0.00	0.00	0.07	0.00
31.06	2.00	0.00	0.00	0.07	0.00	31.13	2.00	0.00	0.00	0.07	0.00
31.19	2.00	0.00	0.00	0.07	0.00	31.26	2.00	0.00	0.00	0.06	0.00
31.32	2.00	0.00	0.00	0.07	0.00	31.39	2.00	0.00	0.00	0.07	0.00
31.45	2.00	0.00	0.00	0.06	0.00	31.52	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.59	2.00	0.00	0.00	0.07	0.00	31.66	2.00	0.00	0.00	0.07	0.00
31.73	2.00	0.00	0.00	0.07	0.00	31.79	2.00	0.00	0.00	0.06	0.00
31.86	2.00	0.00	0.00	0.07	0.00	31.89	2.00	0.00	0.00	0.03	0.00
31.96	2.00	0.00	0.00	0.07	0.00	32.02	2.00	0.00	0.00	0.06	0.00
32.09	2.00	0.00	0.00	0.07	0.00	32.17	2.00	0.00	0.00	0.07	0.00
32.24	2.00	0.00	0.00	0.07	0.00	32.30	2.00	0.00	0.00	0.06	0.00
32.36	2.00	0.00	0.00	0.06	0.00	32.42	2.00	0.00	0.00	0.06	0.00
32.48	2.00	0.00	0.00	0.06	0.00	32.55	2.00	0.00	0.00	0.06	0.00
32.61	2.00	0.00	0.00	0.06	0.00	32.70	2.00	0.00	0.00	0.08	0.00
32.74	2.00	0.00	0.00	0.05	0.00	32.82	2.00	0.00	0.00	0.07	0.00
32.89	2.00	0.00	0.00	0.07	0.00	32.95	2.00	0.00	0.00	0.05	0.00
33.02	2.00	0.00	0.00	0.08	0.00	33.09	2.00	0.00	0.00	0.07	0.00
33.15	2.00	0.00	0.00	0.06	0.00	33.20	2.00	0.00	0.00	0.05	0.00
33.28	2.00	0.00	0.00	0.07	0.00	33.34	2.00	0.00	0.00	0.07	0.00
33.41	2.00	0.00	0.00	0.07	0.00	33.47	2.00	0.00	0.00	0.06	0.00
33.53	2.00	0.00	0.00	0.06	0.00	33.60	2.00	0.00	0.00	0.06	0.00
33.66	2.00	0.00	0.00	0.06	0.00	33.73	2.00	0.00	0.00	0.07	0.00
33.80	2.00	0.00	0.00	0.06	0.00	33.86	2.00	0.00	0.00	0.06	0.00
33.92	2.00	0.00	0.00	0.07	0.00	33.99	2.00	0.00	0.00	0.07	0.00
34.06	2.00	0.00	0.00	0.07	0.00	34.13	2.00	0.00	0.00	0.07	0.00
34.20	2.00	0.00	0.00	0.06	0.00	34.26	2.00	0.00	0.00	0.07	0.00
34.32	2.00	0.00	0.00	0.06	0.00	34.39	2.00	0.00	0.00	0.07	0.00
34.45	2.00	0.00	0.00	0.06	0.00	34.52	2.00	0.00	0.00	0.07	0.00
34.59	2.00	0.00	0.00	0.06	0.00	34.65	2.00	0.00	0.00	0.06	0.00
34.72	2.00	0.00	0.00	0.07	0.00	34.78	2.00	0.00	0.00	0.06	0.00
34.85	2.00	0.00	0.00	0.07	0.00	34.91	2.00	0.00	0.00	0.06	0.00
34.98	2.00	0.00	0.00	0.07	0.00	35.04	2.00	0.00	0.00	0.07	0.00
35.11	2.00	0.00	0.00	0.07	0.00	35.17	2.00	0.00	0.00	0.06	0.00
35.24	2.00	0.00	0.00	0.07	0.00	35.30	2.00	0.00	0.00	0.06	0.00
35.37	2.00	0.00	0.00	0.07	0.00	35.44	2.00	0.00	0.00	0.07	0.00
35.51	2.00	0.00	0.00	0.07	0.00	35.57	2.00	0.00	0.00	0.06	0.00
35.63	2.00	0.00	0.00	0.06	0.00	35.70	2.00	0.00	0.00	0.07	0.00
35.77	2.00	0.00	0.00	0.07	0.00	35.83	2.00	0.00	0.00	0.06	0.00
35.89	2.00	0.00	0.00	0.07	0.00	35.96	2.00	0.00	0.00	0.07	0.00
36.03	2.00	0.00	0.00	0.07	0.00	36.09	2.00	0.00	0.00	0.06	0.00
36.16	2.00	0.00	0.00	0.06	0.00	36.23	2.00	0.00	0.00	0.07	0.00
36.29	2.00	0.00	0.00	0.06	0.00	36.35	2.00	0.00	0.00	0.06	0.00
36.43	2.00	0.00	0.00	0.07	0.00	36.49	2.00	0.00	0.00	0.06	0.00
36.55	2.00	0.00	0.00	0.06	0.00	36.62	2.00	0.00	0.00	0.06	0.00
36.68	2.00	0.00	0.00	0.07	0.00	36.75	2.00	0.00	0.00	0.07	0.00
36.82	2.00	0.00	0.00	0.07	0.00	36.88	2.00	0.00	0.00	0.06	0.00
36.95	2.00	0.00	0.00	0.07	0.00	37.01	2.00	0.00	0.00	0.06	0.00
37.08	2.00	0.00	0.00	0.07	0.00	37.14	2.00	0.00	0.00	0.06	0.00
37.21	2.00	0.00	0.00	0.07	0.00	37.28	2.00	0.00	0.00	0.07	0.00
37.34	2.00	0.00	0.00	0.06	0.00	37.41	2.00	0.00	0.00	0.07	0.00
37.48	2.00	0.00	0.00	0.07	0.00	37.54	2.00	0.00	0.00	0.06	0.00
37.60	2.00	0.00	0.00	0.06	0.00	37.67	2.00	0.00	0.00	0.06	0.00
37.73	2.00	0.00	0.00	0.07	0.00	37.80	2.00	0.00	0.00	0.06	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
37.87	2.00	0.00	0.00	0.07	0.00	37.93	2.00	0.00	0.00	0.07	0.00
38.00	2.00	0.00	0.00	0.07	0.00	38.06	2.00	0.00	0.00	0.06	0.00
38.12	2.00	0.00	0.00	0.06	0.00	38.19	2.00	0.00	0.00	0.07	0.00
38.26	2.00	0.00	0.00	0.07	0.00	38.33	2.00	0.00	0.00	0.07	0.00
38.39	2.00	0.00	0.00	0.06	0.00	38.46	2.00	0.00	0.00	0.07	0.00
38.52	2.00	0.00	0.00	0.06	0.00	38.59	2.00	0.00	0.00	0.07	0.00
38.66	2.00	0.00	0.00	0.07	0.00	38.72	2.00	0.00	0.00	0.06	0.00
38.78	2.00	0.00	0.00	0.07	0.00	38.85	2.00	0.00	0.00	0.06	0.00
38.91	2.00	0.00	0.00	0.07	0.00	38.98	2.00	0.00	0.00	0.07	0.00
39.05	2.00	0.00	0.00	0.07	0.00	39.12	2.00	0.00	0.00	0.07	0.00
39.18	2.00	0.00	0.00	0.06	0.00	39.24	2.00	0.00	0.00	0.07	0.00
39.31	2.00	0.00	0.00	0.07	0.00	39.37	2.00	0.00	0.00	0.06	0.00
39.44	2.00	0.00	0.00	0.07	0.00	39.51	2.00	0.00	0.00	0.07	0.00
39.57	2.00	0.00	0.00	0.06	0.00	39.64	2.00	0.00	0.00	0.07	0.00
39.70	2.00	0.00	0.00	0.07	0.00	39.77	2.00	0.00	0.00	0.07	0.00
39.84	2.00	0.00	0.00	0.06	0.00	39.90	2.00	0.00	0.00	0.07	0.00
39.97	2.00	0.00	0.00	0.06	0.00	40.03	2.00	0.00	0.00	0.06	0.00
40.09	2.00	0.00	0.00	0.07	0.00	40.16	2.00	0.00	0.00	0.06	0.00

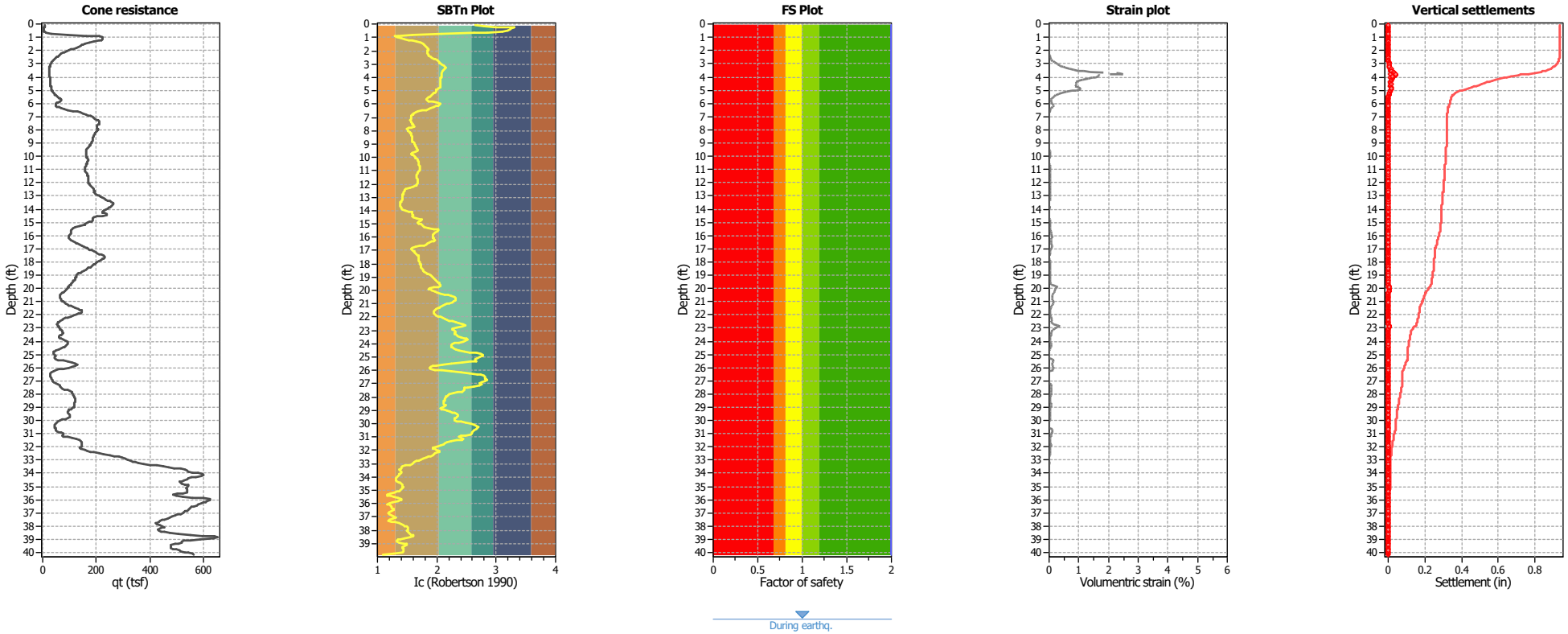
Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.07	2.65	14.43	4.19	60.42	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.14	2.79	12.22	5.72	69.93	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.20	3.00	9.41	8.81	82.92	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.27	3.30	6.14	15.26	93.73	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.34	3.25	7.19	13.99	100.60	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.40	3.23	7.74	13.46	104.17	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.46	3.19	7.93	12.54	99.49	0	0	0.57	0.000	0.00	0.00	0.00	0.000
0.54	3.10	8.53	10.65	90.83	0	0	0.56	0.000	0.00	0.00	0.00	0.000
0.60	2.85	12.13	6.52	79.13	0	0	0.56	0.000	0.00	0.00	0.00	0.000
0.67	2.63	18.54	4.02	74.53	0	0	0.56	0.000	0.00	0.00	0.00	0.000
0.73	2.09	52.37	1.40	73.27	16	412	0.56	0.007	0.01	21.03	0.01	0.000
0.79	1.58	147.80	1.00	147.80	26	612	0.56	0.004	0.00	21.03	0.00	0.000
0.87	1.35	258.22	1.00	258.22	43	803	0.56	0.003	0.00	21.03	0.00	0.000
0.93	1.29	340.72	1.00	340.72	56	972	0.56	0.003	0.00	21.03	0.00	0.000
0.99	1.33	359.11	1.00	359.11	59	1087	0.56	0.003	0.00	21.03	0.00	0.000
1.05	1.40	360.40	1.00	360.40	61	1191	0.56	0.003	0.00	21.03	0.00	0.000
1.12	1.47	359.85	1.00	359.85	62	1290	0.56	0.003	0.00	21.03	0.00	0.000
1.19	1.53	354.18	1.00	354.18	62	1371	0.56	0.003	0.00	21.03	0.00	0.000
1.25	1.59	338.04	1.00	338.04	61	1419	0.56	0.003	0.00	21.03	0.00	0.000
1.33	1.66	307.40	1.00	307.40	57	1415	0.56	0.003	0.00	21.03	0.00	0.000
1.39	1.73	276.87	1.04	289.21	54	1383	0.56	0.003	0.00	21.03	0.00	0.000
1.46	1.77	252.20	1.12	282.56	54	1335	0.56	0.003	0.00	21.03	0.00	0.000
1.52	1.78	242.77	1.13	275.18	53	1302	0.56	0.004	0.00	21.03	0.00	0.000
1.58	1.79	236.60	1.14	269.49	52	1276	0.56	0.004	0.00	21.03	0.00	0.000
1.65	1.80	229.93	1.15	264.18	51	1253	0.56	0.004	0.00	21.03	0.00	0.000
1.71	1.82	217.04	1.17	254.44	50	1216	0.56	0.005	0.00	21.03	0.00	0.000
1.79	1.84	200.89	1.19	239.46	47	1156	0.56	0.005	0.00	21.03	0.00	0.000
1.85	1.85	183.59	1.20	220.76	43	1074	0.56	0.006	0.00	21.03	0.00	0.000
1.92	1.85	168.14	1.20	202.15	40	983	0.56	0.007	0.00	21.03	0.00	0.000
1.98	1.85	154.20	1.20	184.64	36	895	0.56	0.008	0.00	21.03	0.00	0.000
2.04	1.84	141.86	1.19	169.05	33	816	0.56	0.010	0.01	21.03	0.01	0.000
2.11	1.83	131.12	1.19	155.69	30	750	0.56	0.012	0.01	21.03	0.01	0.000
2.17	1.83	121.84	1.19	144.70	28	697	0.56	0.014	0.01	21.03	0.01	0.000
2.24	1.84	113.42	1.19	135.42	27	655	0.56	0.017	0.01	21.03	0.01	0.000
2.30	1.85	105.65	1.20	127.05	25	618	0.56	0.020	0.02	21.03	0.02	0.000
2.37	1.87	97.87	1.21	118.91	24	584	0.56	0.024	0.02	21.03	0.02	0.000
2.43	1.89	90.10	1.23	110.86	22	553	0.56	0.029	0.03	21.03	0.03	0.000
2.50	1.92	82.07	1.25	102.44	21	521	0.56	0.035	0.03	21.03	0.04	0.001
2.58	1.95	74.74	1.27	94.76	19	493	0.56	0.044	0.05	21.03	0.05	0.001
2.64	1.98	68.38	1.29	88.10	18	468	0.56	0.054	0.06	21.03	0.07	0.001
2.71	2.00	63.46	1.31	83.11	17	449	0.56	0.065	0.08	21.03	0.09	0.001
2.77	2.03	59.39	1.33	79.05	17	433	0.56	0.078	0.10	21.03	0.11	0.002
2.83	2.04	55.98	1.35	75.42	16	417	0.56	0.094	0.12	21.03	0.14	0.002
2.90	2.05	53.16	1.35	71.93	15	398	0.56	0.119	0.16	21.03	0.18	0.003
2.95	2.06	50.20	1.37	68.55	15	382	0.56	0.150	0.22	21.03	0.24	0.003
3.04	2.08	47.59	1.39	65.99	14	370	0.56	0.185	0.28	21.03	0.31	0.007
3.11	2.11	45.08	1.43	64.44	14	364	0.56	0.210	0.32	21.03	0.35	0.006
3.17	2.13	43.27	1.46	63.39	14	359	0.56	0.236	0.37	21.03	0.40	0.006

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.24	2.15	41.46	1.50	62.39	14	354	0.56	0.266	0.42	21.03	0.46	0.007
3.28	2.15	40.40	1.51	60.93	13	345	0.56	0.311	0.50	21.03	0.55	0.006
3.38	2.14	40.04	1.49	59.64	13	338	0.56	0.374	0.62	21.03	0.68	0.015
3.44	2.12	40.08	1.45	58.24	13	330	0.56	0.452	0.78	21.03	0.85	0.013
3.51	2.11	40.33	1.43	57.58	12	325	0.56	0.514	0.90	21.03	0.99	0.016
3.54	2.09	40.13	1.41	56.53	12	318	0.56	0.597	1.08	21.03	1.18	0.010
3.64	2.08	40.09	1.40	55.96	12	314	0.56	0.694	1.28	21.03	1.39	0.032
3.70	2.08	39.76	1.00	39.76	9	311	0.56	0.776	2.15	21.03	2.35	0.036
3.77	2.08	39.70	1.00	39.70	9	311	0.56	0.820	2.28	21.03	2.48	0.042
3.81	2.08	39.68	1.40	55.46	12	312	0.56	0.825	1.53	21.03	1.67	0.013
3.90	2.08	40.15	1.39	55.95	12	314	0.56	0.842	1.55	21.03	1.69	0.039
3.97	2.08	40.79	1.39	56.58	12	317	0.56	0.831	1.51	21.03	1.64	0.026
4.00	2.07	41.83	1.37	57.44	12	321	0.56	0.797	1.43	21.03	1.56	0.013
4.07	2.06	42.68	1.37	58.31	12	325	0.56	0.771	1.37	21.03	1.48	0.023
4.14	2.05	44.03	1.36	59.85	13	332	0.56	0.701	1.21	21.03	1.31	0.021
4.21	2.05	45.33	1.36	61.55	13	342	0.56	0.624	1.04	21.03	1.12	0.018
4.27	2.05	46.53	1.36	63.15	13	350	0.56	0.562	0.91	21.03	0.98	0.016
4.34	2.05	47.08	1.36	64.01	14	356	0.56	0.539	0.86	21.03	0.92	0.015
4.40	2.06	47.22	1.36	64.40	14	358	0.56	0.538	0.85	21.03	0.91	0.014
4.47	2.06	47.17	1.37	64.58	14	360	0.56	0.544	0.85	21.03	0.92	0.014
4.54	2.07	47.21	1.37	64.85	14	362	0.56	0.549	0.85	21.03	0.92	0.015
4.60	2.07	47.45	1.38	65.32	14	365	0.56	0.546	0.84	21.03	0.90	0.014
4.67	2.07	48.00	1.38	66.00	14	369	0.56	0.536	0.81	21.03	0.87	0.013
4.73	2.06	48.75	1.36	66.42	14	369	0.56	0.550	0.83	21.03	0.89	0.014
4.80	2.03	49.80	1.34	66.56	14	366	0.56	0.603	0.92	21.03	0.99	0.016
4.87	2.01	50.95	1.31	66.99	14	363	0.56	0.652	1.00	21.03	1.07	0.018
4.93	1.99	52.34	1.30	68.09	14	365	0.56	0.655	0.99	21.03	1.06	0.017
5.00	1.99	53.99	1.30	70.06	15	375	0.56	0.586	0.86	21.03	0.92	0.014
5.06	1.98	56.19	1.29	72.67	15	387	0.56	0.506	0.71	21.03	0.76	0.012
5.13	1.98	58.99	1.29	75.98	16	403	0.56	0.422	0.57	21.03	0.60	0.010
5.19	1.96	63.30	1.28	80.73	17	423	0.56	0.339	0.43	21.03	0.45	0.006
5.25	1.94	68.46	1.26	86.34	18	446	0.56	0.271	0.32	21.03	0.34	0.005
5.32	1.91	74.06	1.25	92.33	19	469	0.56	0.221	0.24	21.03	0.25	0.004
5.38	1.89	78.97	1.23	97.39	19	487	0.56	0.191	0.20	21.03	0.21	0.003
5.45	1.87	84.27	1.22	102.59	20	505	0.56	0.168	0.16	21.03	0.17	0.003
5.51	1.85	90.58	1.20	108.82	21	529	0.56	0.143	0.13	21.03	0.14	0.002
5.58	1.83	97.94	1.19	116.21	23	559	0.56	0.118	0.10	21.03	0.11	0.002
5.65	1.83	104.80	1.18	123.64	24	593	0.56	0.098	0.08	21.03	0.08	0.001
5.71	1.84	109.26	1.19	129.85	25	626	0.56	0.083	0.06	21.03	0.07	0.001
5.78	1.86	110.40	1.21	133.53	26	653	0.56	0.074	0.05	21.03	0.06	0.001
5.84	1.93	101.77	1.26	127.97	26	658	0.56	0.074	0.05	21.03	0.06	0.001
5.91	2.00	90.99	1.31	119.05	25	643	0.56	0.082	0.06	21.03	0.07	0.001
5.97	2.06	80.86	1.36	110.20	23	613	0.56	0.098	0.08	21.03	0.08	0.001
6.04	2.05	78.05	1.36	105.90	22	588	0.56	0.117	0.10	21.03	0.11	0.002
6.11	2.03	77.84	1.33	103.62	22	568	0.56	0.136	0.12	21.03	0.13	0.002
6.17	1.99	80.04	1.30	104.18	22	559	0.56	0.148	0.13	21.03	0.14	0.002
6.24	1.95	86.05	1.27	109.23	22	569	0.56	0.142	0.12	21.03	0.13	0.002
6.30	1.90	95.52	1.24	118.45	24	597	0.56	0.121	0.10	21.03	0.10	0.002

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.37	1.86	108.75	1.21	131.68	26	645	0.56	0.094	0.07	21.03	0.07	0.001
6.43	1.81	126.79	1.17	148.14	29	707	0.56	0.072	0.05	21.03	0.05	0.001
6.50	1.75	150.84	1.09	163.88	31	776	0.56	0.056	0.03	21.03	0.03	0.001
6.57	1.68	178.51	1.00	178.51	33	844	0.56	0.046	0.02	21.03	0.03	0.000
6.63	1.64	202.94	1.00	202.94	37	911	0.56	0.039	0.02	21.03	0.02	0.000
6.70	1.61	222.27	1.00	222.27	40	972	0.56	0.034	0.01	21.03	0.02	0.000
6.76	1.60	237.51	1.00	237.51	43	1029	0.56	0.031	0.01	21.03	0.01	0.000
6.83	1.59	251.57	1.00	251.57	45	1081	0.56	0.028	0.01	21.03	0.01	0.000
6.90	1.57	265.69	1.00	265.69	47	1125	0.56	0.027	0.01	21.03	0.01	0.000
6.97	1.56	277.40	1.00	277.40	49	1165	0.56	0.025	0.01	21.03	0.01	0.000
7.03	1.56	283.50	1.00	283.50	50	1196	0.56	0.024	0.01	21.03	0.01	0.000
7.10	1.56	290.83	1.00	290.83	52	1229	0.56	0.024	0.01	21.03	0.01	0.000
7.17	1.56	297.42	1.00	297.42	53	1263	0.56	0.023	0.01	21.03	0.01	0.000
7.24	1.55	305.79	1.00	305.79	54	1300	0.56	0.022	0.01	21.03	0.01	0.000
7.28	1.56	310.49	1.00	310.49	55	1334	0.56	0.021	0.01	21.03	0.01	0.000
7.36	1.57	312.67	1.00	312.67	56	1367	0.56	0.021	0.01	21.03	0.01	0.000
7.42	1.58	313.39	1.00	313.39	56	1398	0.56	0.020	0.01	21.03	0.01	0.000
7.49	1.59	311.86	1.00	311.86	56	1418	0.56	0.020	0.01	21.03	0.01	0.000
7.56	1.60	307.84	1.00	307.84	56	1427	0.56	0.020	0.01	21.03	0.01	0.000
7.63	1.61	303.37	1.00	303.37	55	1425	0.56	0.020	0.01	21.03	0.01	0.000
7.70	1.61	298.38	1.00	298.38	54	1417	0.56	0.021	0.01	21.03	0.01	0.000
7.74	1.57	295.80	1.00	295.80	53	1333	0.56	0.023	0.01	21.03	0.01	0.000
7.81	1.53	294.09	1.00	294.09	52	1265	0.56	0.026	0.01	21.03	0.01	0.000
7.89	1.49	294.58	1.00	294.58	51	1207	0.56	0.029	0.01	21.03	0.01	0.000
7.95	1.50	295.57	1.00	295.57	52	1244	0.56	0.027	0.01	21.03	0.01	0.000
8.01	1.52	295.97	1.00	295.97	52	1269	0.56	0.027	0.01	21.03	0.01	0.000
8.10	1.54	285.81	1.00	285.81	51	1277	0.56	0.027	0.01	21.03	0.01	0.000
8.15	1.56	279.96	1.00	279.96	50	1276	0.56	0.027	0.01	21.03	0.01	0.000
8.22	1.57	273.05	1.00	273.05	49	1268	0.56	0.028	0.01	21.03	0.01	0.000
8.28	1.56	273.87	1.00	273.87	49	1271	0.56	0.028	0.01	21.03	0.01	0.000
8.35	1.57	269.26	1.00	269.26	48	1272	0.55	0.028	0.01	21.03	0.01	0.000
8.41	1.58	264.71	1.00	264.71	47	1269	0.55	0.029	0.01	21.03	0.01	0.000
8.48	1.58	260.60	1.00	260.60	47	1257	0.55	0.030	0.01	21.03	0.01	0.000
8.55	1.58	257.58	1.00	257.58	46	1247	0.55	0.030	0.01	21.03	0.01	0.000
8.61	1.58	255.64	1.00	255.64	46	1242	0.55	0.031	0.01	21.03	0.01	0.000
8.68	1.58	254.80	1.00	254.80	46	1244	0.55	0.031	0.01	21.03	0.01	0.000
8.74	1.59	254.19	1.00	254.19	46	1250	0.55	0.031	0.01	21.03	0.01	0.000
8.81	1.59	252.67	1.00	252.67	45	1260	0.55	0.031	0.01	21.03	0.01	0.000
8.87	1.60	250.36	1.00	250.36	45	1270	0.55	0.031	0.01	21.03	0.01	0.000
8.94	1.61	247.20	1.00	247.20	45	1275	0.55	0.031	0.01	21.03	0.01	0.000
9.00	1.62	243.82	1.00	243.82	44	1277	0.55	0.031	0.01	21.03	0.01	0.000
9.07	1.63	240.18	1.00	240.18	44	1276	0.55	0.032	0.01	21.03	0.01	0.000
9.13	1.64	236.38	1.00	236.38	43	1274	0.55	0.032	0.01	21.03	0.01	0.000
9.20	1.65	232.59	1.00	232.59	43	1270	0.55	0.033	0.01	21.03	0.01	0.000
9.26	1.66	228.25	1.00	228.25	42	1262	0.55	0.033	0.01	21.03	0.01	0.000
9.33	1.66	223.74	1.00	223.74	41	1252	0.55	0.034	0.01	21.03	0.01	0.000
9.39	1.67	219.23	1.00	219.23	41	1241	0.55	0.035	0.02	21.03	0.01	0.000
9.45	1.68	215.16	1.00	215.16	40	1233	0.55	0.036	0.02	21.03	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.52	1.67	210.92	1.00	210.92	39	1203	0.55	0.038	0.02	21.03	0.02	0.000
9.59	1.63	207.81	1.00	207.81	38	1138	0.55	0.044	0.02	21.03	0.02	0.000
9.66	1.59	206.65	1.00	206.65	37	1077	0.55	0.050	0.02	21.03	0.02	0.000
9.72	1.57	206.77	1.00	206.77	37	1052	0.55	0.053	0.03	21.03	0.02	0.000
9.79	1.59	206.63	1.00	206.63	37	1081	0.55	0.050	0.02	21.03	0.02	0.000
9.85	1.61	206.16	1.00	206.16	37	1108	0.55	0.048	0.02	21.03	0.02	0.000
9.92	1.62	205.83	1.00	205.83	37	1133	0.55	0.046	0.02	21.03	0.02	0.000
9.99	1.64	204.76	1.00	204.76	37	1154	0.55	0.045	0.02	21.03	0.02	0.000
10.04	1.65	206.13	1.00	206.13	38	1180	0.55	0.043	0.02	21.03	0.02	0.000
10.11	1.66	207.83	1.00	207.83	38	1210	0.55	0.041	0.02	21.03	0.02	0.000
10.18	1.67	210.16	1.00	210.16	39	1244	0.55	0.040	0.02	21.03	0.02	0.000
10.24	1.68	211.39	1.00	211.39	39	1269	0.55	0.038	0.02	21.03	0.02	0.000
10.30	1.69	211.08	1.00	211.08	39	1284	0.55	0.038	0.02	21.03	0.02	0.000
10.40	1.70	209.53	1.00	209.53	39	1292	0.55	0.038	0.02	21.03	0.02	0.000
10.43	1.70	207.89	1.00	207.89	39	1289	0.55	0.038	0.02	21.03	0.02	0.000
10.53	1.70	205.39	1.00	205.39	38	1281	0.55	0.039	0.02	21.03	0.02	0.000
10.59	1.70	202.76	1.00	202.76	38	1270	0.55	0.040	0.02	21.03	0.02	0.000
10.65	1.71	200.11	1.00	200.11	37	1261	0.55	0.041	0.02	21.03	0.02	0.000
10.72	1.71	197.41	1.01	198.97	37	1254	0.55	0.042	0.02	21.03	0.02	0.000
10.79	1.71	194.77	1.01	197.51	37	1245	0.55	0.043	0.02	21.03	0.02	0.000
10.86	1.71	192.54	1.02	196.04	37	1238	0.55	0.044	0.02	21.03	0.02	0.000
10.89	1.71	191.47	1.01	193.68	36	1229	0.55	0.045	0.02	21.03	0.02	0.000
10.96	1.71	190.42	1.00	190.87	36	1221	0.55	0.046	0.02	21.03	0.02	0.000
11.03	1.70	189.81	1.00	189.81	35	1212	0.55	0.047	0.02	21.03	0.02	0.000
11.09	1.69	189.58	1.00	189.58	35	1206	0.55	0.048	0.02	21.03	0.02	0.000
11.15	1.68	191.06	1.00	191.06	35	1205	0.55	0.049	0.02	21.03	0.02	0.000
11.25	1.67	192.95	1.00	192.95	36	1208	0.55	0.049	0.02	21.03	0.02	0.001
11.31	1.67	195.40	1.00	195.40	36	1215	0.55	0.049	0.02	21.03	0.02	0.000
11.38	1.66	196.97	1.00	196.97	36	1225	0.55	0.049	0.02	21.03	0.02	0.000
11.44	1.66	198.24	1.00	198.24	37	1237	0.55	0.048	0.02	21.03	0.02	0.000
11.51	1.66	198.97	1.00	198.97	37	1248	0.55	0.048	0.02	21.03	0.02	0.000
11.57	1.67	199.49	1.00	199.49	37	1258	0.55	0.047	0.02	21.03	0.02	0.000
11.64	1.67	199.79	1.00	199.79	37	1267	0.55	0.047	0.02	21.03	0.02	0.000
11.71	1.67	200.07	1.00	200.07	37	1274	0.55	0.047	0.02	21.03	0.02	0.000
11.77	1.67	199.90	1.00	199.90	37	1277	0.55	0.047	0.02	21.03	0.02	0.000
11.84	1.67	199.24	1.00	199.24	37	1277	0.55	0.047	0.02	21.03	0.02	0.000
11.90	1.67	198.10	1.00	198.10	37	1275	0.55	0.048	0.02	21.03	0.02	0.000
11.97	1.67	197.31	1.00	197.31	36	1271	0.55	0.049	0.02	21.03	0.02	0.000
12.03	1.67	197.21	1.00	197.21	36	1268	0.55	0.049	0.02	21.03	0.02	0.000
12.09	1.66	197.99	1.00	197.99	36	1264	0.55	0.050	0.02	21.03	0.02	0.000
12.16	1.65	199.71	1.00	199.71	37	1264	0.55	0.051	0.02	21.03	0.02	0.000
12.23	1.61	202.63	1.00	202.63	37	1222	0.55	0.055	0.03	21.03	0.02	0.000
12.30	1.54	206.28	1.00	206.28	37	1155	0.55	0.063	0.03	21.03	0.03	0.000
12.36	1.48	209.80	1.00	209.80	36	1088	0.55	0.074	0.04	21.03	0.03	0.001
12.43	1.46	212.76	1.00	212.76	37	1072	0.55	0.077	0.04	21.03	0.03	0.001
12.50	1.45	214.80	1.00	214.80	37	1082	0.55	0.076	0.04	21.03	0.03	0.001
12.56	1.45	215.39	1.00	215.39	37	1084	0.55	0.077	0.04	21.03	0.03	0.001
12.61	1.45	215.10	1.00	215.10	37	1078	0.55	0.078	0.04	21.03	0.03	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.68	1.44	214.00	1.00	214.00	37	1069	0.55	0.081	0.04	21.03	0.04	0.001
12.74	1.43	214.29	1.00	214.29	37	1057	0.55	0.084	0.04	21.03	0.04	0.001
12.81	1.42	216.84	1.00	216.84	37	1058	0.55	0.084	0.04	21.03	0.04	0.001
12.87	1.42	221.69	1.00	221.69	38	1082	0.55	0.080	0.04	21.03	0.03	0.001
12.94	1.42	227.05	1.00	227.05	39	1111	0.55	0.076	0.03	21.03	0.03	0.000
13.00	1.42	231.70	1.00	231.70	39	1143	0.55	0.071	0.03	21.03	0.03	0.000
13.06	1.42	237.15	1.00	237.15	40	1173	0.55	0.067	0.03	21.03	0.03	0.000
13.13	1.42	243.37	1.00	243.37	41	1209	0.55	0.063	0.03	21.03	0.02	0.000
13.20	1.42	250.27	1.00	250.27	43	1240	0.55	0.060	0.02	21.03	0.02	0.000
13.27	1.41	258.04	1.00	258.04	44	1266	0.55	0.058	0.02	21.03	0.02	0.000
13.34	1.40	264.66	1.00	264.66	45	1289	0.55	0.056	0.02	21.03	0.02	0.000
13.39	1.39	272.44	1.00	272.44	46	1311	0.55	0.054	0.02	21.03	0.02	0.000
13.47	1.38	277.72	1.00	277.72	47	1331	0.55	0.053	0.02	21.03	0.02	0.000
13.53	1.38	282.69	1.00	282.69	47	1346	0.55	0.052	0.02	21.03	0.02	0.000
13.58	1.38	283.58	1.00	283.58	48	1355	0.55	0.052	0.02	21.03	0.02	0.000
13.65	1.39	280.84	1.00	280.84	47	1360	0.55	0.052	0.02	21.03	0.02	0.000
13.73	1.40	275.99	1.00	275.99	47	1363	0.55	0.052	0.02	21.03	0.02	0.000
13.80	1.41	270.60	1.00	270.60	46	1356	0.55	0.053	0.02	21.03	0.02	0.000
13.87	1.41	266.09	1.00	266.09	45	1337	0.55	0.055	0.02	21.03	0.02	0.000
13.91	1.43	261.66	1.00	261.66	45	1344	0.55	0.054	0.02	21.03	0.02	0.000
13.98	1.48	256.57	1.00	256.57	44	1411	0.55	0.050	0.02	21.03	0.02	0.000
14.05	1.54	248.73	1.00	248.73	44	1479	0.55	0.045	0.02	21.03	0.02	0.000
14.12	1.59	240.60	1.00	240.60	43	1528	0.55	0.043	0.02	21.03	0.02	0.000
14.19	1.59	234.51	1.00	234.51	42	1504	0.55	0.045	0.02	21.03	0.02	0.000
14.26	1.59	235.04	1.00	235.04	42	1508	0.55	0.045	0.02	21.03	0.02	0.000
14.32	1.60	240.12	1.00	240.12	43	1553	0.55	0.043	0.02	21.03	0.01	0.000
14.38	1.59	250.27	1.00	250.27	45	1610	0.55	0.040	0.02	21.03	0.01	0.000
14.45	1.59	248.27	1.00	248.27	45	1606	0.55	0.040	0.02	21.03	0.01	0.000
14.50	1.61	232.63	1.00	232.63	42	1542	0.55	0.044	0.02	21.03	0.02	0.000
14.57	1.67	211.74	1.00	211.74	39	1511	0.55	0.046	0.02	21.03	0.02	0.000
14.64	1.73	198.09	1.04	206.63	39	1523	0.55	0.046	0.02	21.03	0.02	0.000
14.70	1.75	194.63	1.08	210.23	40	1538	0.55	0.045	0.02	21.03	0.02	0.000
14.77	1.74	191.89	1.07	205.03	39	1508	0.55	0.047	0.02	21.03	0.02	0.000
14.83	1.70	192.39	1.00	192.39	36	1443	0.55	0.052	0.03	21.03	0.02	0.000
14.91	1.68	188.59	1.00	188.59	35	1376	0.55	0.058	0.03	21.03	0.03	0.000
14.97	1.69	178.87	1.00	178.87	33	1328	0.55	0.063	0.03	21.03	0.03	0.000
15.03	1.73	168.01	1.04	175.19	33	1311	0.55	0.065	0.04	21.03	0.03	0.000
15.11	1.76	161.83	1.09	176.85	34	1311	0.55	0.066	0.04	21.03	0.03	0.001
15.17	1.77	160.39	1.11	177.69	34	1318	0.55	0.065	0.03	21.03	0.03	0.000
15.23	1.79	154.54	1.15	177.02	34	1318	0.55	0.066	0.03	21.03	0.03	0.000
15.29	1.86	140.24	1.21	170.00	34	1308	0.55	0.067	0.04	21.03	0.03	0.000
15.36	1.95	125.42	1.27	159.35	33	1304	0.55	0.068	0.04	21.03	0.03	0.001
15.44	2.02	114.92	1.32	151.86	32	1299	0.55	0.070	0.04	21.03	0.03	0.001
15.49	2.02	112.29	1.32	148.37	31	1272	0.55	0.074	0.04	21.03	0.04	0.001
15.55	2.00	110.08	1.31	143.99	30	1226	0.55	0.081	0.05	21.03	0.04	0.001
15.62	1.98	107.55	1.29	138.76	29	1169	0.55	0.092	0.06	21.03	0.05	0.001
15.68	1.97	105.45	1.28	135.05	28	1130	0.55	0.102	0.07	21.03	0.06	0.001
15.75	1.95	104.24	1.27	132.11	27	1094	0.55	0.112	0.08	21.03	0.07	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.84	1.93	103.09	1.26	129.64	26	1066	0.55	0.123	0.09	21.03	0.08	0.002
15.91	1.92	101.61	1.25	127.32	26	1044	0.55	0.131	0.10	21.03	0.08	0.001
15.98	1.93	99.35	1.26	124.90	25	1032	0.55	0.137	0.10	21.03	0.09	0.001
16.04	1.94	97.22	1.26	122.81	25	1024	0.55	0.142	0.11	21.03	0.09	0.002
16.08	1.95	95.38	1.27	121.20	25	1020	0.55	0.144	0.11	21.03	0.09	0.001
16.15	1.96	94.45	1.28	120.62	25	1024	0.55	0.144	0.11	21.03	0.09	0.002
16.21	1.96	95.12	1.28	121.58	25	1036	0.55	0.140	0.11	21.03	0.09	0.001
16.28	1.95	98.43	1.27	124.82	25	1055	0.55	0.133	0.10	21.03	0.08	0.001
16.34	1.92	103.94	1.25	129.69	26	1075	0.55	0.127	0.09	21.03	0.08	0.001
16.41	1.88	110.60	1.22	135.33	27	1096	0.55	0.120	0.08	21.03	0.07	0.001
16.50	1.85	116.69	1.20	140.08	28	1117	0.55	0.115	0.08	21.03	0.07	0.001
16.57	1.83	121.67	1.18	143.50	28	1132	0.55	0.112	0.07	21.03	0.06	0.001
16.60	1.79	126.93	1.14	144.88	28	1131	0.54	0.112	0.08	21.03	0.06	0.001
16.67	1.72	132.22	1.02	135.28	25	1078	0.54	0.130	0.10	21.03	0.08	0.001
16.73	1.64	139.26	1.00	139.26	25	1033	0.54	0.149	0.11	21.03	0.09	0.001
16.83	1.58	146.73	1.00	146.73	26	1012	0.54	0.161	0.12	21.03	0.10	0.002
16.89	1.57	154.01	1.00	154.01	28	1057	0.54	0.142	0.10	21.03	0.08	0.001
16.93	1.59	157.96	1.00	157.96	28	1106	0.54	0.124	0.08	21.03	0.07	0.001
17.01	1.61	161.61	1.00	161.61	29	1157	0.54	0.110	0.07	21.03	0.06	0.001
17.07	1.62	166.55	1.00	166.55	30	1219	0.54	0.096	0.06	21.03	0.05	0.001
17.13	1.62	174.55	1.00	174.55	32	1284	0.54	0.085	0.05	21.03	0.04	0.001
17.19	1.63	181.74	1.00	181.74	33	1356	0.54	0.075	0.04	21.03	0.03	0.001
17.26	1.66	187.70	1.00	187.70	35	1444	0.54	0.065	0.03	21.03	0.03	0.000
17.33	1.68	192.85	1.00	192.85	36	1526	0.54	0.058	0.03	21.03	0.02	0.000
17.39	1.69	198.23	1.00	198.23	37	1599	0.54	0.053	0.03	21.03	0.02	0.000
17.45	1.69	205.97	1.00	205.97	38	1658	0.54	0.050	0.02	21.03	0.02	0.000
17.53	1.69	211.84	1.00	211.84	39	1708	0.54	0.047	0.02	21.03	0.02	0.000
17.60	1.69	215.44	1.00	215.44	40	1747	0.54	0.046	0.02	21.03	0.02	0.000
17.66	1.70	215.18	1.00	215.18	40	1766	0.54	0.045	0.02	21.03	0.02	0.000
17.73	1.70	213.18	1.00	213.18	40	1762	0.54	0.045	0.02	21.03	0.02	0.000
17.79	1.70	208.95	1.00	208.95	39	1734	0.55	0.047	0.02	21.03	0.02	0.000
17.86	1.71	202.11	1.00	202.55	38	1690	0.55	0.050	0.02	21.03	0.02	0.000
17.93	1.71	194.89	1.02	197.87	37	1646	0.55	0.053	0.03	21.03	0.02	0.000
18.00	1.72	188.31	1.03	193.74	36	1607	0.55	0.055	0.03	21.03	0.02	0.000
18.06	1.72	182.84	1.04	189.60	36	1571	0.55	0.058	0.03	21.03	0.02	0.000
18.13	1.73	178.66	1.04	186.08	35	1543	0.55	0.061	0.03	21.03	0.03	0.000
18.18	1.73	174.79	1.05	183.47	35	1520	0.55	0.063	0.03	21.03	0.03	0.000
18.25	1.74	170.71	1.06	181.30	34	1501	0.55	0.065	0.03	21.03	0.03	0.001
18.33	1.75	166.35	1.08	179.10	34	1481	0.55	0.068	0.04	21.03	0.03	0.001
18.38	1.75	161.84	1.09	176.55	34	1460	0.55	0.070	0.04	21.03	0.03	0.000
18.44	1.76	156.79	1.11	173.29	33	1434	0.55	0.074	0.04	21.03	0.03	0.000
18.53	1.78	151.10	1.12	169.74	33	1408	0.55	0.077	0.04	21.03	0.03	0.001
18.59	1.79	145.24	1.15	166.30	32	1386	0.55	0.081	0.05	21.03	0.04	0.001
18.66	1.82	139.25	1.17	162.83	32	1371	0.55	0.083	0.05	21.03	0.04	0.001
18.73	1.84	132.85	1.19	158.50	31	1354	0.55	0.086	0.05	21.03	0.04	0.001
18.79	1.87	126.56	1.21	153.58	30	1336	0.55	0.090	0.05	21.03	0.04	0.001
18.86	1.89	120.91	1.23	148.84	30	1320	0.55	0.093	0.06	21.03	0.05	0.001
18.92	1.91	116.31	1.25	144.85	29	1309	0.55	0.096	0.06	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.99	1.93	112.97	1.26	141.96	29	1302	0.55	0.097	0.06	21.03	0.05	0.001
19.06	1.94	110.81	1.27	140.34	29	1305	0.55	0.097	0.06	21.03	0.05	0.001
19.13	1.96	109.48	1.28	139.75	29	1317	0.55	0.096	0.06	21.03	0.05	0.001
19.19	1.97	108.59	1.29	139.69	29	1333	0.55	0.094	0.06	21.03	0.05	0.001
19.23	1.99	107.59	1.30	139.64	29	1348	0.55	0.091	0.06	21.03	0.05	0.000
19.32	2.01	105.70	1.31	138.63	29	1358	0.55	0.090	0.06	21.03	0.05	0.001
19.39	2.02	103.55	1.33	137.38	29	1363	0.55	0.090	0.06	21.03	0.05	0.001
19.42	2.04	100.57	1.34	134.94	28	1352	0.55	0.092	0.06	21.03	0.05	0.000
19.52	2.05	97.43	1.35	131.88	28	1333	0.55	0.096	0.06	21.03	0.05	0.001
19.59	2.06	94.26	1.36	128.37	27	1305	0.55	0.102	0.07	21.03	0.05	0.001
19.65	2.06	91.80	1.37	125.39	27	1279	0.55	0.108	0.08	21.03	0.06	0.001
19.71	2.02	89.47	1.32	118.50	25	1186	0.55	0.134	0.10	21.03	0.08	0.001
19.78	1.95	87.06	1.27	110.75	23	1060	0.55	0.192	0.17	21.03	0.13	0.002
19.85	1.87	84.80	1.22	103.24	20	931	0.55	0.309	0.30	21.03	0.23	0.004
19.92	1.86	82.95	1.21	100.34	20	900	0.56	0.355	0.36	21.03	0.28	0.005
19.95	1.89	81.82	1.23	100.65	20	922	0.56	0.324	0.32	21.03	0.25	0.002
20.02	1.92	80.54	1.25	100.58	20	943	0.56	0.298	0.29	21.03	0.23	0.004
20.08	1.96	77.55	1.28	99.09	20	963	0.56	0.278	0.27	21.03	0.21	0.003
20.16	2.01	73.70	1.32	97.04	20	979	0.56	0.263	0.26	21.03	0.20	0.004
20.23	2.07	69.35	1.38	95.57	20	997	0.56	0.248	0.24	21.03	0.18	0.003
20.29	2.13	65.52	1.47	96.04	21	1021	0.56	0.230	0.22	21.03	0.16	0.003
20.36	2.19	61.46	1.60	98.15	22	1043	0.56	0.214	0.19	21.03	0.15	0.002
20.42	2.25	57.80	1.76	101.51	23	1061	0.56	0.203	0.17	21.03	0.13	0.002
20.49	2.30	54.88	1.91	104.98	25	1072	0.56	0.198	0.15	21.03	0.12	0.002
20.55	2.32	53.86	1.99	107.12	25	1082	0.56	0.193	0.14	21.03	0.11	0.002
20.62	2.33	53.41	2.02	108.13	26	1088	0.56	0.190	0.14	21.03	0.11	0.002
20.68	2.32	53.93	2.00	107.79	26	1092	0.56	0.189	0.14	21.03	0.11	0.002
20.75	2.31	54.25	1.97	106.80	25	1090	0.56	0.192	0.14	21.03	0.11	0.002
20.82	2.29	55.68	1.88	104.63	24	1087	0.56	0.195	0.15	21.03	0.12	0.002
20.88	2.26	57.66	1.77	101.99	24	1080	0.56	0.200	0.16	21.03	0.12	0.002
20.95	2.22	60.19	1.65	99.50	23	1072	0.56	0.206	0.18	21.03	0.13	0.002
21.01	2.17	63.12	1.55	97.89	22	1065	0.56	0.212	0.19	21.03	0.14	0.002
21.08	2.13	66.68	1.47	97.99	21	1068	0.56	0.212	0.19	21.03	0.15	0.002
21.14	2.10	70.90	1.41	100.22	22	1086	0.56	0.201	0.18	21.03	0.14	0.002
21.21	2.07	75.80	1.38	104.26	22	1120	0.56	0.183	0.16	21.03	0.12	0.002
21.28	2.04	81.22	1.35	109.50	23	1165	0.56	0.163	0.14	21.03	0.10	0.002
21.34	2.02	87.48	1.32	115.85	24	1217	0.56	0.143	0.11	21.03	0.08	0.001
21.41	2.00	94.35	1.30	123.07	26	1276	0.56	0.126	0.09	21.03	0.07	0.001
21.48	1.98	101.65	1.29	130.92	27	1339	0.56	0.111	0.08	21.03	0.06	0.001
21.54	1.96	108.72	1.28	138.70	28	1403	0.56	0.099	0.06	21.03	0.05	0.001
21.61	1.95	114.78	1.27	145.65	30	1464	0.56	0.090	0.06	21.03	0.04	0.001
21.67	1.95	118.89	1.27	150.73	31	1516	0.56	0.083	0.05	21.03	0.04	0.001
21.74	1.95	120.45	1.27	153.25	31	1553	0.56	0.079	0.05	21.03	0.03	0.001
21.80	1.97	119.09	1.28	152.68	31	1567	0.56	0.078	0.05	21.03	0.03	0.001
21.87	1.99	115.04	1.30	149.29	31	1559	0.56	0.079	0.05	21.03	0.03	0.001
21.93	2.02	108.49	1.32	143.45	30	1532	0.56	0.083	0.05	21.03	0.04	0.001
22.00	2.05	100.27	1.36	136.15	29	1487	0.56	0.089	0.06	21.03	0.04	0.001
22.07	2.09	91.32	1.41	128.48	28	1430	0.56	0.098	0.07	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
22.13	2.13	82.50	1.47	121.31	27	1366	0.56	0.111	0.08	21.03	0.06	0.001
22.20	2.17	74.43	1.55	115.39	26	1304	0.56	0.126	0.09	21.03	0.07	0.001
22.26	2.21	67.23	1.65	111.00	25	1248	0.56	0.144	0.11	21.03	0.08	0.001
22.33	2.26	60.95	1.78	108.72	25	1205	0.56	0.160	0.12	21.03	0.09	0.001
22.39	2.31	55.27	1.98	109.42	26	1178	0.56	0.173	0.13	21.03	0.09	0.001
22.46	2.38	50.20	2.26	113.44	28	1167	0.56	0.179	0.12	21.03	0.09	0.001
22.52	2.44	45.80	2.61	119.32	30	1163	0.56	0.182	0.11	21.03	0.08	0.001
22.59	2.49	42.65	2.90	123.79	32	1156	0.57	0.186	0.11	21.03	0.08	0.001
22.65	2.48	41.16	2.87	118.33	30	1112	0.57	0.212	0.13	21.03	0.09	0.001
22.72	2.42	41.03	2.50	102.71	26	1024	0.57	0.286	0.21	21.03	0.15	0.002
22.79	2.33	42.52	2.05	86.96	21	937	0.57	0.405	0.39	21.03	0.28	0.005
22.85	2.26	44.79	1.79	80.39	19	904	0.57	0.475	0.52	21.03	0.37	0.006
22.91	2.25	47.03	1.76	82.99	19	939	0.57	0.408	0.43	21.03	0.31	0.005
22.98	2.28	47.14	1.84	86.84	20	973	0.57	0.355	0.35	21.03	0.25	0.004
23.04	2.30	47.79	1.92	91.80	22	1018	0.57	0.300	0.27	21.03	0.19	0.003
23.11	2.31	49.12	1.97	96.58	23	1065	0.57	0.256	0.22	21.03	0.15	0.003
23.17	2.30	52.09	1.93	100.72	24	1119	0.57	0.217	0.18	21.03	0.13	0.002
23.24	2.30	54.09	1.94	104.99	25	1167	0.57	0.190	0.15	21.03	0.10	0.002
23.30	2.31	55.69	1.98	110.23	26	1220	0.57	0.166	0.12	21.03	0.09	0.001
23.37	2.33	56.61	2.05	115.96	28	1272	0.57	0.148	0.10	21.03	0.07	0.001
23.43	2.36	55.66	2.18	121.18	29	1303	0.57	0.139	0.09	21.03	0.06	0.001
23.50	2.40	52.48	2.39	125.60	31	1306	0.57	0.138	0.08	21.03	0.06	0.001
23.57	2.46	47.99	2.71	130.07	33	1290	0.57	0.144	0.08	21.03	0.06	0.001
23.64	2.50	44.73	2.99	133.66	34	1277	0.57	0.149	0.08	21.03	0.05	0.001
23.70	2.52	43.95	3.08	135.52	35	1281	0.57	0.149	0.08	21.03	0.05	0.001
23.77	2.49	46.11	2.91	134.33	34	1302	0.57	0.142	0.07	21.03	0.05	0.001
23.83	2.44	50.77	2.59	131.29	33	1338	0.57	0.132	0.07	21.03	0.05	0.001
23.90	2.37	57.41	2.22	127.53	31	1381	0.57	0.122	0.07	21.03	0.05	0.001
23.97	2.30	64.29	1.94	124.78	29	1418	0.57	0.114	0.07	21.03	0.05	0.001
24.03	2.26	69.04	1.78	123.10	28	1436	0.57	0.111	0.07	21.03	0.05	0.001
24.10	2.24	70.58	1.72	121.37	28	1430	0.57	0.113	0.08	21.03	0.05	0.001
24.16	2.24	69.68	1.71	119.42	27	1411	0.57	0.118	0.08	21.03	0.06	0.001
24.23	2.25	67.84	1.74	118.09	27	1393	0.57	0.122	0.08	21.03	0.06	0.001
24.30	2.26	65.80	1.79	117.58	27	1381	0.57	0.126	0.09	21.03	0.06	0.001
24.36	2.28	63.51	1.86	118.42	28	1378	0.57	0.127	0.09	21.03	0.06	0.001
24.43	2.32	60.41	2.01	121.28	29	1383	0.57	0.126	0.08	21.03	0.06	0.001
24.49	2.38	55.60	2.27	126.43	31	1383	0.57	0.127	0.08	21.03	0.05	0.001
24.56	2.46	48.86	2.74	134.01	34	1366	0.57	0.132	0.07	21.03	0.05	0.001
24.63	2.56	41.36	3.43	141.99	38	1324	0.57	0.144	0.07	21.03	0.05	0.001
24.69	2.66	34.61	4.28	148.10	0	0	0.57	0.000	0.00	0.00	0.00	0.000
24.76	2.74	29.58	5.09	150.68	0	0	0.57	0.000	0.00	0.00	0.00	0.000
24.82	2.78	27.06	5.55	150.20	0	0	0.57	0.000	0.00	0.00	0.00	0.000
24.89	2.78	26.68	5.61	149.70	0	0	0.57	0.000	0.00	0.00	0.00	0.000
24.95	2.76	28.06	5.31	149.14	0	0	0.57	0.000	0.00	0.00	0.00	0.000
25.02	2.72	30.09	4.87	146.49	0	0	0.57	0.000	0.00	0.00	0.00	0.000
25.09	2.67	31.64	4.45	140.72	0	0	0.57	0.000	0.00	0.00	0.00	0.000
25.15	2.65	31.70	4.21	133.58	0	0	0.57	0.000	0.00	0.00	0.00	0.000
25.22	2.65	30.15	4.25	128.13	0	0	0.57	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
25.28	2.66	28.90	4.27	123.27	0	0	0.57	0.000	0.00	0.00	0.00	0.000
25.34	2.58	31.81	3.59	114.12	31	1069	0.57	0.303	0.18	21.03	0.12	0.002
25.41	2.43	40.14	2.53	101.40	25	1095	0.57	0.279	0.21	21.03	0.14	0.002
25.48	2.25	53.54	1.75	93.61	22	1142	0.57	0.243	0.22	21.03	0.15	0.002
25.55	2.10	68.22	1.42	96.98	21	1191	0.57	0.212	0.20	21.03	0.13	0.002
25.61	2.00	81.50	1.30	106.28	22	1231	0.57	0.192	0.17	21.03	0.11	0.002
25.68	1.93	91.11	1.25	114.28	23	1251	0.57	0.183	0.15	21.03	0.10	0.002
25.74	1.89	95.97	1.23	118.05	24	1255	0.57	0.182	0.15	21.03	0.10	0.002
25.81	1.88	95.60	1.22	116.83	23	1232	0.57	0.194	0.16	21.03	0.11	0.002
25.88	1.89	90.37	1.23	111.45	22	1193	0.57	0.216	0.19	21.03	0.12	0.002
25.95	1.96	80.92	1.28	103.44	21	1175	0.57	0.228	0.21	21.03	0.14	0.002
26.01	2.08	68.82	1.39	95.84	21	1181	0.57	0.225	0.22	21.03	0.14	0.002
26.08	2.24	55.14	1.73	95.34	22	1185	0.57	0.224	0.20	21.03	0.13	0.002
26.13	2.41	42.07	2.42	101.65	25	1140	0.57	0.256	0.19	21.03	0.13	0.002
26.21	2.56	31.58	3.45	108.92	29	1064	0.57	0.329	0.21	21.03	0.14	0.003
26.27	2.68	24.79	4.51	111.84	0	0	0.57	0.000	0.00	0.00	0.00	0.000
26.34	2.75	21.14	5.22	110.35	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.40	2.78	18.89	5.66	106.81	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.46	2.80	17.44	5.88	102.61	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.53	2.80	16.84	5.90	99.41	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.59	2.82	16.42	6.10	100.18	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.66	2.84	16.56	6.34	105.03	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.72	2.85	17.05	6.51	111.09	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.79	2.81	18.92	5.99	113.37	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.86	2.76	21.19	5.34	113.05	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.92	2.72	22.81	4.97	113.39	0	0	0.58	0.000	0.00	0.00	0.00	0.000
26.99	2.73	23.39	4.98	116.49	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.05	2.75	23.25	5.23	121.62	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.12	2.71	25.49	4.85	123.51	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.19	2.62	30.81	3.93	120.96	0	0	0.58	0.000	0.00	0.00	0.00	0.000
27.26	2.52	37.21	3.14	116.68	30	1220	0.58	0.219	0.13	21.03	0.08	0.001
27.32	2.47	41.27	2.78	114.82	29	1260	0.58	0.199	0.13	21.03	0.08	0.001
27.39	2.46	42.59	2.72	115.75	29	1284	0.58	0.188	0.12	21.03	0.07	0.001
27.46	2.46	43.34	2.72	117.83	30	1309	0.58	0.178	0.11	21.03	0.07	0.001
27.52	2.45	45.08	2.65	119.32	30	1342	0.58	0.166	0.10	21.03	0.06	0.001
27.59	2.42	48.14	2.47	119.03	30	1376	0.58	0.155	0.10	21.03	0.06	0.001
27.65	2.36	53.74	2.16	116.30	28	1412	0.58	0.145	0.10	21.03	0.06	0.001
27.72	2.28	61.44	1.85	113.86	27	1452	0.58	0.135	0.10	21.03	0.06	0.001
27.78	2.22	68.75	1.66	113.83	26	1486	0.58	0.127	0.09	21.03	0.06	0.001
27.84	2.18	73.34	1.57	114.92	26	1510	0.58	0.123	0.09	21.03	0.06	0.001
27.91	2.17	75.13	1.53	115.31	26	1517	0.58	0.122	0.09	21.03	0.06	0.001
27.98	2.16	75.80	1.52	114.98	25	1515	0.58	0.123	0.09	21.03	0.06	0.001
28.05	2.15	76.50	1.50	114.66	25	1511	0.58	0.124	0.09	21.03	0.06	0.001
28.11	2.14	77.27	1.49	114.98	25	1516	0.58	0.123	0.09	21.03	0.06	0.001
28.18	2.14	78.60	1.48	116.22	26	1534	0.58	0.120	0.09	21.03	0.05	0.001
28.25	2.13	80.28	1.47	117.85	26	1556	0.58	0.116	0.09	21.03	0.05	0.001
28.31	2.12	82.09	1.45	119.28	26	1574	0.58	0.113	0.08	21.03	0.05	0.001
28.37	2.12	83.15	1.44	119.96	26	1582	0.58	0.112	0.08	21.03	0.05	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
28.44	2.12	83.06	1.44	119.85	26	1584	0.58	0.112	0.08	21.03	0.05	0.001
28.51	2.12	82.07	1.45	119.37	26	1583	0.58	0.113	0.08	21.03	0.05	0.001
28.57	2.13	80.67	1.47	118.92	26	1584	0.58	0.113	0.08	21.03	0.05	0.001
28.64	2.15	79.32	1.50	119.18	26	1594	0.58	0.112	0.08	21.03	0.05	0.001
28.70	2.13	78.46	1.47	115.15	25	1537	0.58	0.123	0.09	21.03	0.06	0.001
28.77	2.10	78.10	1.42	110.62	24	1464	0.58	0.140	0.11	21.03	0.07	0.001
28.83	2.07	78.27	1.37	107.44	23	1403	0.58	0.158	0.13	21.03	0.08	0.001
28.90	2.08	78.25	1.40	109.23	23	1441	0.58	0.147	0.12	21.03	0.07	0.001
28.97	2.12	77.88	1.45	113.01	25	1514	0.58	0.129	0.10	21.03	0.06	0.001
29.03	2.17	74.74	1.55	115.83	26	1566	0.58	0.119	0.09	21.03	0.05	0.001
29.08	2.22	71.20	1.67	118.78	27	1600	0.58	0.113	0.08	21.03	0.05	0.001
29.14	2.27	67.05	1.81	121.60	28	1615	0.58	0.111	0.07	21.03	0.04	0.001
29.20	2.31	63.73	1.95	124.59	29	1626	0.58	0.109	0.07	21.03	0.04	0.001
29.29	2.34	60.84	2.09	127.22	30	1630	0.58	0.109	0.07	21.03	0.04	0.001
29.35	2.36	58.97	2.18	128.51	31	1628	0.58	0.110	0.06	21.03	0.04	0.001
29.42	2.35	60.06	2.12	127.31	31	1630	0.58	0.110	0.07	21.03	0.04	0.001
29.48	2.33	61.70	2.04	126.04	30	1635	0.58	0.110	0.07	21.03	0.04	0.001
29.55	2.31	63.62	1.97	125.55	30	1648	0.58	0.108	0.07	21.03	0.04	0.001
29.62	2.30	64.84	1.93	125.44	30	1659	0.58	0.107	0.07	21.03	0.04	0.001
29.68	2.30	65.15	1.92	124.81	29	1657	0.58	0.107	0.07	21.03	0.04	0.001
29.74	2.31	63.55	1.95	123.96	29	1640	0.58	0.110	0.07	21.03	0.04	0.001
29.81	2.34	59.11	2.10	124.26	30	1611	0.58	0.115	0.07	21.03	0.04	0.001
29.87	2.41	52.27	2.43	126.78	31	1568	0.58	0.124	0.07	21.03	0.04	0.001
29.94	2.49	44.88	2.91	130.77	34	1514	0.58	0.136	0.07	21.03	0.04	0.001
30.00	2.57	38.49	3.48	134.05	36	1452	0.58	0.152	0.08	21.03	0.04	0.001
30.07	2.62	34.04	3.95	134.53	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.14	2.66	30.98	4.29	132.85	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.20	2.68	28.86	4.49	129.56	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.27	2.70	26.93	4.66	125.41	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.34	2.69	25.88	4.59	118.70	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.40	2.66	25.37	4.34	110.22	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.47	2.64	25.55	4.07	103.96	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.54	2.61	26.47	3.87	102.37	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.60	2.60	27.55	3.79	104.44	0	0	0.58	0.000	0.00	0.00	0.00	0.000
30.67	2.60	28.36	3.75	106.43	29	1141	0.58	0.340	0.22	21.03	0.12	0.002
30.73	2.60	28.74	3.73	107.30	29	1154	0.58	0.327	0.21	21.03	0.12	0.002
30.80	2.57	30.65	3.46	106.21	28	1177	0.58	0.306	0.20	21.03	0.11	0.002
30.86	2.49	35.72	2.88	102.91	26	1224	0.58	0.268	0.19	21.03	0.11	0.002
30.93	2.41	41.94	2.40	100.74	25	1283	0.58	0.231	0.18	21.03	0.10	0.002
30.99	2.38	45.52	2.25	102.48	25	1336	0.58	0.204	0.16	21.03	0.09	0.001
31.06	2.40	45.09	2.39	107.60	26	1378	0.58	0.186	0.13	21.03	0.07	0.001
31.13	2.44	43.74	2.60	113.68	28	1414	0.58	0.173	0.11	21.03	0.06	0.001
31.19	2.42	46.37	2.51	116.36	29	1468	0.58	0.156	0.10	21.03	0.06	0.001
31.26	2.34	55.37	2.09	115.62	28	1554	0.58	0.135	0.09	21.03	0.05	0.001
31.32	2.24	67.95	1.73	117.47	27	1657	0.58	0.115	0.08	21.03	0.04	0.001
31.39	2.17	79.38	1.55	122.79	27	1750	0.58	0.102	0.07	21.03	0.04	0.001
31.45	2.14	86.35	1.48	127.72	28	1814	0.58	0.094	0.06	21.03	0.03	0.001
31.52	2.12	89.42	1.45	130.07	28	1844	0.58	0.091	0.06	21.03	0.03	0.001

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
31.59	2.11	90.63	1.44	130.44	28	1846	0.58	0.091	0.06	21.03	0.03	0.001
31.66	2.07	92.01	1.37	126.34	27	1752	0.58	0.102	0.07	21.03	0.04	0.001
31.73	2.00	94.09	1.31	123.12	26	1635	0.58	0.121	0.09	21.03	0.05	0.001
31.79	1.94	95.80	1.26	121.12	25	1527	0.58	0.144	0.11	21.03	0.06	0.001
31.86	1.94	95.67	1.26	120.88	25	1525	0.58	0.145	0.11	21.03	0.06	0.001
31.89	1.96	94.06	1.28	120.42	25	1554	0.58	0.139	0.11	21.03	0.06	0.000
31.96	1.98	92.84	1.29	120.21	25	1581	0.58	0.133	0.10	21.03	0.05	0.001
32.02	2.04	86.45	1.34	115.93	24	1590	0.58	0.131	0.10	21.03	0.05	0.001
32.09	2.04	87.38	1.34	117.22	25	1611	0.58	0.128	0.10	21.03	0.05	0.001
32.17	2.02	90.78	1.33	120.43	25	1639	0.58	0.122	0.09	21.03	0.05	0.001
32.24	1.97	101.65	1.28	130.34	27	1698	0.58	0.113	0.08	21.03	0.04	0.001
32.30	1.95	108.10	1.27	137.09	28	1755	0.58	0.105	0.07	21.03	0.04	0.001
32.36	1.93	115.17	1.26	144.63	29	1822	0.58	0.096	0.06	21.03	0.03	0.000
32.42	1.90	124.68	1.24	154.41	31	1901	0.58	0.088	0.05	21.03	0.03	0.000
32.48	1.87	136.88	1.21	166.06	33	1982	0.58	0.081	0.04	21.03	0.02	0.000
32.55	1.82	150.82	1.18	177.65	35	2057	0.58	0.075	0.04	21.03	0.02	0.000
32.61	1.77	167.10	1.12	187.11	36	2119	0.58	0.071	0.04	21.03	0.02	0.000
32.70	1.73	180.34	1.06	190.35	36	2160	0.58	0.069	0.03	21.03	0.02	0.000
32.74	1.69	192.24	1.00	192.24	36	2174	0.58	0.068	0.03	21.03	0.02	0.000
32.82	1.66	200.47	1.00	200.47	37	2163	0.58	0.069	0.03	21.03	0.02	0.000
32.89	1.63	208.77	1.00	208.77	38	2149	0.58	0.070	0.03	21.03	0.02	0.000
32.95	1.60	215.74	1.00	215.74	39	2143	0.58	0.071	0.03	21.03	0.02	0.000
33.02	1.58	222.57	1.00	222.57	40	2163	0.58	0.069	0.03	21.03	0.02	0.000
33.09	1.54	228.34	1.00	228.34	40	2117	0.58	0.073	0.03	21.03	0.02	0.000
33.15	1.48	234.12	1.00	234.12	41	2002	0.58	0.081	0.03	21.03	0.02	0.000
33.20	1.41	241.72	1.00	241.72	41	1913	0.58	0.090	0.04	21.03	0.02	0.000
33.28	1.40	253.74	1.00	253.74	43	1972	0.58	0.084	0.03	21.03	0.02	0.000
33.34	1.40	270.64	1.00	270.64	46	2120	0.58	0.073	0.03	21.03	0.01	0.000
33.41	1.39	288.14	1.00	288.14	49	2211	0.58	0.068	0.02	21.03	0.01	0.000
33.47	1.37	304.63	1.00	304.63	51	2302	0.58	0.063	0.02	21.03	0.01	0.000
33.53	1.39	318.13	1.00	318.13	54	2449	0.58	0.056	0.02	21.03	0.01	0.000
33.60	1.40	330.51	1.00	330.51	56	2600	0.58	0.051	0.01	21.03	0.01	0.000
33.66	1.40	345.57	1.00	345.57	58	2697	0.58	0.048	0.01	21.03	0.01	0.000
33.73	1.38	356.06	1.00	356.06	60	2722	0.58	0.048	0.01	21.03	0.01	0.000
33.80	1.37	362.40	1.00	362.40	61	2733	0.58	0.047	0.01	21.03	0.01	0.000
33.86	1.36	365.33	1.00	365.33	61	2732	0.58	0.048	0.01	21.03	0.01	0.000
33.92	1.34	375.33	1.00	375.33	62	2741	0.58	0.047	0.01	21.03	0.01	0.000
33.99	1.32	388.71	1.00	388.71	64	2768	0.58	0.047	0.01	21.03	0.01	0.000
34.06	1.31	399.48	1.00	399.48	66	2822	0.58	0.045	0.01	21.03	0.01	0.000
34.13	1.32	400.82	1.00	400.82	66	2845	0.58	0.045	0.01	21.03	0.01	0.000
34.20	1.31	394.55	1.00	394.55	65	2798	0.58	0.046	0.01	21.03	0.01	0.000
34.26	1.31	382.26	1.00	382.26	63	2715	0.58	0.049	0.01	21.03	0.01	0.000
34.32	1.33	370.48	1.00	370.48	61	2687	0.58	0.050	0.01	21.03	0.01	0.000
34.39	1.36	362.77	1.00	362.77	61	2729	0.58	0.048	0.01	21.03	0.01	0.000
34.45	1.38	358.68	1.00	358.68	60	2787	0.58	0.047	0.01	21.03	0.01	0.000
34.52	1.40	350.45	1.00	350.45	59	2799	0.58	0.047	0.01	21.03	0.01	0.000
34.59	1.41	344.56	1.00	344.56	59	2790	0.58	0.047	0.01	21.03	0.01	0.000
34.65	1.42	339.82	1.00	339.82	58	2789	0.58	0.047	0.01	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
34.72	1.43	341.23	1.00	341.23	58	2807	0.58	0.047	0.01	21.03	0.01	0.000
34.78	1.43	344.14	1.00	344.14	59	2851	0.58	0.046	0.01	21.03	0.01	0.000
34.85	1.42	350.30	1.00	350.30	60	2884	0.58	0.045	0.01	21.03	0.01	0.000
34.91	1.41	357.62	1.00	357.62	61	2887	0.58	0.045	0.01	21.03	0.01	0.000
34.98	1.39	358.61	1.00	358.61	60	2832	0.58	0.047	0.01	21.03	0.01	0.000
35.04	1.36	356.15	1.00	356.15	60	2726	0.58	0.050	0.01	21.03	0.01	0.000
35.11	1.34	353.32	1.00	353.32	59	2614	0.58	0.053	0.01	21.03	0.01	0.000
35.17	1.28	353.53	1.00	353.53	58	2450	0.58	0.059	0.02	21.03	0.01	0.000
35.24	1.21	353.96	1.00	353.96	57	2247	0.58	0.070	0.02	21.03	0.01	0.000
35.30	1.17	353.22	1.00	353.22	56	2118	0.58	0.078	0.02	21.03	0.01	0.000
35.37	1.17	352.77	1.00	352.77	56	2118	0.58	0.078	0.02	21.03	0.01	0.000
35.44	1.21	352.52	1.00	352.52	56	2244	0.58	0.070	0.02	21.03	0.01	0.000
35.51	1.28	340.72	1.00	340.72	56	2354	0.58	0.064	0.02	21.03	0.01	0.000
35.57	1.35	327.92	1.00	327.92	55	2474	0.58	0.059	0.02	21.03	0.01	0.000
35.63	1.40	316.75	1.00	316.75	54	2551	0.58	0.056	0.02	21.03	0.01	0.000
35.70	1.40	324.38	1.00	324.38	55	2623	0.58	0.054	0.02	21.03	0.01	0.000
35.77	1.38	340.17	1.00	340.17	57	2694	0.58	0.052	0.01	21.03	0.01	0.000
35.83	1.34	365.38	1.00	365.38	61	2744	0.58	0.050	0.01	21.03	0.01	0.000
35.89	1.26	390.92	1.00	390.92	63	2654	0.58	0.053	0.01	21.03	0.01	0.000
35.96	1.19	405.43	1.00	405.43	64	2535	0.58	0.057	0.01	21.03	0.01	0.000
36.03	1.17	406.16	1.00	406.16	64	2474	0.58	0.060	0.01	21.03	0.01	0.000
36.09	1.21	397.38	1.00	397.38	63	2541	0.58	0.057	0.01	21.03	0.01	0.000
36.16	1.23	392.86	1.00	392.86	63	2570	0.58	0.056	0.01	21.03	0.01	0.000
36.23	1.24	387.34	1.00	387.34	62	2572	0.58	0.056	0.01	21.03	0.01	0.000
36.29	1.24	382.69	1.00	382.69	62	2560	0.58	0.057	0.01	21.03	0.01	0.000
36.35	1.26	375.78	1.00	375.78	61	2580	0.58	0.056	0.01	21.03	0.01	0.000
36.43	1.28	370.72	1.00	370.72	60	2588	0.58	0.056	0.01	21.03	0.01	0.000
36.49	1.27	364.25	1.00	364.25	59	2540	0.58	0.058	0.02	21.03	0.01	0.000
36.55	1.24	358.66	1.00	358.66	58	2399	0.58	0.064	0.02	21.03	0.01	0.000
36.62	1.20	354.60	1.00	354.60	56	2261	0.58	0.072	0.02	21.03	0.01	0.000
36.68	1.18	352.87	1.00	352.87	56	2180	0.58	0.077	0.02	21.03	0.01	0.000
36.75	1.19	349.80	1.00	349.80	55	2190	0.58	0.076	0.02	21.03	0.01	0.000
36.82	1.20	346.22	1.00	346.22	55	2213	0.58	0.075	0.02	21.03	0.01	0.000
36.88	1.23	341.54	1.00	341.54	55	2280	0.58	0.071	0.02	21.03	0.01	0.000
36.95	1.27	337.97	1.00	337.97	55	2373	0.58	0.066	0.02	21.03	0.01	0.000
37.01	1.31	334.17	1.00	334.17	55	2452	0.58	0.062	0.02	21.03	0.01	0.000
37.08	1.31	328.28	1.00	328.28	54	2433	0.58	0.063	0.02	21.03	0.01	0.000
37.14	1.26	321.39	1.00	321.39	52	2230	0.58	0.075	0.02	21.03	0.01	0.000
37.21	1.20	314.99	1.00	314.99	50	2030	0.58	0.090	0.03	21.03	0.01	0.000
37.28	1.18	307.46	1.00	307.46	49	1918	0.58	0.102	0.04	21.03	0.02	0.000
37.34	1.23	301.59	1.00	301.59	48	2027	0.58	0.091	0.03	21.03	0.01	0.000
37.41	1.30	295.51	1.00	295.51	48	2153	0.58	0.080	0.03	21.03	0.01	0.000
37.48	1.36	288.27	1.00	288.27	48	2276	0.58	0.072	0.03	21.03	0.01	0.000
37.54	1.41	282.56	1.00	282.56	48	2363	0.58	0.068	0.02	21.03	0.01	0.000
37.60	1.44	277.36	1.00	277.36	47	2415	0.58	0.065	0.02	21.03	0.01	0.000
37.67	1.46	273.42	1.00	273.42	47	2464	0.58	0.063	0.02	21.03	0.01	0.000
37.73	1.49	268.55	1.00	268.55	47	2511	0.58	0.061	0.02	21.03	0.01	0.000
37.80	1.52	265.01	1.00	265.01	46	2557	0.58	0.059	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
37.87	1.52	268.57	1.00	268.57	47	2601	0.58	0.058	0.02	21.03	0.01	0.000
37.93	1.51	274.82	1.00	274.82	48	2644	0.58	0.056	0.02	21.03	0.01	0.000
38.00	1.51	281.04	1.00	281.04	49	2689	0.58	0.055	0.02	21.03	0.01	0.000
38.06	1.50	285.48	1.00	285.48	50	2720	0.58	0.054	0.02	21.03	0.01	0.000
38.12	1.52	279.58	1.00	279.58	49	2709	0.57	0.054	0.02	21.03	0.01	0.000
38.19	1.52	273.95	1.00	273.95	48	2686	0.57	0.055	0.02	21.03	0.01	0.000
38.26	1.54	268.43	1.00	268.43	48	2707	0.57	0.054	0.02	21.03	0.01	0.000
38.33	1.57	271.81	1.00	271.81	49	2845	0.57	0.050	0.02	21.03	0.01	0.000
38.39	1.60	276.12	1.00	276.12	50	2981	0.57	0.047	0.02	21.03	0.01	0.000
38.46	1.60	283.83	1.00	283.83	51	3066	0.57	0.045	0.01	21.03	0.01	0.000
38.52	1.54	297.44	1.00	297.44	53	2994	0.57	0.047	0.01	21.03	0.01	0.000
38.59	1.45	317.78	1.00	317.78	55	2871	0.57	0.050	0.01	21.03	0.01	0.000
38.66	1.38	344.14	1.00	344.14	58	2828	0.57	0.051	0.01	21.03	0.01	0.000
38.72	1.34	371.66	1.00	371.66	62	2924	0.57	0.049	0.01	21.03	0.01	0.000
38.78	1.33	400.48	1.00	400.48	66	3097	0.57	0.045	0.01	21.03	0.00	0.000
38.85	1.34	406.98	1.00	406.98	67	3180	0.57	0.043	0.01	21.03	0.00	0.000
38.91	1.37	396.76	1.00	396.76	66	3230	0.57	0.042	0.01	21.03	0.00	0.000
38.98	1.45	366.87	1.00	366.87	63	3295	0.57	0.041	0.01	21.03	0.00	0.000
39.05	1.50	343.38	1.00	343.38	60	3302	0.57	0.041	0.01	21.03	0.00	0.000
39.12	1.50	327.74	1.00	327.74	57	3163	0.57	0.043	0.01	21.03	0.00	0.000
39.18	1.46	321.47	1.00	321.47	55	2967	0.57	0.048	0.01	21.03	0.01	0.000
39.24	1.42	321.01	1.00	321.01	55	2820	0.57	0.052	0.02	21.03	0.01	0.000
39.31	1.43	313.48	1.00	313.48	53	2769	0.57	0.054	0.02	21.03	0.01	0.000
39.37	1.43	304.84	1.00	304.84	52	2704	0.57	0.056	0.02	21.03	0.01	0.000
39.44	1.44	296.13	1.00	296.13	51	2646	0.57	0.058	0.02	21.03	0.01	0.000
39.51	1.43	294.90	1.00	294.90	50	2627	0.57	0.059	0.02	21.03	0.01	0.000
39.57	1.43	294.42	1.00	294.42	50	2628	0.57	0.059	0.02	21.03	0.01	0.000
39.64	1.43	294.79	1.00	294.79	50	2618	0.57	0.059	0.02	21.03	0.01	0.000
39.70	1.42	298.62	1.00	298.62	51	2615	0.57	0.060	0.02	21.03	0.01	0.000
39.77	1.28	305.42	1.00	305.42	50	2251	0.57	0.078	0.03	21.03	0.01	0.000
39.84	1.10	312.97	1.00	312.97	48	1831	0.57	0.121	0.04	21.03	0.02	0.000
39.90	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
39.97	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.03	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.09	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.16	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000

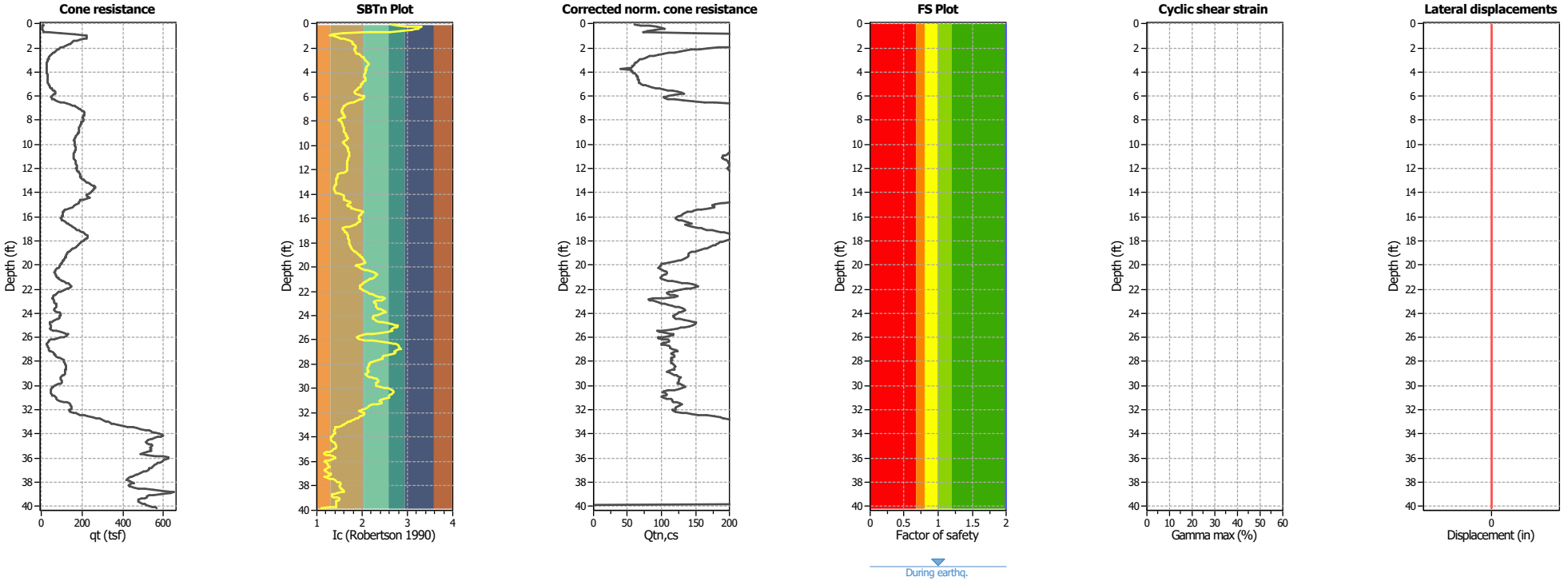
Total estimated settlement: 0.93

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

Estimation of post-earthquake lateral Displacements

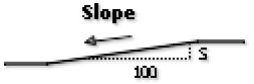
Geometric parameters: Gently sloping ground without free face (Slope 1.00 %)



Abbreviations

q_t: Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c: Soil Behaviour Type Index
$Q_{tn,cs}$: Equivalent clean sand normalized CPT total cone resistance
F.S.: Factor of safety
γ_{max}: Maximum cyclic shear strain
LDI: Lateral displacement index

Surface condition



:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.07	8.98	14.43	4.19	60.42	2.65	0.12	0.66
0.14	7.61	12.22	5.72	69.93	2.79	0.25	0.68
0.20	5.87	9.41	8.81	82.92	3.00	15.74	41.09
0.27	3.84	6.14	15.26	93.73	3.30	14.60	20.42
0.34	4.49	7.19	13.99	100.60	3.25	13.42	18.65
0.40	4.84	7.74	13.46	104.17	3.23	13.58	16.97
0.46	4.96	7.93	12.54	99.49	3.19	11.08	15.05
0.54	5.33	8.53	10.65	90.83	3.10	5.82	13.72
0.60	7.58	12.13	6.52	79.13	2.85	0.54	0.71
0.67	11.57	18.54	4.02	74.53	2.63	0.37	0.69
0.73	32.64	52.37	1.40	73.27	2.09	0.33	0.69
0.79	92.04	147.80	1.00	147.80	1.58	0.82	0.82
0.87	160.77	258.22	1.00	258.22	1.35	0.94	0.94
0.93	212.12	340.72	1.00	340.72	1.29	1.01	1.01
0.99	223.57	359.11	1.00	359.11	1.33	1.02	1.02
1.05	224.38	360.40	1.00	360.40	1.40	1.02	1.02
1.12	224.03	359.85	1.00	359.85	1.47	1.02	1.02
1.19	220.51	354.18	1.00	354.18	1.53	1.02	1.02
1.25	210.47	338.04	1.00	338.04	1.59	1.01	1.01
1.33	191.41	307.40	1.00	307.40	1.66	0.98	0.98
1.39	172.41	276.87	1.04	289.21	1.73	0.97	0.97
1.46	157.06	252.20	1.12	282.56	1.77	0.96	0.96
1.52	151.19	242.77	1.13	275.18	1.78	0.96	0.96
1.58	147.36	236.60	1.14	269.49	1.79	0.95	0.95
1.65	143.21	229.93	1.15	264.18	1.80	0.95	0.95
1.71	135.19	217.04	1.17	254.44	1.82	0.94	0.94
1.79	125.14	200.89	1.19	239.46	1.84	0.93	0.93
1.85	114.38	183.59	1.20	220.76	1.85	0.91	0.91
1.92	104.77	168.14	1.20	202.15	1.85	0.89	0.89
1.98	96.09	154.20	1.20	184.64	1.85	0.87	0.87
2.04	88.42	141.86	1.19	169.05	1.84	0.85	0.85
2.11	81.74	131.12	1.19	155.69	1.83	0.83	0.83
2.17	75.96	121.84	1.19	144.70	1.83	0.82	0.82
2.24	70.72	113.42	1.19	135.42	1.84	0.81	0.81
2.30	65.89	105.65	1.20	127.05	1.85	0.79	0.79
2.37	61.06	97.87	1.21	118.91	1.87	0.78	0.78
2.43	56.22	90.10	1.23	110.86	1.89	0.77	0.77
2.50	51.23	82.07	1.25	102.44	1.92	0.75	0.75
2.58	46.67	74.74	1.27	94.76	1.95	0.74	0.74
2.64	42.71	68.38	1.29	88.10	1.98	0.72	0.72
2.71	39.66	63.46	1.31	83.11	2.00	0.71	0.71
2.77	37.13	59.39	1.33	79.05	2.03	0.54	0.70
2.83	35.01	55.98	1.35	75.42	2.04	0.40	0.70
2.90	33.26	53.16	1.35	71.93	2.05	0.30	0.69
2.95	31.42	50.20	1.37	68.55	2.06	0.23	0.68
3.04	29.80	47.59	1.39	65.99	2.08	0.18	0.67
3.11	28.24	45.08	1.43	64.44	2.11	0.16	0.67
3.17	27.11	43.27	1.46	63.39	2.13	0.15	0.67

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.24	25.99	41.46	1.50	62.39	2.15	0.14	0.66
3.28	25.33	40.40	1.51	60.93	2.15	0.12	0.66
3.38	25.11	40.04	1.49	59.64	2.14	0.11	0.66
3.44	25.14	40.08	1.45	58.24	2.12	0.10	0.65
3.51	25.30	40.33	1.43	57.58	2.11	0.09	0.65
3.54	25.18	40.13	1.41	56.53	2.09	0.09	0.65
3.64	25.16	40.09	1.40	55.96	2.08	0.08	0.64
3.70	24.96	39.76	1.00	39.76	2.08	0.03	0.62
3.77	24.93	39.70	1.00	39.70	2.08	0.03	0.62
3.81	24.91	39.68	1.40	55.46	2.08	0.08	0.64
3.90	25.21	40.15	1.39	55.95	2.08	0.08	0.64
3.97	25.61	40.79	1.39	56.58	2.08	0.09	0.65
4.00	26.27	41.83	1.37	57.44	2.07	0.09	0.65
4.07	26.80	42.68	1.37	58.31	2.06	0.10	0.65
4.14	27.64	44.03	1.36	59.85	2.05	0.11	0.66
4.21	28.45	45.33	1.36	61.55	2.05	0.13	0.66
4.27	29.20	46.53	1.36	63.15	2.05	0.15	0.67
4.34	29.55	47.08	1.36	64.01	2.05	0.16	0.67
4.40	29.64	47.22	1.36	64.40	2.06	0.16	0.67
4.47	29.61	47.17	1.37	64.58	2.06	0.16	0.67
4.54	29.64	47.21	1.37	64.85	2.07	0.17	0.67
4.60	29.79	47.45	1.38	65.32	2.07	0.17	0.67
4.67	30.14	48.00	1.38	66.00	2.07	0.18	0.67
4.73	30.61	48.75	1.36	66.42	2.06	0.19	0.67
4.80	31.26	49.80	1.34	66.56	2.03	0.19	0.67
4.87	31.98	50.95	1.31	66.99	2.01	0.20	0.68
4.93	32.85	52.34	1.30	68.09	1.99	0.22	0.68
5.00	33.88	53.99	1.30	70.06	1.99	0.26	0.68
5.06	35.26	56.19	1.29	72.67	1.98	0.32	0.69
5.13	37.00	58.99	1.29	75.98	1.98	0.42	0.70
5.19	39.69	63.30	1.28	80.73	1.96	0.62	0.71
5.25	42.90	68.46	1.26	86.34	1.94	0.72	0.72
5.32	46.39	74.06	1.25	92.33	1.91	0.73	0.73
5.38	49.45	78.97	1.23	97.39	1.89	0.74	0.74
5.45	52.76	84.27	1.22	102.59	1.87	0.75	0.75
5.51	56.69	90.58	1.20	108.82	1.85	0.76	0.76
5.58	61.27	97.94	1.19	116.21	1.83	0.78	0.78
5.65	65.55	104.80	1.18	123.64	1.83	0.79	0.79
5.71	68.32	109.26	1.19	129.85	1.84	0.80	0.80
5.78	69.04	110.40	1.21	133.53	1.86	0.80	0.80
5.84	63.67	101.77	1.26	127.97	1.93	0.80	0.80
5.91	56.97	90.99	1.31	119.05	2.00	0.78	0.78
5.97	50.66	80.86	1.36	110.20	2.06	0.77	0.77
6.04	48.92	78.05	1.36	105.90	2.05	0.76	0.76
6.11	48.79	77.84	1.33	103.62	2.03	0.75	0.75
6.17	50.17	80.04	1.30	104.18	1.99	0.76	0.76
6.24	53.91	86.05	1.27	109.23	1.95	0.76	0.76
6.30	59.81	95.52	1.24	118.45	1.90	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.37	68.04	108.75	1.21	131.68	1.86	0.80	0.80
6.43	79.28	126.79	1.17	148.14	1.81	0.82	0.82
6.50	94.25	150.84	1.09	163.88	1.75	0.85	0.85
6.57	111.47	178.51	1.00	178.51	1.68	0.86	0.86
6.63	127.88	202.94	1.00	202.94	1.64	0.89	0.89
6.70	140.83	222.27	1.00	222.27	1.61	0.91	0.91
6.76	151.28	237.51	1.00	237.51	1.60	0.92	0.92
6.83	161.11	251.57	1.00	251.57	1.59	0.94	0.94
6.90	171.06	265.69	1.00	265.69	1.57	0.95	0.95
6.97	179.55	277.40	1.00	277.40	1.56	0.96	0.96
7.03	184.48	283.50	1.00	283.50	1.56	0.96	0.96
7.10	190.19	290.83	1.00	290.83	1.56	0.97	0.97
7.17	195.68	297.42	1.00	297.42	1.56	0.98	0.98
7.24	202.23	305.79	1.00	305.79	1.55	0.98	0.98
7.28	206.03	310.49	1.00	310.49	1.56	0.99	0.99
7.36	208.62	312.67	1.00	312.67	1.57	0.99	0.99
7.42	210.18	313.39	1.00	313.39	1.58	0.99	0.99
7.49	210.24	311.86	1.00	311.86	1.59	0.99	0.99
7.56	208.65	307.84	1.00	307.84	1.60	0.98	0.98
7.63	206.69	303.37	1.00	303.37	1.61	0.98	0.98
7.70	204.32	298.38	1.00	298.38	1.61	0.98	0.98
7.74	203.22	295.80	1.00	295.80	1.57	0.97	0.97
7.81	203.04	294.09	1.00	294.09	1.53	0.97	0.97
7.89	204.47	294.58	1.00	294.58	1.49	0.97	0.97
7.95	206.10	295.57	1.00	295.57	1.50	0.97	0.97
8.01	207.16	295.97	1.00	295.97	1.52	0.97	0.97
8.10	201.32	285.81	1.00	285.81	1.54	0.97	0.97
8.15	197.86	279.96	1.00	279.96	1.56	0.96	0.96
8.22	193.93	273.05	1.00	273.05	1.57	0.96	0.96
8.28	195.24	273.87	1.00	273.87	1.56	0.96	0.96
8.35	192.93	269.26	1.00	269.26	1.57	0.95	0.95
8.41	190.47	264.71	1.00	264.71	1.58	0.95	0.95
8.48	188.31	260.60	1.00	260.60	1.58	0.95	0.95
8.55	186.94	257.58	1.00	257.58	1.58	0.94	0.94
8.61	186.35	255.64	1.00	255.64	1.58	0.94	0.94
8.68	186.56	254.80	1.00	254.80	1.58	0.94	0.94
8.74	186.78	254.19	1.00	254.19	1.59	0.94	0.94
8.81	186.44	252.67	1.00	252.67	1.59	0.94	0.94
8.87	185.47	250.36	1.00	250.36	1.60	0.94	0.94
8.94	183.88	247.20	1.00	247.20	1.61	0.93	0.93
9.00	182.11	243.82	1.00	243.82	1.62	0.93	0.93
9.07	180.14	240.18	1.00	240.18	1.63	0.93	0.93
9.13	177.95	236.38	1.00	236.38	1.64	0.92	0.92
9.20	175.46	232.59	1.00	232.59	1.65	0.92	0.92
9.26	172.53	228.25	1.00	228.25	1.66	0.92	0.92
9.33	169.53	223.74	1.00	223.74	1.66	0.91	0.91
9.39	166.57	219.23	1.00	219.23	1.67	0.91	0.91
9.45	163.85	215.16	1.00	215.16	1.68	0.90	0.90

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.52	161.48	210.92	1.00	210.92	1.67	0.90	0.90
9.59	160.72	207.81	1.00	207.81	1.63	0.90	0.90
9.66	160.41	206.65	1.00	206.65	1.59	0.89	0.89
9.72	161.09	206.77	1.00	206.77	1.57	0.89	0.89
9.79	161.54	206.63	1.00	206.63	1.59	0.89	0.89
9.85	161.76	206.16	1.00	206.16	1.61	0.89	0.89
9.92	162.06	205.83	1.00	205.83	1.62	0.89	0.89
9.99	161.84	204.76	1.00	204.76	1.64	0.89	0.89
10.04	163.12	206.13	1.00	206.13	1.65	0.89	0.89
10.11	164.67	207.83	1.00	207.83	1.66	0.90	0.90
10.18	166.85	210.16	1.00	210.16	1.67	0.90	0.90
10.24	168.13	211.39	1.00	211.39	1.68	0.90	0.90
10.30	168.19	211.08	1.00	211.08	1.69	0.90	0.90
10.40	167.60	209.53	1.00	209.53	1.70	0.90	0.90
10.43	166.54	207.89	1.00	207.89	1.70	0.90	0.90
10.53	165.35	205.39	1.00	205.39	1.70	0.89	0.89
10.59	163.76	202.76	1.00	202.76	1.70	0.89	0.89
10.65	162.11	200.11	1.00	200.11	1.71	0.89	0.89
10.72	160.42	197.41	1.01	198.97	1.71	0.89	0.89
10.79	158.77	194.77	1.01	197.51	1.71	0.88	0.88
10.86	157.46	192.54	1.02	196.04	1.71	0.88	0.88
10.89	156.94	191.47	1.01	193.68	1.71	0.88	0.88
10.96	156.72	190.42	1.00	190.87	1.71	0.88	0.88
11.03	156.88	189.81	1.00	189.81	1.70	0.88	0.88
11.09	157.33	189.58	1.00	189.58	1.69	0.88	0.88
11.15	159.30	191.06	1.00	191.06	1.68	0.88	0.88
11.25	161.86	192.95	1.00	192.95	1.67	0.88	0.88
11.31	164.57	195.40	1.00	195.40	1.67	0.88	0.88
11.38	166.48	196.97	1.00	196.97	1.66	0.88	0.88
11.44	168.04	198.24	1.00	198.24	1.66	0.88	0.88
11.51	169.13	198.97	1.00	198.97	1.66	0.89	0.89
11.57	170.06	199.49	1.00	199.49	1.67	0.89	0.89
11.64	170.81	199.79	1.00	199.79	1.67	0.89	0.89
11.71	171.53	200.07	1.00	200.07	1.67	0.89	0.89
11.77	171.90	199.90	1.00	199.90	1.67	0.89	0.89
11.84	171.84	199.24	1.00	199.24	1.67	0.89	0.89
11.90	171.37	198.10	1.00	198.10	1.67	0.88	0.88
11.97	171.22	197.31	1.00	197.31	1.67	0.88	0.88
12.03	171.71	197.21	1.00	197.21	1.67	0.88	0.88
12.09	173.06	197.99	1.00	197.99	1.66	0.88	0.88
12.16	175.27	199.71	1.00	199.71	1.65	0.89	0.89
12.23	178.48	202.63	1.00	202.63	1.61	0.89	0.89
12.30	182.23	206.28	1.00	206.28	1.54	0.89	0.89
12.36	185.85	209.80	1.00	209.80	1.48	0.90	0.90
12.43	188.97	212.76	1.00	212.76	1.46	0.90	0.90
12.50	191.31	214.80	1.00	214.80	1.45	0.90	0.90
12.56	192.37	215.39	1.00	215.39	1.45	0.90	0.90
12.61	192.46	215.10	1.00	215.10	1.45	0.90	0.90

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.68	192.02	214.00	1.00	214.00	1.44	0.90	0.90
12.74	192.80	214.29	1.00	214.29	1.43	0.90	0.90
12.81	195.58	216.84	1.00	216.84	1.42	0.90	0.90
12.87	200.45	221.69	1.00	221.69	1.42	0.91	0.91
12.94	205.81	227.05	1.00	227.05	1.42	0.91	0.91
13.00	210.53	231.70	1.00	231.70	1.42	0.92	0.92
13.06	216.02	237.15	1.00	237.15	1.42	0.92	0.92
13.13	222.26	243.37	1.00	243.37	1.42	0.93	0.93
13.20	229.15	250.27	1.00	250.27	1.42	0.94	0.94
13.27	236.92	258.04	1.00	258.04	1.41	0.94	0.94
13.34	243.63	264.66	1.00	264.66	1.40	0.95	0.95
13.39	251.30	272.44	1.00	272.44	1.39	0.96	0.96
13.47	256.95	277.72	1.00	277.72	1.38	0.96	0.96
13.53	262.16	282.69	1.00	282.69	1.38	0.96	0.96
13.58	263.53	283.58	1.00	283.58	1.38	0.96	0.96
13.65	261.69	280.84	1.00	280.84	1.39	0.96	0.96
13.73	257.95	275.99	1.00	275.99	1.40	0.96	0.96
13.80	253.61	270.60	1.00	270.60	1.41	0.95	0.95
13.87	250.05	266.09	1.00	266.09	1.41	0.95	0.95
13.91	246.31	261.66	1.00	261.66	1.43	0.95	0.95
13.98	242.22	256.57	1.00	256.57	1.48	0.94	0.94
14.05	235.45	248.73	1.00	248.73	1.54	0.93	0.93
14.12	228.37	240.60	1.00	240.60	1.59	0.93	0.93
14.19	223.23	234.51	1.00	234.51	1.59	0.92	0.92
14.26	224.29	235.04	1.00	235.04	1.59	0.92	0.92
14.32	229.65	240.12	1.00	240.12	1.60	0.93	0.93
14.38	239.88	250.27	1.00	250.27	1.59	0.94	0.94
14.45	238.57	248.27	1.00	248.27	1.59	0.93	0.93
14.50	224.03	232.63	1.00	232.63	1.61	0.92	0.92
14.57	204.16	211.74	1.00	211.74	1.67	0.90	0.90
14.64	190.93	198.09	1.04	206.63	1.73	0.89	0.89
14.70	187.84	194.63	1.08	210.23	1.75	0.90	0.90
14.77	185.75	191.89	1.07	205.03	1.74	0.89	0.89
14.83	187.09	192.39	1.00	192.39	1.70	0.88	0.88
14.91	184.16	188.59	1.00	188.59	1.68	0.87	0.87
14.97	175.02	178.87	1.00	178.87	1.69	0.86	0.86
15.03	164.48	168.01	1.04	175.19	1.73	0.86	0.86
15.11	158.70	161.83	1.09	176.85	1.76	0.86	0.86
15.17	157.61	160.39	1.11	177.69	1.77	0.86	0.86
15.23	152.06	154.54	1.15	177.02	1.79	0.86	0.86
15.29	137.99	140.24	1.21	170.00	1.86	0.85	0.85
15.36	123.42	125.42	1.27	159.35	1.95	0.84	0.84
15.44	113.22	114.92	1.32	151.86	2.02	0.83	0.83
15.49	110.91	112.29	1.32	148.37	2.02	0.82	0.82
15.55	109.07	110.08	1.31	143.99	2.00	0.82	0.82
15.62	106.94	107.55	1.29	138.76	1.98	0.81	0.81
15.68	105.20	105.45	1.28	135.05	1.97	0.81	0.81
15.75	104.32	104.24	1.27	132.11	1.95	0.80	0.80

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.84	103.61	103.09	1.26	129.64	1.93	0.80	0.80
15.91	102.42	101.61	1.25	127.32	1.92	0.79	0.79
15.98	100.39	99.35	1.26	124.90	1.93	0.79	0.79
16.04	98.48	97.22	1.26	122.81	1.94	0.79	0.79
16.08	96.74	95.38	1.27	121.20	1.95	0.78	0.78
16.15	96.02	94.45	1.28	120.62	1.96	0.78	0.78
16.21	96.93	95.12	1.28	121.58	1.96	0.79	0.79
16.28	100.55	98.43	1.27	124.82	1.95	0.79	0.79
16.34	106.44	103.94	1.25	129.69	1.92	0.80	0.80
16.41	113.55	110.60	1.22	135.33	1.88	0.81	0.81
16.50	120.23	116.69	1.20	140.08	1.85	0.81	0.81
16.57	125.66	121.67	1.18	143.50	1.83	0.82	0.82
16.60	131.28	126.93	1.14	144.88	1.79	0.82	0.82
16.67	137.18	132.22	1.02	135.28	1.72	0.81	0.81
16.73	144.88	139.26	1.00	139.26	1.64	0.81	0.81
16.83	153.02	146.73	1.00	146.73	1.58	0.82	0.82
16.89	160.89	154.01	1.00	154.01	1.57	0.83	0.83
16.93	165.16	157.96	1.00	157.96	1.59	0.84	0.84
17.01	169.38	161.61	1.00	161.61	1.61	0.84	0.84
17.07	174.83	166.55	1.00	166.55	1.62	0.85	0.85
17.13	183.51	174.55	1.00	174.55	1.62	0.86	0.86
17.19	191.40	181.74	1.00	181.74	1.63	0.87	0.87
17.26	198.05	187.70	1.00	187.70	1.66	0.87	0.87
17.33	203.88	192.85	1.00	192.85	1.68	0.88	0.88
17.39	209.93	198.23	1.00	198.23	1.69	0.88	0.88
17.45	218.51	205.97	1.00	205.97	1.69	0.89	0.89
17.53	225.28	211.84	1.00	211.84	1.69	0.90	0.90
17.60	229.59	215.44	1.00	215.44	1.69	0.90	0.90
17.66	229.74	215.18	1.00	215.18	1.70	0.90	0.90
17.73	228.09	213.18	1.00	213.18	1.70	0.90	0.90
17.79	224.06	208.95	1.00	208.95	1.70	0.90	0.90
17.86	217.23	202.11	1.00	202.55	1.71	0.89	0.89
17.93	209.96	194.89	1.02	197.87	1.71	0.88	0.88
18.00	203.35	188.31	1.03	193.74	1.72	0.88	0.88
18.06	197.89	182.84	1.04	189.60	1.72	0.88	0.88
18.13	193.80	178.66	1.04	186.08	1.73	0.87	0.87
18.18	189.90	174.79	1.05	183.47	1.73	0.87	0.87
18.25	185.94	170.71	1.06	181.30	1.74	0.87	0.87
18.33	181.66	166.35	1.08	179.10	1.75	0.86	0.86
18.38	177.08	161.84	1.09	176.55	1.75	0.86	0.86
18.44	171.93	156.79	1.11	173.29	1.76	0.86	0.86
18.53	166.22	151.10	1.12	169.74	1.78	0.85	0.85
18.59	160.17	145.24	1.15	166.30	1.79	0.85	0.85
18.66	153.99	139.25	1.17	162.83	1.82	0.84	0.84
18.73	147.35	132.85	1.19	158.50	1.84	0.84	0.84
18.79	140.79	126.56	1.21	153.58	1.87	0.83	0.83
18.86	134.93	120.91	1.23	148.84	1.89	0.83	0.83
18.92	130.15	116.31	1.25	144.85	1.91	0.82	0.82

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.99	126.78	112.97	1.26	141.96	1.93	0.82	0.82
19.06	124.69	110.81	1.27	140.34	1.94	0.81	0.81
19.13	123.54	109.48	1.28	139.75	1.96	0.81	0.81
19.19	122.86	108.59	1.29	139.69	1.97	0.81	0.81
19.23	121.92	107.59	1.30	139.64	1.99	0.81	0.81
19.32	120.23	105.70	1.31	138.63	2.01	0.81	0.81
19.39	118.14	103.55	1.33	137.38	2.02	0.81	0.81
19.42	114.96	100.57	1.34	134.94	2.04	0.81	0.81
19.52	111.81	97.43	1.35	131.88	2.05	0.80	0.80
19.59	108.47	94.26	1.36	128.37	2.06	0.80	0.80
19.65	105.91	91.80	1.37	125.39	2.06	0.79	0.79
19.71	103.32	89.47	1.32	118.50	2.02	0.78	0.78
19.78	100.52	87.06	1.27	110.75	1.95	0.77	0.77
19.85	97.83	84.80	1.22	103.24	1.87	0.75	0.75
19.92	95.87	82.95	1.21	100.34	1.86	0.75	0.75
19.95	94.77	81.82	1.23	100.65	1.89	0.75	0.75
20.02	93.59	80.54	1.25	100.58	1.92	0.75	0.75
20.08	90.50	77.55	1.28	99.09	1.96	0.75	0.75
20.16	86.44	73.70	1.32	97.04	2.01	0.74	0.74
20.23	81.79	69.35	1.38	95.57	2.07	0.74	0.74
20.29	77.71	65.52	1.47	96.04	2.13	0.74	0.74
20.36	73.34	61.46	1.60	98.15	2.19	0.74	0.74
20.42	69.38	57.80	1.76	101.51	2.25	0.75	0.75
20.49	66.23	54.88	1.91	104.98	2.30	0.76	0.76
20.55	65.23	53.86	1.99	107.12	2.32	0.76	0.76
20.62	64.88	53.41	2.02	108.13	2.33	0.76	0.76
20.68	65.63	53.93	2.00	107.79	2.32	0.76	0.76
20.75	66.12	54.25	1.97	106.80	2.31	0.76	0.76
20.82	67.90	55.68	1.88	104.63	2.29	0.76	0.76
20.88	70.31	57.66	1.77	101.99	2.26	0.75	0.75
20.95	73.34	60.19	1.65	99.50	2.22	0.75	0.75
21.01	76.83	63.12	1.55	97.89	2.17	0.74	0.74
21.08	81.08	66.68	1.47	97.99	2.13	0.74	0.74
21.14	86.13	70.90	1.41	100.22	2.10	0.75	0.75
21.21	92.03	75.80	1.38	104.26	2.07	0.76	0.76
21.28	98.58	81.22	1.35	109.50	2.04	0.77	0.77
21.34	106.13	87.48	1.32	115.85	2.02	0.78	0.78
21.41	114.43	94.35	1.30	123.07	2.00	0.79	0.79
21.48	123.26	101.65	1.29	130.92	1.98	0.80	0.80
21.54	131.84	108.72	1.28	138.70	1.96	0.81	0.81
21.61	139.29	114.78	1.27	145.65	1.95	0.82	0.82
21.67	144.50	118.89	1.27	150.73	1.95	0.83	0.83
21.74	146.72	120.45	1.27	153.25	1.95	0.83	0.83
21.80	145.47	119.09	1.28	152.68	1.97	0.83	0.83
21.87	141.04	115.04	1.30	149.29	1.99	0.83	0.83
21.93	133.61	108.49	1.32	143.45	2.02	0.82	0.82
22.00	124.13	100.27	1.36	136.15	2.05	0.81	0.81
22.07	113.71	91.32	1.41	128.48	2.09	0.80	0.80

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.13	103.36	82.50	1.47	121.31	2.13	0.78	0.78
22.20	93.84	74.43	1.55	115.39	2.17	0.78	0.78
22.26	85.32	67.23	1.65	111.00	2.21	0.77	0.77
22.33	77.90	60.95	1.78	108.72	2.26	0.76	0.76
22.39	71.19	55.27	1.98	109.42	2.31	0.77	0.77
22.46	65.23	50.20	2.26	113.44	2.38	0.77	0.77
22.52	60.05	45.80	2.61	119.32	2.44	0.78	0.78
22.59	56.34	42.65	2.90	123.79	2.49	0.79	0.79
22.65	54.53	41.16	2.87	118.33	2.48	0.78	0.78
22.72	54.22	41.03	2.50	102.71	2.42	0.75	0.75
22.79	55.84	42.52	2.05	86.96	2.33	0.72	0.72
22.85	58.55	44.79	1.79	80.39	2.26	0.60	0.71
22.91	61.49	47.03	1.76	82.99	2.25	0.71	0.71
22.98	61.86	47.14	1.84	86.84	2.28	0.72	0.72
23.04	62.92	47.79	1.92	91.80	2.30	0.73	0.73
23.11	64.82	49.12	1.97	96.58	2.31	0.74	0.74
23.17	68.75	52.09	1.93	100.72	2.30	0.75	0.75
23.24	71.50	54.09	1.94	104.99	2.30	0.76	0.76
23.30	73.78	55.69	1.98	110.23	2.31	0.77	0.77
23.37	75.24	56.61	2.05	115.96	2.33	0.78	0.78
23.43	74.33	55.66	2.18	121.18	2.36	0.78	0.78
23.50	70.59	52.48	2.39	125.60	2.40	0.79	0.79
23.57	65.14	47.99	2.71	130.07	2.46	0.80	0.80
23.64	61.18	44.73	2.99	133.66	2.50	0.80	0.80
23.70	60.33	43.95	3.08	135.52	2.52	0.81	0.81
23.77	63.23	46.11	2.91	134.33	2.49	0.80	0.80
23.83	69.27	50.77	2.59	131.29	2.44	0.80	0.80
23.90	77.82	57.41	2.22	127.53	2.37	0.79	0.79
23.97	86.62	64.29	1.94	124.78	2.30	0.79	0.79
24.03	92.71	69.04	1.78	123.10	2.26	0.79	0.79
24.10	94.74	70.58	1.72	121.37	2.24	0.79	0.79
24.16	93.71	69.68	1.71	119.42	2.24	0.78	0.78
24.23	91.53	67.84	1.74	118.09	2.25	0.78	0.78
24.30	89.13	65.80	1.79	117.58	2.26	0.78	0.78
24.36	86.44	63.51	1.86	118.42	2.28	0.78	0.78
24.43	82.76	60.41	2.01	121.28	2.32	0.78	0.78
24.49	76.90	55.60	2.27	126.43	2.38	0.79	0.79
24.56	68.48	48.86	2.74	134.01	2.46	0.80	0.80
24.63	58.90	41.36	3.43	141.99	2.56	0.82	0.82
24.69	50.13	34.61	4.28	148.10	2.66	0.82	0.82
24.76	43.51	29.58	5.09	150.68	2.74	0.83	0.83
24.82	40.18	27.06	5.55	150.20	2.78	0.83	0.83
24.89	39.74	26.68	5.61	149.70	2.78	0.83	0.83
24.95	41.71	28.06	5.31	149.14	2.76	0.83	0.83
25.02	44.52	30.09	4.87	146.49	2.72	0.82	0.82
25.09	46.64	31.64	4.45	140.72	2.67	0.81	0.81
25.15	46.71	31.70	4.21	133.58	2.65	0.80	0.80
25.22	44.61	30.15	4.25	128.13	2.65	0.80	0.80

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.28	42.93	28.90	4.27	123.27	2.66	0.79	0.79
25.34	46.80	31.81	3.59	114.12	2.58	0.77	0.77
25.41	57.78	40.14	2.53	101.40	2.43	0.75	0.75
25.48	75.15	53.54	1.75	93.61	2.25	0.74	0.74
25.55	93.93	68.22	1.42	96.98	2.10	0.74	0.74
25.61	110.75	81.50	1.30	106.28	2.00	0.76	0.76
25.68	122.82	91.11	1.25	114.28	1.93	0.77	0.77
25.74	128.94	95.97	1.23	118.05	1.89	0.78	0.78
25.81	128.47	95.60	1.22	116.83	1.88	0.78	0.78
25.88	121.95	90.37	1.23	111.45	1.89	0.77	0.77
25.95	110.40	80.92	1.28	103.44	1.96	0.75	0.75
26.01	95.62	68.82	1.39	95.84	2.08	0.74	0.74
26.08	78.55	55.14	1.73	95.34	2.24	0.74	0.74
26.13	61.61	42.07	2.42	101.65	2.41	0.75	0.75
26.21	47.63	31.58	3.45	108.92	2.56	0.76	0.76
26.27	38.34	24.79	4.51	111.84	2.68	0.77	0.77
26.34	33.25	21.14	5.22	110.35	2.75	0.77	0.77
26.40	30.07	18.89	5.66	106.81	2.78	0.76	0.76
26.46	28.01	17.44	5.88	102.61	2.80	0.75	0.75
26.53	27.15	16.84	5.90	99.41	2.80	0.75	0.75
26.59	26.62	16.42	6.10	100.18	2.82	0.75	0.75
26.66	26.94	16.56	6.34	105.03	2.84	0.76	0.76
26.72	27.80	17.05	6.51	111.09	2.85	0.77	0.77
26.79	30.58	18.92	5.99	113.37	2.81	0.77	0.77
26.86	33.90	21.19	5.34	113.05	2.76	0.77	0.77
26.92	36.29	22.81	4.97	113.39	2.72	0.77	0.77
26.99	37.25	23.39	4.98	116.49	2.73	0.78	0.78
27.05	37.22	23.25	5.23	121.62	2.75	0.79	0.79
27.12	40.55	25.49	4.85	123.51	2.71	0.79	0.79
27.19	48.18	30.81	3.93	120.96	2.62	0.78	0.78
27.26	57.23	37.21	3.14	116.68	2.52	0.78	0.78
27.32	62.96	41.27	2.78	114.82	2.47	0.77	0.77
27.39	64.95	42.59	2.72	115.75	2.46	0.78	0.78
27.46	66.19	43.34	2.72	117.83	2.46	0.78	0.78
27.52	68.81	45.08	2.65	119.32	2.45	0.78	0.78
27.59	73.20	48.14	2.47	119.03	2.42	0.78	0.78
27.65	80.98	53.74	2.16	116.30	2.36	0.78	0.78
27.72	91.54	61.44	1.85	113.86	2.28	0.77	0.77
27.78	101.48	68.75	1.66	113.83	2.22	0.77	0.77
27.84	107.78	73.34	1.57	114.92	2.18	0.77	0.77
27.91	110.34	75.13	1.53	115.31	2.17	0.78	0.78
27.98	111.35	75.80	1.52	114.98	2.16	0.77	0.77
28.05	112.39	76.50	1.50	114.66	2.15	0.77	0.77
28.11	113.59	77.27	1.49	114.98	2.14	0.77	0.77
28.18	115.62	78.60	1.48	116.22	2.14	0.78	0.78
28.25	118.14	80.28	1.47	117.85	2.13	0.78	0.78
28.31	120.79	82.09	1.45	119.28	2.12	0.78	0.78
28.37	122.42	83.15	1.44	119.96	2.12	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.44	122.48	83.06	1.44	119.85	2.12	0.78	0.78
28.51	121.36	82.07	1.45	119.37	2.12	0.78	0.78
28.57	119.70	80.67	1.47	118.92	2.13	0.78	0.78
28.64	118.17	79.32	1.50	119.18	2.15	0.78	0.78
28.70	116.77	78.46	1.47	115.15	2.13	0.77	0.77
28.77	115.87	78.10	1.42	110.62	2.10	0.77	0.77
28.83	115.71	78.27	1.37	107.44	2.07	0.76	0.76
28.90	116.17	78.25	1.40	109.23	2.08	0.76	0.76
28.97	116.46	77.88	1.45	113.01	2.12	0.77	0.77
29.03	112.90	74.74	1.55	115.83	2.17	0.78	0.78
29.08	108.56	71.20	1.67	118.78	2.22	0.78	0.78
29.14	103.23	67.05	1.81	121.60	2.27	0.79	0.79
29.20	98.95	63.73	1.95	124.59	2.31	0.79	0.79
29.29	95.23	60.84	2.09	127.22	2.34	0.79	0.79
29.35	92.80	58.97	2.18	128.51	2.36	0.80	0.80
29.42	94.45	60.06	2.12	127.31	2.35	0.79	0.79
29.48	96.86	61.70	2.04	126.04	2.33	0.79	0.79
29.55	99.72	63.62	1.97	125.55	2.31	0.79	0.79
29.62	101.61	64.84	1.93	125.44	2.30	0.79	0.79
29.68	102.17	65.15	1.92	124.81	2.30	0.79	0.79
29.74	100.00	63.55	1.95	123.96	2.31	0.79	0.79
29.81	93.85	59.11	2.10	124.26	2.34	0.79	0.79
29.87	84.23	52.27	2.43	126.78	2.41	0.79	0.79
29.94	73.65	44.88	2.91	130.77	2.49	0.80	0.80
30.00	64.32	38.49	3.48	134.05	2.57	0.80	0.80
30.07	57.70	34.04	3.95	134.53	2.62	0.81	0.81
30.14	53.08	30.98	4.29	132.85	2.66	0.80	0.80
30.20	49.84	28.86	4.49	129.56	2.68	0.80	0.80
30.27	46.84	26.93	4.66	125.41	2.70	0.79	0.79
30.34	45.11	25.88	4.59	118.70	2.69	0.78	0.78
30.40	44.16	25.37	4.34	110.22	2.66	0.77	0.77
30.47	44.32	25.55	4.07	103.96	2.64	0.76	0.76
30.54	45.77	26.47	3.87	102.37	2.61	0.75	0.75
30.60	47.56	27.55	3.79	104.44	2.60	0.76	0.76
30.67	48.97	28.36	3.75	106.43	2.60	0.76	0.76
30.73	49.65	28.74	3.73	107.30	2.60	0.76	0.76
30.80	52.65	30.65	3.46	106.21	2.57	0.76	0.76
30.86	60.32	35.72	2.88	102.91	2.49	0.75	0.75
30.93	69.65	41.94	2.40	100.74	2.41	0.75	0.75
30.99	75.17	45.52	2.25	102.48	2.38	0.75	0.75
31.06	74.95	45.09	2.39	107.60	2.40	0.76	0.76
31.13	73.36	43.74	2.60	113.68	2.44	0.77	0.77
31.19	77.58	46.37	2.51	116.36	2.42	0.78	0.78
31.26	91.06	55.37	2.09	115.62	2.34	0.78	0.78
31.32	109.59	67.95	1.73	117.47	2.24	0.78	0.78
31.39	126.30	79.38	1.55	122.79	2.17	0.79	0.79
31.45	136.60	86.35	1.48	127.72	2.14	0.79	0.79
31.52	141.25	89.42	1.45	130.07	2.12	0.80	0.80

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.59	143.10	90.63	1.44	130.44	2.11	0.80	0.80
31.66	144.21	92.01	1.37	126.34	2.07	0.79	0.79
31.73	145.95	94.09	1.31	123.12	2.00	0.79	0.79
31.79	147.15	95.80	1.26	121.12	1.94	0.78	0.78
31.86	147.12	95.67	1.26	120.88	1.94	0.78	0.78
31.89	145.41	94.06	1.28	120.42	1.96	0.78	0.78
31.96	144.25	92.84	1.29	120.21	1.98	0.78	0.78
32.02	135.92	86.45	1.34	115.93	2.04	0.78	0.78
32.09	137.58	87.38	1.34	117.22	2.04	0.78	0.78
32.17	142.66	90.78	1.33	120.43	2.02	0.78	0.78
32.24	158.14	101.65	1.28	130.34	1.97	0.80	0.80
32.30	167.62	108.10	1.27	137.09	1.95	0.81	0.81
32.36	178.04	115.17	1.26	144.63	1.93	0.82	0.82
32.42	191.86	124.68	1.24	154.41	1.90	0.83	0.83
32.48	209.27	136.88	1.21	166.06	1.87	0.85	0.85
32.55	228.84	150.82	1.18	177.65	1.82	0.86	0.86
32.61	251.21	167.10	1.12	187.11	1.77	0.87	0.87
32.70	269.30	180.34	1.06	190.35	1.73	0.88	0.88
32.74	285.00	192.24	1.00	192.24	1.69	0.88	0.88
32.82	295.60	200.47	1.00	200.47	1.66	0.89	0.89
32.89	306.93	208.77	1.00	208.77	1.63	0.90	0.90
32.95	317.38	215.74	1.00	215.74	1.60	0.90	0.90
33.02	327.77	222.57	1.00	222.57	1.58	0.91	0.91
33.09	336.60	228.34	1.00	228.34	1.54	0.92	0.92
33.15	345.40	234.12	1.00	234.12	1.48	0.92	0.92
33.20	356.85	241.72	1.00	241.72	1.41	0.93	0.93
33.28	374.91	253.74	1.00	253.74	1.40	0.94	0.94
33.34	400.18	270.64	1.00	270.64	1.40	0.95	0.95
33.41	426.39	288.14	1.00	288.14	1.39	0.97	0.97
33.47	451.10	304.63	1.00	304.63	1.37	0.98	0.98
33.53	471.50	318.13	1.00	318.13	1.39	0.99	0.99
33.60	490.28	330.51	1.00	330.51	1.40	1.00	1.00
33.66	513.06	345.57	1.00	345.57	1.40	1.01	1.01
33.73	529.19	356.06	1.00	356.06	1.38	1.02	1.02
33.80	539.11	362.40	1.00	362.40	1.37	1.02	1.02
33.86	544.01	365.33	1.00	365.33	1.36	1.03	1.03
33.92	559.45	375.33	1.00	375.33	1.34	1.03	1.03
33.99	579.95	388.71	1.00	388.71	1.32	1.04	1.04
34.06	596.57	399.48	1.00	399.48	1.31	1.05	1.05
34.13	599.29	400.82	1.00	400.82	1.32	1.05	1.05
34.20	590.55	394.55	1.00	394.55	1.31	1.04	1.04
34.26	572.83	382.26	1.00	382.26	1.31	1.04	1.04
34.32	555.77	370.48	1.00	370.48	1.33	1.03	1.03
34.39	544.85	362.77	1.00	362.77	1.36	1.02	1.02
34.45	539.26	358.68	1.00	358.68	1.38	1.02	1.02
34.52	527.53	350.45	1.00	350.45	1.40	1.02	1.02
34.59	519.23	344.56	1.00	344.56	1.41	1.01	1.01
34.65	512.62	339.82	1.00	339.82	1.42	1.01	1.01

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.72	515.33	341.23	1.00	341.23	1.43	1.01	1.01
34.78	520.20	344.14	1.00	344.14	1.43	1.01	1.01
34.85	530.06	350.30	1.00	350.30	1.42	1.01	1.01
34.91	541.60	357.62	1.00	357.62	1.41	1.02	1.02
34.98	543.66	358.61	1.00	358.61	1.39	1.02	1.02
35.04	540.51	356.15	1.00	356.15	1.36	1.02	1.02
35.11	536.80	353.32	1.00	353.32	1.34	1.02	1.02
35.17	537.64	353.53	1.00	353.53	1.28	1.02	1.02
35.24	538.86	353.96	1.00	353.96	1.21	1.02	1.02
35.30	538.20	353.22	1.00	353.22	1.17	1.02	1.02
35.37	538.05	352.77	1.00	352.77	1.17	1.02	1.02
35.44	538.23	352.52	1.00	352.52	1.21	1.02	1.02
35.51	520.82	340.72	1.00	340.72	1.28	1.01	1.01
35.57	501.82	327.92	1.00	327.92	1.35	1.00	1.00
35.63	485.26	316.75	1.00	316.75	1.40	0.99	0.99
35.70	497.46	324.38	1.00	324.38	1.40	1.00	1.00
35.77	522.10	340.17	1.00	340.17	1.38	1.01	1.01
35.83	561.10	365.38	1.00	365.38	1.34	1.03	1.03
35.89	600.78	390.92	1.00	390.92	1.26	1.04	1.04
35.96	623.62	405.43	1.00	405.43	1.19	1.05	1.05
36.03	625.37	406.16	1.00	406.16	1.17	1.05	1.05
36.09	612.48	397.38	1.00	397.38	1.21	1.05	1.05
36.16	606.12	392.86	1.00	392.86	1.23	1.04	1.04
36.23	598.29	387.34	1.00	387.34	1.24	1.04	1.04
36.29	591.68	382.69	1.00	382.69	1.24	1.04	1.04
36.35	581.57	375.78	1.00	375.78	1.26	1.03	1.03
36.43	574.40	370.72	1.00	370.72	1.28	1.03	1.03
36.49	564.94	364.25	1.00	364.25	1.27	1.02	1.02
36.55	556.83	358.66	1.00	358.66	1.24	1.02	1.02
36.62	551.06	354.60	1.00	354.60	1.20	1.02	1.02
36.68	548.90	352.87	1.00	352.87	1.18	1.02	1.02
36.75	544.66	349.80	1.00	349.80	1.19	1.01	1.01
36.82	539.63	346.22	1.00	346.22	1.20	1.01	1.01
36.88	532.86	341.54	1.00	341.54	1.23	1.01	1.01
36.95	527.84	337.97	1.00	337.97	1.27	1.01	1.01
37.01	522.41	334.17	1.00	334.17	1.31	1.00	1.00
37.08	513.74	328.28	1.00	328.28	1.31	1.00	1.00
37.14	503.45	321.39	1.00	321.39	1.26	0.99	0.99
37.21	493.96	314.99	1.00	314.99	1.20	0.99	0.99
37.28	482.63	307.46	1.00	307.46	1.18	0.98	0.98
37.34	473.90	301.59	1.00	301.59	1.23	0.98	0.98
37.41	464.85	295.51	1.00	295.51	1.30	0.97	0.97
37.48	453.93	288.27	1.00	288.27	1.36	0.97	0.97
37.54	445.38	282.56	1.00	282.56	1.41	0.96	0.96
37.60	437.62	277.36	1.00	277.36	1.44	0.96	0.96
37.67	431.84	273.42	1.00	273.42	1.46	0.96	0.96
37.73	424.61	268.55	1.00	268.55	1.49	0.95	0.95
37.80	419.43	265.01	1.00	265.01	1.52	0.95	0.95

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
37.87	425.45	268.57	1.00	268.57	1.52	0.95	0.95
37.93	435.71	274.82	1.00	274.82	1.51	0.96	0.96
38.00	445.94	281.04	1.00	281.04	1.51	0.96	0.96
38.06	453.34	285.48	1.00	285.48	1.50	0.97	0.97
38.12	444.42	279.58	1.00	279.58	1.52	0.96	0.96
38.19	435.93	273.95	1.00	273.95	1.52	0.96	0.96
38.26	427.60	268.43	1.00	268.43	1.54	0.95	0.95
38.33	433.37	271.81	1.00	271.81	1.57	0.95	0.95
38.39	440.61	276.12	1.00	276.12	1.60	0.96	0.96
38.46	453.31	283.83	1.00	283.83	1.60	0.96	0.96
38.52	475.33	297.44	1.00	297.44	1.54	0.98	0.98
38.59	508.19	317.78	1.00	317.78	1.45	0.99	0.99
38.66	550.68	344.14	1.00	344.14	1.38	1.01	1.01
38.72	595.04	371.66	1.00	371.66	1.34	1.03	1.03
38.78	641.59	400.48	1.00	400.48	1.33	1.05	1.05
38.85	652.54	406.98	1.00	406.98	1.34	1.05	1.05
38.91	636.81	396.76	1.00	396.76	1.37	1.05	1.05
38.98	589.58	366.87	1.00	366.87	1.45	1.03	1.03
39.05	552.52	343.38	1.00	343.38	1.50	1.01	1.01
39.12	527.96	327.74	1.00	327.74	1.50	1.00	1.00
39.18	518.35	321.47	1.00	321.47	1.46	0.99	0.99
39.24	518.10	321.01	1.00	321.01	1.42	0.99	0.99
39.31	506.47	313.48	1.00	313.48	1.43	0.99	0.99
39.37	492.99	304.84	1.00	304.84	1.43	0.98	0.98
39.44	479.45	296.13	1.00	296.13	1.44	0.97	0.97
39.51	477.89	294.90	1.00	294.90	1.43	0.97	0.97
39.57	477.52	294.42	1.00	294.42	1.43	0.97	0.97
39.64	478.58	294.79	1.00	294.79	1.43	0.97	0.97
39.70	485.19	298.62	1.00	298.62	1.42	0.98	0.98
39.77	496.61	305.42	1.00	305.42	1.28	0.98	0.98
39.84	509.24	312.97	1.00	312.97	1.10	0.99	0.99
39.90	515.67	-1.00	1.00	-1.00	-1.00	0.00	0.00
39.97	531.08	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.03	543.62	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.09	561.25	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.16	565.27	-1.00	1.00	-1.00	-1.00	0.00	0.00

Abbreviations

q_t:	Total cone resistance
K_c:	Cone resistance correction factor due to fines
$Q_{tn,cs}$:	Adjusted and corrected cone resistance due to fines
I_c:	Soil behavior type index
$S_{u(liq)}/\sigma'_v$:	Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$:	Calculated peak undrained strength ratio

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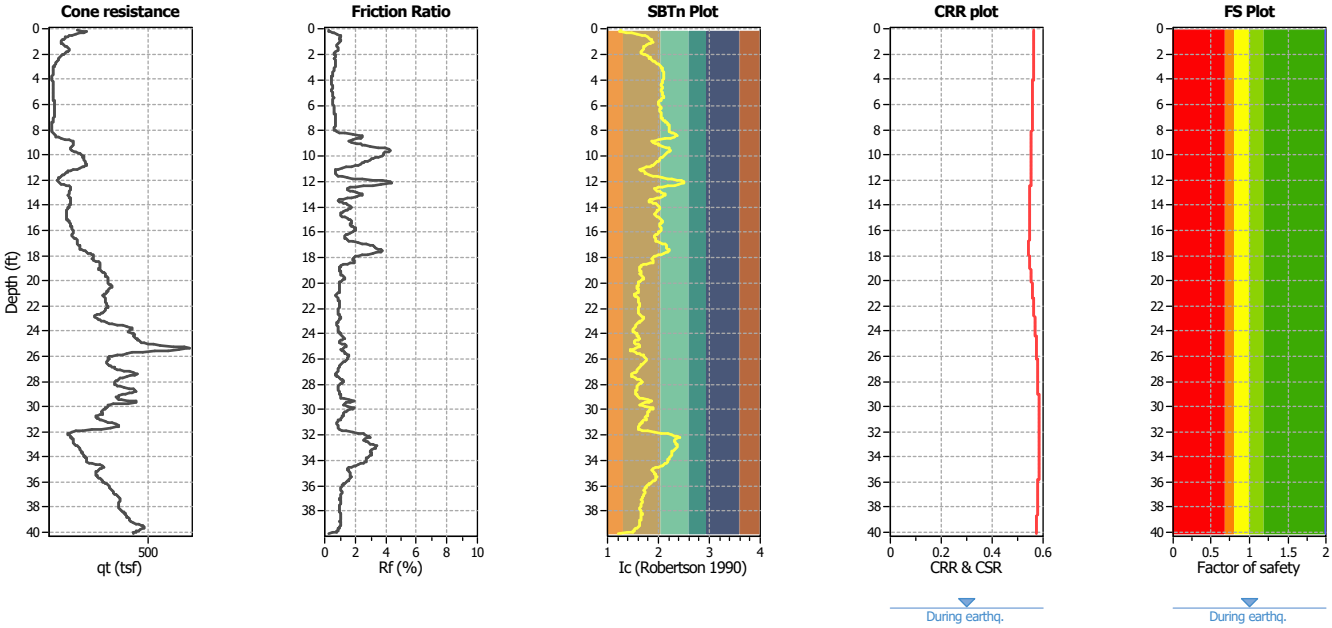
LIQUEFACTION ANALYSIS REPORT

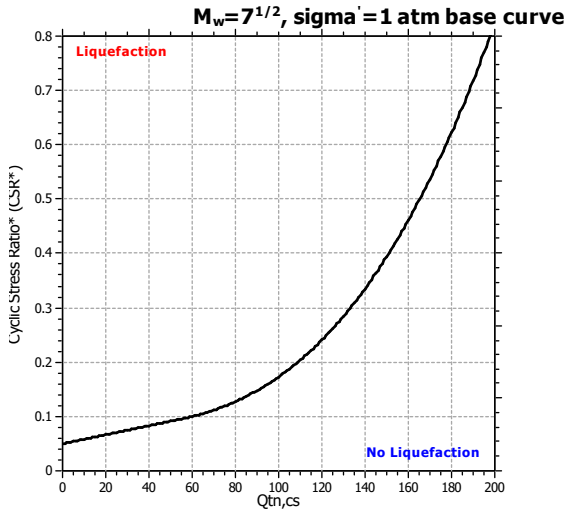
Project title : **Location :**

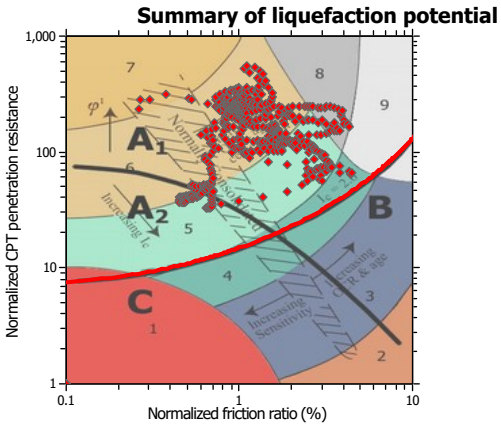
CPT file : CPT-5

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	46.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	46.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	8.07	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.72	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

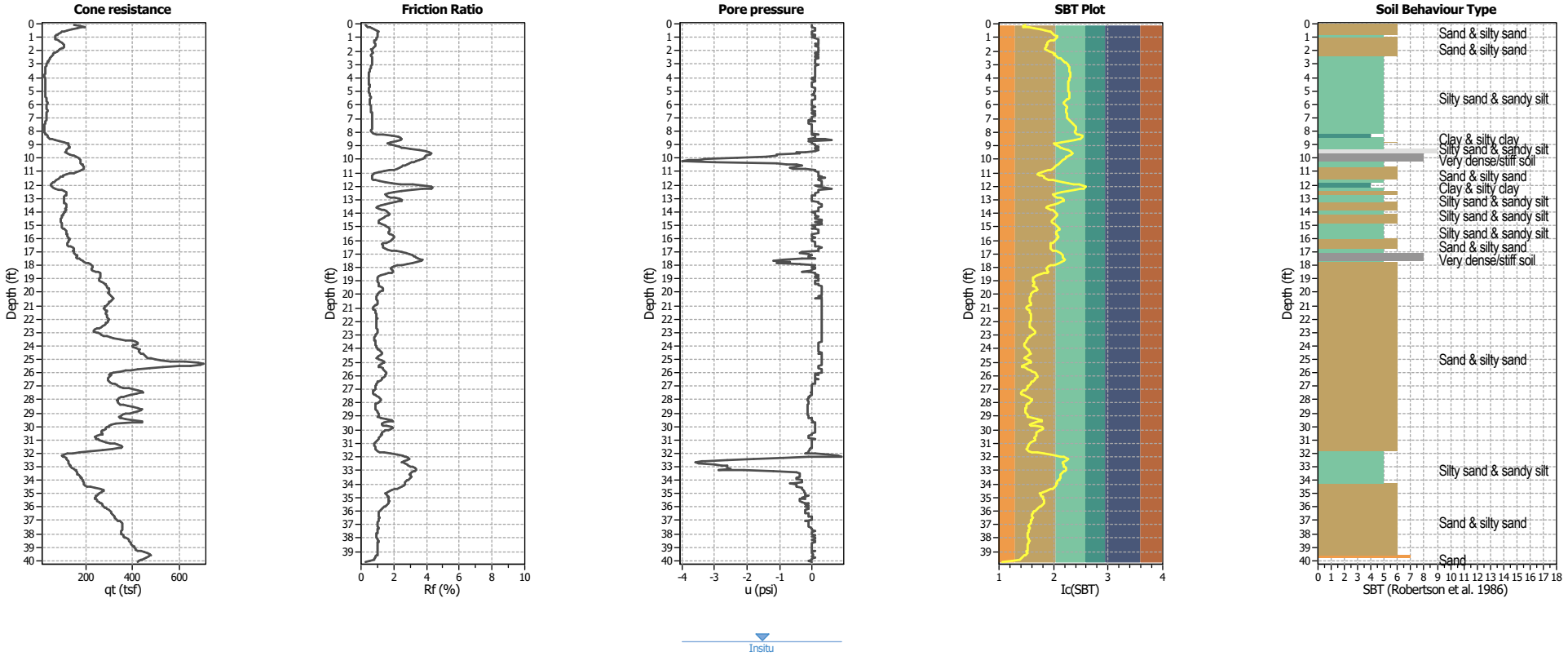






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



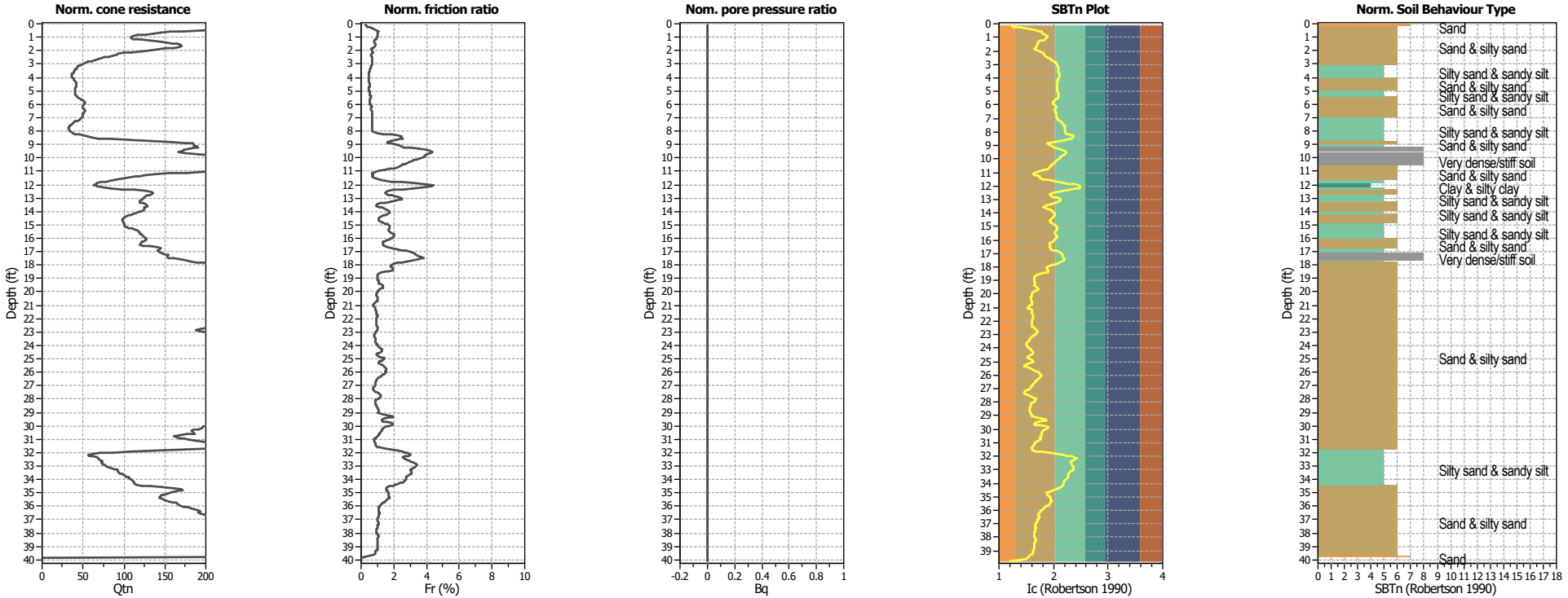
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	46.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	46.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



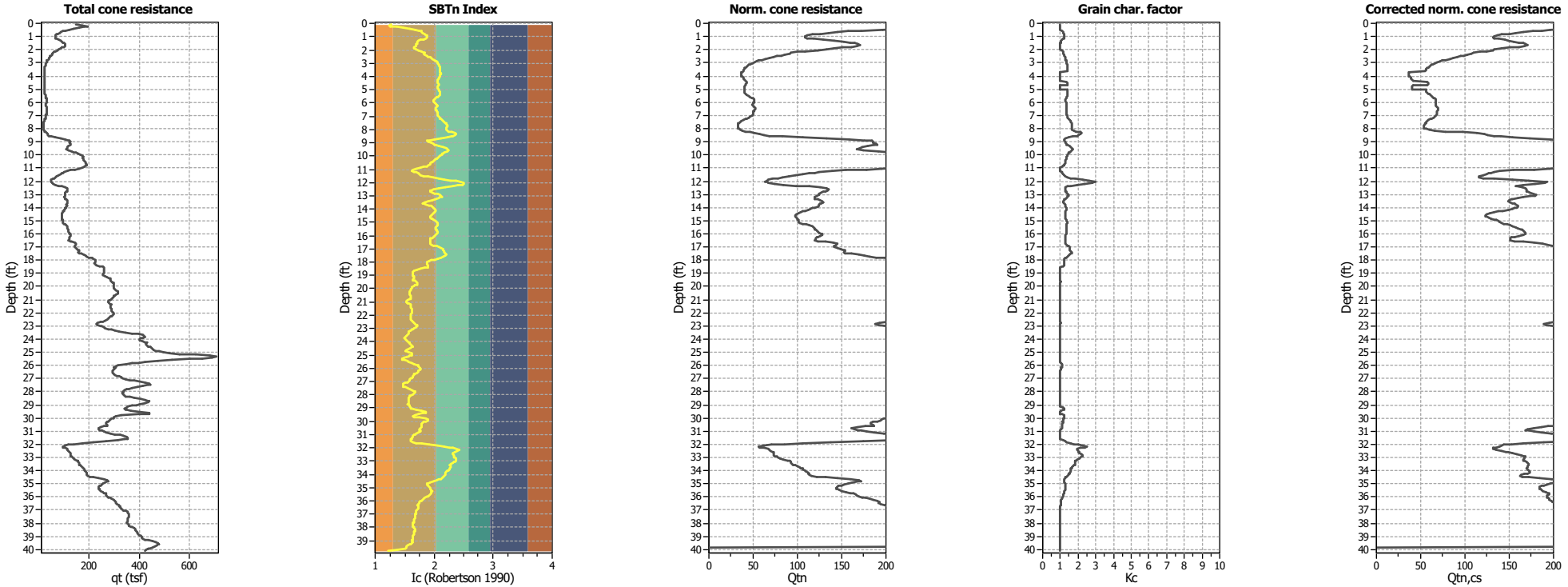
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	46.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	46.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

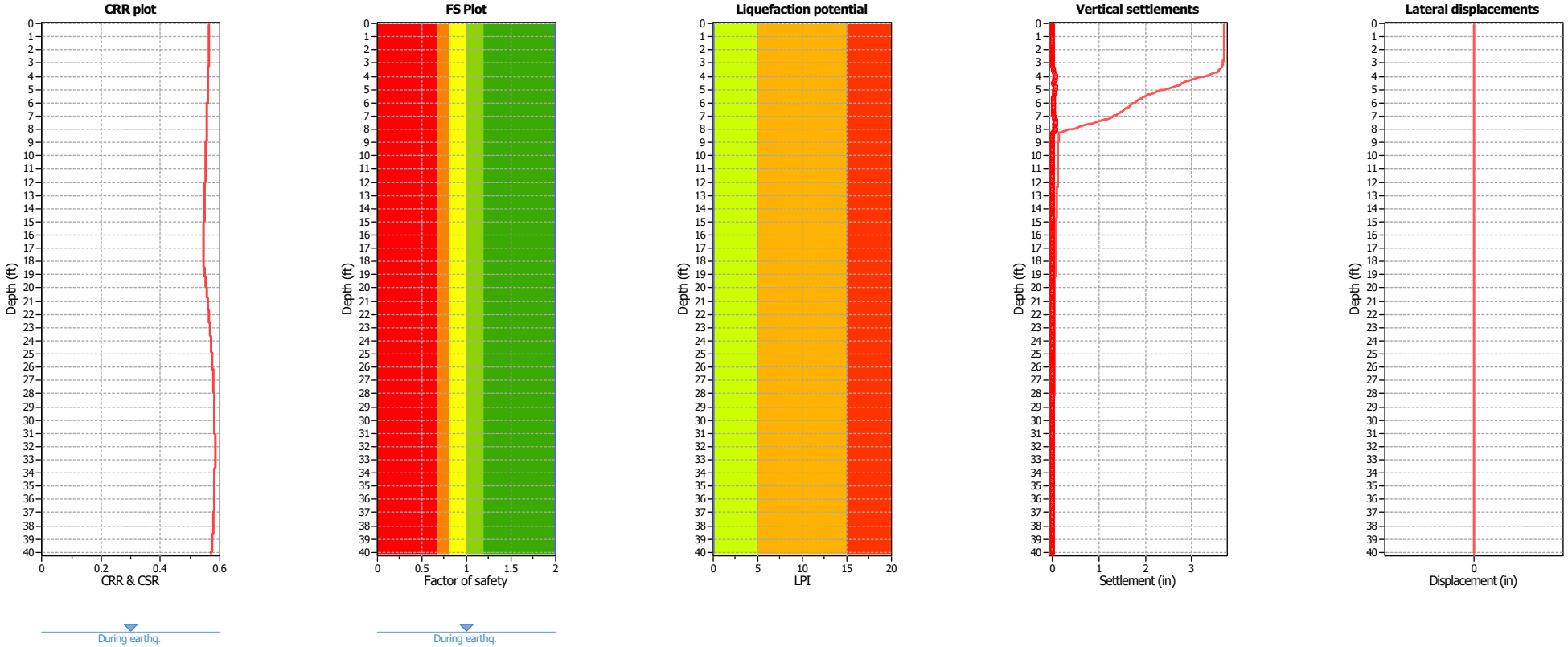
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	46.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	46.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	46.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	46.00 ft	Fill height:	N/A	Limit depth:	N/A

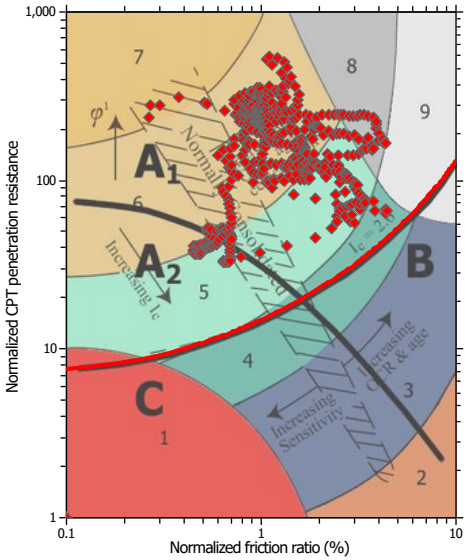
F.S. color scheme

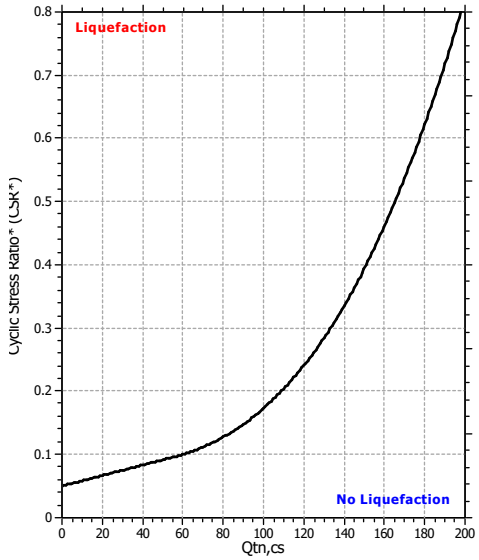
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

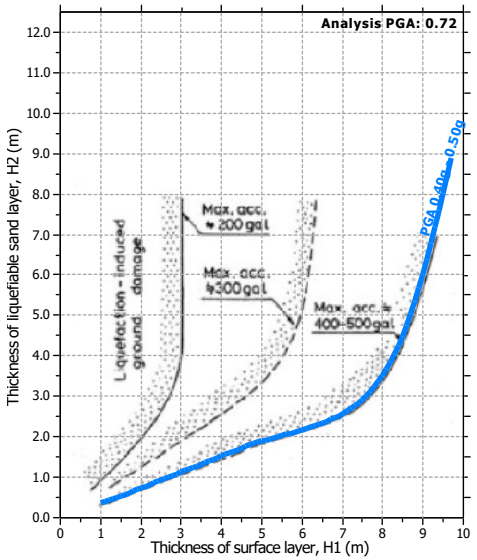
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



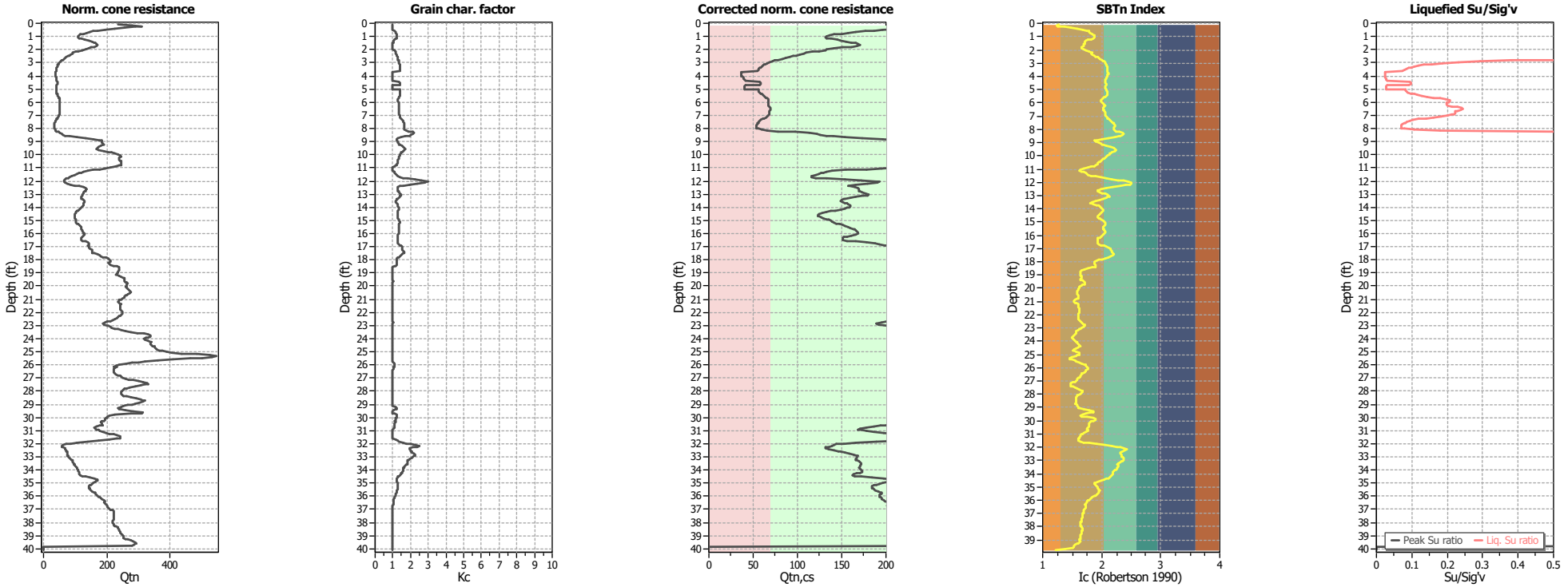




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	46.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	46.00 ft	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	46.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	8.07	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.72	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	46.00 ft	Fill height:	N/A	Limit depth:	N/A

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.07	120.06	0.33	0.00	0.11	115.52
2	0.13	201.41	0.51	0.00	0.00	118.25
3	0.20	203.65	0.76	0.00	0.00	120.87
4	0.27	178.97	0.93	0.00	1.13	122.35
5	0.33	161.20	1.07	0.10	2.56	123.00
6	0.40	141.66	1.14	0.10	4.15	123.26
7	0.47	118.56	1.19	0.10	5.77	123.10
8	0.53	105.94	1.16	0.00	7.07	122.52
9	0.59	97.24	1.01	0.00	7.66	121.63
10	0.66	90.23	0.90	0.00	7.97	120.61
11	0.73	83.50	0.83	0.00	8.39	119.81
12	0.79	78.36	0.79	0.10	8.94	119.17
13	0.85	72.93	0.75	0.00	9.57	118.59
14	0.93	67.42	0.71	0.10	9.95	118.07
15	0.99	67.37	0.67	0.00	10.00	117.63
16	1.05	67.37	0.64	0.10	9.72	117.31
17	1.12	67.32	0.62	0.20	9.25	117.24
18	1.19	72.47	0.64	0.20	8.50	117.52
19	1.25	80.88	0.67	0.20	7.48	118.00
20	1.32	89.11	0.68	0.20	6.73	118.66
21	1.38	95.00	0.76	0.20	6.43	119.51
22	1.45	99.68	0.88	0.20	6.34	120.27
23	1.51	103.42	0.90	0.10	6.25	120.75
24	1.58	105.29	0.91	0.20	6.07	120.90
25	1.64	106.50	0.92	0.10	5.98	121.00
26	1.71	107.25	0.92	0.20	5.93	120.60
27	1.77	99.49	0.78	0.20	5.46	119.22
28	1.84	94.25	0.50	0.20	5.22	117.67
29	1.91	88.55	0.54	0.20	5.26	116.54
30	1.97	82.38	0.55	0.20	6.16	116.56
31	2.04	76.49	0.54	0.20	6.90	116.17
32	2.11	70.60	0.49	0.10	7.99	115.36
33	2.17	56.85	0.44	0.20	8.46	114.38
34	2.23	60.59	0.39	0.10	8.83	113.34
35	2.30	56.76	0.35	0.20	8.59	112.63
36	2.37	53.58	0.34	0.10	9.14	112.11
37	2.44	50.49	0.34	0.20	9.79	111.84
38	2.50	48.25	0.33	0.10	10.44	111.49
39	2.57	45.16	0.31	0.20	10.99	111.00
40	2.63	42.64	0.29	0.10	11.63	110.45
41	2.69	39.93	0.28	0.10	12.27	109.89
42	2.76	37.40	0.26	0.10	12.94	109.31
43	2.83	35.16	0.25	0.10	13.52	108.69
44	2.89	33.38	0.23	0.10	14.03	108.04
45	2.96	31.60	0.21	0.10	14.42	107.35
46	3.03	30.11	0.19	0.20	14.76	106.66
47	3.09	28.89	0.18	0.10	15.03	106.02
48	3.16	27.86	0.17	0.10	15.22	105.45

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.22	27.21	0.16	0.10	15.38	104.95
50	3.28	26.46	0.15	0.10	15.48	104.50
51	3.35	25.90	0.15	0.10	15.62	104.13
52	3.41	25.43	0.14	0.10	15.68	103.77
53	3.48	25.06	0.13	0.10	15.64	103.38
54	3.54	24.87	0.13	0.10	15.65	102.96
55	3.61	24.12	0.12	0.10	15.70	102.55
56	3.68	23.66	0.12	0.10	5.00	102.17
57	3.75	22.82	0.11	0.10	5.00	101.90
58	3.81	23.00	0.11	0.10	5.00	101.66
59	3.88	23.00	0.11	0.10	5.00	101.46
60	3.94	23.00	0.10	0.10	5.00	101.34
61	4.01	23.19	0.10	0.00	5.00	101.39
62	4.07	23.94	0.11	0.10	5.00	101.55
63	4.14	24.12	0.11	0.00	5.00	101.80
64	4.20	24.59	0.11	0.10	5.00	102.15
65	4.27	25.25	0.12	0.10	5.00	102.52
66	4.33	26.09	0.12	0.00	5.00	102.84
67	4.40	26.27	0.13	0.00	5.00	103.18
68	4.47	26.56	0.13	0.00	14.76	103.50
69	4.53	26.56	0.14	0.00	14.90	103.74
70	4.59	26.46	0.14	0.00	14.97	103.74
71	4.66	26.27	0.14	0.00	14.94	103.49
72	4.72	25.90	0.13	0.00	5.00	102.91
73	4.80	25.62	0.11	0.10	5.00	102.48
74	4.86	25.43	0.12	0.10	5.00	102.29
75	4.93	25.53	0.12	0.10	5.00	102.60
76	4.99	25.53	0.12	0.10	5.00	102.86
77	5.06	25.15	0.13	0.07	15.27	103.09
78	5.12	25.43	0.13	0.07	15.53	103.17
79	5.19	24.78	0.13	0.07	15.55	103.26
80	5.25	25.34	0.13	0.00	15.66	103.54
81	5.32	25.90	0.14	0.10	15.68	104.03
82	5.38	26.27	0.15	0.10	15.62	104.53
83	5.46	27.21	0.16	0.10	15.37	104.88
84	5.52	28.14	0.16	0.10	14.77	105.06
85	5.59	29.45	0.16	0.10	14.11	105.18
86	5.65	30.67	0.16	0.00	13.49	105.29
87	5.72	31.60	0.16	0.00	13.09	105.48
88	5.78	32.26	0.17	0.00	12.85	105.65
89	5.85	32.63	0.17	0.00	12.75	105.81
90	5.92	32.82	0.17	0.00	12.84	105.92
91	5.99	32.26	0.18	0.00	13.16	106.10
92	6.05	31.60	0.18	0.00	13.69	106.36
93	6.12	31.14	0.20	0.00	14.21	106.62
94	6.19	30.76	0.20	0.10	14.42	106.73
95	6.24	31.04	0.19	0.00	14.28	106.74
96	6.31	31.88	0.19	0.00	13.92	106.75

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.38	32.63	0.20	0.00	13.67	106.92
98	6.45	33.01	0.20	0.00	13.65	107.11
99	6.50	32.82	0.21	0.10	13.81	107.26
100	6.57	32.45	0.21	0.00	14.11	107.30
101	6.65	31.70	0.21	0.10	14.34	107.29
102	6.70	31.60	0.21	0.00	14.48	107.27
103	6.77	31.70	0.21	0.10	14.51	107.26
104	6.84	31.51	0.21	0.10	14.49	107.26
105	6.91	31.70	0.21	0.00	14.52	107.25
106	6.96	31.51	0.21	0.00	14.68	107.21
107	7.03	30.58	0.21	0.00	15.07	107.12
108	7.10	29.55	0.21	0.00	15.54	106.91
109	7.18	28.52	0.20	-0.10	15.98	106.59
110	7.22	27.49	0.19	0.10	16.42	106.07
111	7.29	25.81	0.17	-0.10	17.07	105.53
112	7.36	24.22	0.17	-0.10	17.68	104.99
113	7.43	23.56	0.16	-0.10	18.24	104.53
114	7.50	22.53	0.15	0.00	18.68	104.09
115	7.55	21.60	0.15	0.00	19.13	103.75
116	7.63	21.23	0.14	0.00	19.49	103.50
117	7.70	20.85	0.14	0.00	19.59	103.25
118	7.76	20.66	0.13	0.00	19.57	103.01
119	7.81	20.66	0.13	0.00	19.40	102.87
120	7.89	20.95	0.13	0.00	19.18	102.81
121	7.96	21.13	0.13	0.00	19.07	102.97
122	8.01	21.41	0.14	0.00	19.13	103.66
123	8.08	22.63	0.17	0.00	19.61	105.09
124	8.15	23.84	0.22	0.00	20.76	107.22
125	8.21	24.78	0.30	0.20	22.46	110.43
126	8.28	29.08	0.52	0.00	24.37	114.00
127	8.35	33.10	0.81	0.10	25.02	116.58
128	8.40	35.53	0.90	0.10	24.50	117.99
129	8.47	39.08	0.90	0.10	23.44	118.80
130	8.54	42.54	1.03	-0.10	22.64	119.98
131	8.62	47.50	1.29	0.40	20.06	121.52
132	8.66	66.01	1.42	0.60	16.42	123.17
133	8.74	88.36	1.59	-0.10	13.00	124.52
134	8.80	107.16	1.74	0.00	10.65	125.58
135	8.87	124.27	1.80	0.00	9.92	126.70
136	8.92	127.73	2.21	0.00	10.48	127.98
137	9.00	124.64	2.73	0.10	11.72	129.09
138	9.06	124.45	2.91	0.10	12.74	129.90
139	9.13	126.70	3.13	0.20	13.09	130.45
140	9.20	131.93	3.35	0.10	13.75	131.04
141	9.25	126.70	3.68	0.20	15.14	131.75
142	9.32	118.38	4.24	0.10	17.24	132.47
143	9.39	113.89	4.74	0.20	18.95	132.98
144	9.45	112.77	4.77	0.10	19.65	133.21

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.53	113.98	4.73	-0.20	20.18	133.19
146	9.59	106.69	4.80	-0.50	20.28	133.28
147	9.66	114.08	4.93	-0.40	19.58	133.65
148	9.73	133.52	5.21	-1.10	18.17	134.22
149	9.78	144.65	5.46	-1.10	17.25	134.84
150	9.85	149.05	5.84	-1.10	16.96	135.42
151	9.91	157.74	6.24	-1.40	16.67	135.91
152	9.99	167.47	6.38	-2.29	15.92	136.18
153	10.05	176.35	6.17	-3.29	15.10	136.15
154	10.12	178.03	5.93	-3.49	14.41	135.93
155	10.18	178.13	5.70	-3.79	13.94	135.66
156	10.24	179.72	5.48	-3.99	13.80	135.33
157	10.30	170.46	5.26	-2.99	13.35	135.05
158	10.37	181.02	5.05	-1.10	12.86	134.76
159	10.44	183.64	4.83	-0.80	12.15	134.56
160	10.50	184.58	4.72	-0.50	11.75	134.39
161	10.56	187.76	4.65	-0.30	11.38	134.24
162	10.64	190.19	4.49	-0.50	10.99	134.03
163	10.70	190.47	4.30	-0.70	10.38	133.58
164	10.78	191.31	3.81	-0.60	9.75	132.98
165	10.83	189.91	3.50	-0.20	8.75	131.85
166	10.90	184.20	2.67	0.10	7.51	130.05
167	10.97	174.20	1.72	0.10	6.14	127.52
168	11.04	159.89	1.30	0.20	5.11	124.79
169	11.11	145.68	1.00	0.20	4.84	122.78
170	11.17	132.96	0.85	0.20	5.38	121.15
171	11.22	105.66	0.78	0.20	6.08	119.99
172	11.29	103.04	0.71	0.20	6.89	119.13
173	11.36	98.46	0.67	0.30	7.02	118.57
174	11.42	94.53	0.65	0.20	7.52	118.23
175	11.49	87.71	0.65	0.40	8.46	118.17
176	11.57	80.13	0.69	0.20	10.21	118.58
177	11.64	71.72	0.83	0.20	12.45	119.27
178	11.69	66.39	0.94	0.30	15.25	120.25
179	11.76	60.96	1.13	0.30	18.28	121.38
180	11.83	57.22	1.40	0.30	21.65	122.53
181	11.88	53.30	1.62	0.30	25.63	123.65
182	11.95	47.41	1.96	0.30	28.22	124.65
183	12.03	52.83	2.18	0.30	30.55	125.33
184	12.08	48.34	2.26	0.10	30.43	125.78
185	12.15	52.36	2.29	0.20	29.63	125.94
186	12.22	58.63	2.25	0.40	26.55	126.05
187	12.29	67.23	2.11	0.60	22.88	126.07
188	12.34	78.45	2.02	0.20	18.80	126.09
189	12.41	95.75	1.92	0.20	15.33	126.10
190	12.48	108.84	1.80	0.20	12.81	125.96
191	12.55	114.73	1.69	0.20	11.46	125.73
192	12.61	116.32	1.65	0.10	11.09	125.67

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.68	115.20	1.72	0.10	11.43	125.91
194	12.75	113.42	1.86	0.10	12.19	126.34
195	12.80	111.18	1.99	0.00	13.35	126.94
196	12.88	107.06	2.25	0.00	14.70	127.65
197	12.95	105.94	2.54	0.00	15.88	128.30
198	13.00	106.31	2.66	0.00	16.44	128.66
199	13.07	106.13	2.63	0.00	16.63	128.60
200	13.12	102.76	2.50	0.00	16.01	128.13
201	13.20	106.36	2.17	0.00	15.21	127.28
202	13.27	102.20	1.85	0.20	13.62	126.15
203	13.34	106.59	1.55	0.20	12.12	124.95
204	13.39	109.49	1.31	0.20	10.27	123.70
205	13.46	113.51	1.07	0.30	8.96	122.74
206	13.54	116.32	1.03	0.30	8.25	122.28
207	13.59	117.25	1.08	0.30	8.49	122.73
208	13.66	117.07	1.26	0.20	9.54	123.55
209	13.72	109.31	1.45	0.20	10.58	124.48
210	13.78	114.17	1.61	0.20	11.53	125.24
211	13.86	114.08	1.75	0.20	12.06	125.81
212	13.92	111.27	1.83	0.20	12.74	126.14
213	13.99	108.84	1.87	0.00	13.30	126.26
214	14.05	107.06	1.88	0.00	13.63	126.21
215	14.12	105.19	1.83	0.10	13.65	125.90
216	14.19	103.23	1.68	0.10	13.43	125.30
217	14.26	99.96	1.49	0.10	13.04	124.53
218	14.31	98.27	1.36	0.10	12.57	123.66
219	14.38	96.03	1.20	0.20	12.09	122.81
220	14.45	93.88	1.07	0.10	11.61	121.91
221	14.52	92.29	0.97	0.10	11.30	121.29
222	14.57	91.82	0.95	0.30	11.23	121.06
223	14.64	91.73	0.98	0.30	11.30	121.11
224	14.72	92.48	0.99	0.30	11.49	121.38
225	14.76	93.32	1.06	0.10	11.92	122.00
226	14.84	94.63	1.24	0.30	12.67	122.90
227	14.91	95.37	1.40	0.20	13.44	123.74
228	14.96	95.84	1.50	0.30	14.05	124.38
229	15.03	96.40	1.60	0.00	14.57	124.79
230	15.10	95.28	1.67	0.10	14.90	125.15
231	15.17	97.62	1.73	0.10	14.90	125.46
232	15.24	102.01	1.78	0.00	14.59	125.74
233	15.29	105.10	1.81	0.10	14.09	125.98
234	15.36	109.96	1.84	0.20	13.68	126.20
235	15.44	113.33	1.88	0.20	13.47	126.52
236	15.51	115.20	2.00	0.20	13.57	126.91
237	15.56	116.51	2.11	0.20	13.95	127.40
238	15.63	117.35	2.28	0.00	14.39	127.84
239	15.70	117.35	2.37	0.00	14.67	128.17
240	15.75	119.12	2.41	0.00	14.64	128.32

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.82	121.37	2.40	0.00	14.45	128.36
242	15.89	122.02	2.38	0.10	14.08	128.34
243	15.96	125.67	2.34	0.00	13.72	128.28
244	16.01	127.17	2.31	0.00	13.30	128.20
245	16.09	128.57	2.27	0.00	12.76	127.74
246	16.16	126.32	1.92	0.00	11.95	126.85
247	16.21	123.71	1.58	0.10	11.26	125.89
248	16.28	122.02	1.59	0.10	11.00	125.40
249	16.35	121.70	1.60	0.10	11.14	125.41
250	16.42	121.70	1.60	0.10	11.20	125.42
251	16.48	121.37	1.60	0.10	11.39	125.49
252	16.55	119.50	1.65	0.10	11.27	126.04
253	16.62	136.33	1.91	0.20	11.39	127.18
254	16.69	145.12	2.35	0.30	11.61	128.52
255	16.73	148.11	2.68	0.20	12.56	129.84
256	16.81	149.79	3.20	0.20	13.98	130.94
257	16.88	143.90	3.69	0.20	15.39	131.84
258	16.93	144.09	3.97	0.20	16.56	132.54
259	17.00	146.24	4.32	-0.30	17.23	133.14
260	17.07	148.48	4.67	-0.40	17.70	133.77
261	17.14	153.53	5.04	-0.10	17.91	134.30
262	17.21	158.40	5.23	0.00	17.89	134.70
263	17.27	161.58	5.37	0.00	17.96	134.97
264	17.34	161.11	5.55	-0.10	18.40	135.25
265	17.40	158.58	5.85	-0.10	19.05	135.56
266	17.46	159.05	6.12	0.10	19.31	135.89
267	17.52	167.00	6.29	-0.30	18.58	136.16
268	17.60	182.89	6.22	-0.90	17.47	136.19
269	17.66	185.51	5.91	-1.20	16.15	135.95
270	17.73	190.47	5.44	-0.70	14.78	135.48
271	17.80	201.41	4.94	-0.70	13.28	135.01
272	17.85	211.13	4.68	-1.10	11.84	134.63
273	17.91	221.42	4.44	-0.40	10.84	134.30
274	17.98	223.19	4.16	0.10	10.08	134.05
275	18.06	229.83	4.12	0.00	9.77	133.95
276	18.11	229.93	4.22	0.10	9.79	133.95
277	18.18	222.63	4.15	0.00	9.99	134.10
278	18.25	229.32	4.38	0.10	10.44	134.20
279	18.31	217.49	4.48	0.00	10.49	134.37
280	18.38	228.71	4.42	-0.05	10.13	134.33
281	18.44	241.99	4.23	-0.30	8.91	134.02
282	18.51	255.45	3.71	-0.10	7.48	133.33
283	18.58	264.71	3.14	0.10	6.27	132.38
284	18.64	260.41	2.79	0.10	5.49	131.54
285	18.70	260.50	2.65	0.20	5.19	131.09
286	18.77	261.81	2.64	0.10	5.05	130.92
287	18.83	261.81	2.60	0.20	5.01	130.88
288	18.91	261.81	2.60	0.10	5.04	130.85

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.97	259.01	2.61	0.20	5.04	130.72
290	19.03	256.01	2.48	0.20	5.04	130.52
291	19.10	252.74	2.43	0.20	5.27	130.70
292	19.17	254.71	2.81	0.10	5.43	131.05
293	19.24	263.40	2.83	0.10	5.36	131.44
294	19.30	275.93	2.78	0.10	5.10	131.72
295	19.37	285.66	3.03	0.10	5.16	132.21
296	19.43	285.61	3.35	0.20	5.54	132.92
297	19.50	289.77	3.67	0.20	6.01	133.45
298	19.56	285.56	3.79	0.30	6.27	133.79
299	19.62	288.18	3.85	0.30	6.42	134.01
300	19.69	293.51	3.98	0.30	6.27	134.09
301	19.75	299.87	3.86	0.30	5.83	133.77
302	19.82	299.31	3.31	0.30	5.26	133.20
303	19.89	300.99	3.12	0.30	4.78	132.54
304	19.95	296.88	2.99	0.30	4.58	132.23
305	20.02	296.92	2.91	0.30	4.52	132.06
306	20.08	296.92	2.94	0.30	4.48	131.99
307	20.15	296.97	2.90	0.30	4.39	131.93
308	20.22	300.34	2.82	0.30	4.26	131.95
309	20.28	309.03	2.92	0.20	4.18	132.14
310	20.34	314.83	3.08	0.30	4.18	132.46
311	20.42	318.85	3.15	0.10	4.21	132.67
312	20.48	320.06	3.16	0.30	4.25	132.70
313	20.55	314.17	3.11	0.30	4.32	132.61
314	20.61	308.19	3.07	0.30	4.46	132.47
315	20.67	301.36	3.04	0.30	4.51	132.27
316	20.74	300.15	2.91	0.30	4.40	131.97
317	20.81	299.77	2.73	0.30	4.09	131.41
318	20.87	295.29	2.42	0.30	3.65	130.61
319	20.93	292.39	2.10	0.30	3.34	129.81
320	21.01	283.88	2.03	0.30	3.29	129.43
321	21.07	279.95	2.12	0.30	3.60	129.62
322	21.13	278.36	2.30	0.30	3.95	130.04
323	21.20	279.30	2.42	0.30	4.32	130.37
324	21.27	270.41	2.47	0.30	4.36	130.65
325	21.33	289.49	2.54	0.30	4.33	130.86
326	21.39	293.32	2.60	0.30	4.28	131.09
327	21.46	286.87	2.67	0.30	4.47	131.23
328	21.53	282.94	2.70	0.30	4.66	131.32
329	21.59	285.28	2.73	0.30	4.73	131.42
330	21.66	287.71	2.78	0.30	4.68	131.54
331	21.73	292.95	2.80	0.30	4.74	131.66
332	21.79	288.37	2.85	0.30	4.77	131.73
333	21.85	289.49	2.86	0.30	4.74	131.73
334	21.92	296.22	2.80	0.30	4.53	131.67
335	21.99	300.43	2.74	0.30	4.35	131.59
336	22.05	299.49	2.73	0.30	4.31	131.53

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.12	296.78	2.73	0.30	4.38	131.50
338	22.18	294.16	2.72	0.30	4.44	131.40
339	22.25	289.96	2.64	0.30	4.48	131.24
340	22.31	285.47	2.59	0.30	4.50	131.06
341	22.38	284.16	2.57	0.30	4.57	130.96
342	22.45	280.23	2.56	0.30	4.70	130.90
343	22.52	274.15	2.56	0.30	4.98	130.86
344	22.59	264.34	2.59	0.30	5.37	130.87
345	22.64	256.39	2.65	0.30	5.78	130.87
346	22.70	250.87	2.64	0.30	6.12	130.53
347	22.77	230.77	2.35	0.30	6.32	130.10
348	22.84	228.06	2.31	0.30	6.26	129.61
349	22.90	233.76	2.22	0.30	5.90	129.49
350	22.98	244.79	2.19	0.30	5.31	129.46
351	23.05	259.38	2.19	0.30	4.99	129.49
352	23.10	254.24	2.19	0.30	4.70	129.53
353	23.16	264.62	2.16	0.30	4.39	129.50
354	23.23	279.02	2.11	0.30	3.95	129.59
355	23.30	289.96	2.18	0.30	3.75	130.02
356	23.37	302.11	2.45	0.30	3.71	130.77
357	23.43	321.47	2.71	0.30	3.71	131.57
358	23.49	336.15	2.90	0.30	3.44	132.36
359	23.56	375.05	3.16	0.30	3.18	133.15
360	23.63	399.64	3.47	0.30	2.96	133.89
361	23.70	413.94	3.67	0.30	2.86	134.41
362	23.76	428.16	3.77	0.20	2.85	134.65
363	23.82	420.11	3.77	0.20	2.99	134.85
364	23.89	414.41	3.99	0.20	3.26	134.94
365	23.95	403.56	3.98	0.20	3.49	134.98
366	24.02	398.23	3.90	0.20	3.83	135.24
367	24.08	398.70	4.47	0.20	4.04	135.61
368	24.15	410.76	4.60	0.20	4.17	136.29
369	24.22	439.28	4.99	0.20	4.35	136.82
370	24.28	424.60	5.44	0.20	4.61	137.28
371	24.35	425.96	5.59	0.20	4.90	137.28
372	24.41	425.96	5.47	0.20	4.77	137.28
373	24.48	427.31	5.14	0.30	4.32	136.99
374	24.55	441.71	4.68	0.20	3.75	136.45
375	24.61	443.58	4.31	0.30	3.26	136.00
376	24.67	448.82	4.24	0.30	3.05	135.81
377	24.74	452.47	4.30	0.30	3.15	136.12
378	24.81	459.39	4.82	0.30	3.71	137.05
379	24.88	462.19	6.00	0.30	4.58	137.28
380	24.94	475.19	7.27	0.30	4.84	137.28
381	25.01	502.02	6.55	0.30	4.75	137.28
382	25.07	515.40	6.90	0.30	4.27	137.28
383	25.13	550.55	7.29	0.30	3.74	137.28
384	25.20	618.25	7.08	0.30	2.80	137.28

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.27	705.68	6.92	0.30	2.24	137.28
386	25.33	714.19	7.80	0.30	2.28	137.28
387	25.40	696.14	8.61	0.30	2.87	137.28
388	25.46	658.55	8.77	0.20	3.48	137.28
389	25.53	595.25	8.25	0.20	3.95	137.28
390	25.60	550.18	7.51	0.20	4.71	137.28
391	25.66	446.48	6.93	0.20	5.42	137.28
392	25.73	422.55	6.53	0.30	6.28	137.28
393	25.79	394.78	6.11	0.30	6.55	137.28
394	25.86	368.22	5.57	0.30	6.80	137.28
395	25.93	347.93	5.16	0.30	6.94	136.57
396	25.99	332.13	4.76	0.30	7.61	135.77
397	26.05	272.57	4.42	0.10	7.56	135.15
398	26.12	314.17	4.15	0.20	7.49	134.64
399	26.19	307.91	3.98	0.10	6.82	134.44
400	26.25	301.74	3.95	0.10	6.66	133.95
401	26.32	296.41	3.44	0.10	6.34	133.34
402	26.39	293.70	3.12	0.10	5.82	132.58
403	26.45	294.35	2.95	0.20	5.52	132.15
404	26.52	292.67	2.90	0.10	5.31	131.86
405	26.59	292.67	2.77	0.10	5.16	131.69
406	26.65	295.75	2.75	0.10	4.92	131.58
407	26.71	304.08	2.74	0.10	4.61	131.56
408	26.78	315.02	2.69	0.10	4.38	131.70
409	26.84	321.84	2.83	0.02	4.23	131.88
410	26.91	327.27	2.87	0.00	4.08	132.11
411	26.97	341.20	2.88	0.00	3.94	132.14
412	27.04	336.62	2.82	0.00	3.51	132.12
413	27.10	365.79	2.74	0.00	3.05	132.05
414	27.17	382.62	2.70	0.00	2.59	132.21
415	27.23	398.23	2.85	0.00	2.41	132.77
416	27.30	428.16	3.25	-0.01	2.44	133.65
417	27.37	446.58	3.65	0.00	2.62	134.56
418	27.43	448.82	4.00	-0.06	2.96	135.21
419	27.50	438.82	4.23	0.00	3.45	135.59
420	27.56	417.78	4.36	0.00	4.09	135.76
421	27.63	391.32	4.50	0.00	4.80	135.79
422	27.70	370.46	4.54	-0.07	5.36	135.67
423	27.76	359.15	4.36	-0.08	5.65	135.38
424	27.83	348.40	4.16	-0.11	5.64	134.95
425	27.89	342.51	3.89	-0.13	5.43	134.40
426	27.96	339.98	3.54	-0.14	5.05	133.70
427	28.02	333.34	3.15	-0.13	4.55	132.91
428	28.09	334.84	2.83	-0.13	4.18	132.31
429	28.16	334.84	2.80	-0.12	4.00	132.05
430	28.22	334.84	2.85	-0.12	3.97	132.05
431	28.28	338.11	2.82	-0.10	3.94	132.19
432	28.35	345.97	2.93	-0.14	3.90	132.52

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.42	358.96	3.17	-0.15	3.83	133.05
434	28.48	379.35	3.37	-0.15	3.76	133.83
435	28.55	407.02	3.82	-0.16	3.77	134.73
436	28.62	424.70	4.29	-0.14	3.71	135.38
437	28.68	437.60	4.25	-0.16	3.73	135.83
438	28.75	441.90	4.48	-0.16	3.69	136.03
439	28.81	447.04	4.58	-0.16	3.98	136.16
440	28.88	415.16	4.57	-0.16	4.20	136.01
441	28.94	405.43	4.32	-0.16	4.40	135.52
442	29.01	389.45	3.92	-0.16	4.37	134.89
443	29.07	370.37	3.65	-0.16	4.79	134.71
444	29.14	353.82	4.20	-0.15	5.99	135.46
445	29.21	343.72	5.37	-0.11	7.70	136.96
446	29.27	351.95	6.77	-0.12	9.46	137.28
447	29.33	332.97	7.51	-0.10	9.48	137.28
448	29.41	350.08	5.62	0.00	8.33	137.28
449	29.47	370.46	4.67	0.00	6.72	136.72
450	29.53	383.09	5.27	0.00	5.59	136.84
451	29.60	450.60	5.42	0.03	5.03	137.28
452	29.66	491.83	5.97	0.00	5.45	137.28
453	29.73	374.20	6.14	0.10	6.91	137.28
454	29.79	324.83	6.08	0.10	9.52	137.28
455	29.86	289.68	6.10	0.10	10.32	137.27
456	29.92	308.28	5.61	0.10	10.15	136.62
457	29.99	295.75	4.74	0.10	9.25	135.77
458	30.05	287.34	4.31	0.10	8.69	134.87
459	30.12	286.87	4.01	0.10	8.27	134.24
460	30.18	284.16	3.72	0.10	7.80	133.61
461	30.25	279.86	3.36	0.10	7.66	133.12
462	30.32	269.48	3.36	0.10	7.72	132.80
463	30.38	265.08	3.35	0.10	7.87	132.69
464	30.45	267.70	3.26	0.10	7.67	132.53
465	30.52	272.28	3.13	0.00	7.29	132.29
466	30.58	273.22	3.00	0.00	6.95	131.98
467	30.65	271.07	2.86	0.00	7.22	131.47
468	30.72	234.51	2.66	-0.10	7.36	130.80
469	30.78	236.85	2.39	-0.10	7.32	130.04
470	30.84	241.05	2.18	-0.10	6.57	129.40
471	30.91	244.70	2.03	0.10	6.00	128.99
472	30.97	249.19	1.99	0.00	5.63	128.91
473	31.05	257.42	2.06	0.00	5.41	129.16
474	31.11	268.08	2.18	0.00	5.19	129.63
475	31.17	283.97	2.31	0.00	4.97	130.32
476	31.24	304.26	2.57	0.00	4.79	131.10
477	31.30	321.37	2.81	0.00	4.59	131.89
478	31.37	343.16	3.00	0.00	4.48	132.48
479	31.44	348.68	3.15	0.00	4.39	132.93
480	31.50	357.84	3.27	0.00	4.51	133.32

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.57	357.56	3.48	0.00	4.92	133.80
482	31.63	345.12	3.83	-0.04	5.98	134.52
483	31.70	322.96	4.49	-0.09	7.95	135.23
484	31.76	274.15	5.05	-0.09	10.96	135.53
485	31.83	212.54	5.12	-0.10	14.61	135.03
486	31.89	170.83	4.49	-0.10	18.30	133.67
487	31.97	134.74	3.58	-0.20	20.99	132.14
488	32.03	121.46	3.34	0.10	23.44	130.76
489	32.09	104.91	3.07	0.50	25.56	129.89
490	32.16	93.69	2.82	0.80	27.27	129.19
491	32.22	92.94	2.77	0.90	26.34	129.02
492	32.28	110.80	2.81	-0.10	24.55	129.10
493	32.36	113.14	2.74	-0.90	23.03	129.44
494	32.42	116.51	2.96	-1.80	23.07	129.90
495	32.49	119.78	3.29	-2.59	23.39	130.54
496	32.55	122.58	3.47	-3.29	23.57	131.08
497	32.61	125.95	3.62	-3.39	23.69	131.45
498	32.69	126.60	3.76	-3.59	24.05	131.81
499	32.76	126.32	3.97	-3.49	24.73	132.20
500	32.83	126.51	4.24	-2.99	25.29	132.60
501	32.88	128.85	4.40	-2.79	25.35	132.94
502	32.95	133.62	4.49	-2.59	24.99	133.14
503	33.02	136.24	4.50	-2.59	24.47	133.26
504	33.07	138.85	4.50	-2.59	23.77	133.35
505	33.15	145.87	4.54	-2.50	22.88	133.50
506	33.22	153.35	4.58	-2.89	21.99	133.72
507	33.29	158.96	4.71	-2.10	21.52	133.93
508	33.34	160.08	4.80	-1.20	21.47	134.13
509	33.41	159.99	4.90	-0.50	21.61	134.26
510	33.48	160.83	4.96	-0.40	21.62	134.38
511	33.55	163.45	4.99	-0.40	21.38	134.46
512	33.60	167.00	5.00	-0.40	20.87	134.51
513	33.67	171.77	4.96	-0.40	20.29	134.51
514	33.74	174.57	4.88	-0.40	19.64	134.48
515	33.81	178.87	4.82	-0.50	19.22	134.45
516	33.86	179.62	4.82	-0.50	18.91	134.49
517	33.93	182.61	4.90	-0.50	18.86	134.59
518	33.99	183.64	4.98	-0.30	18.68	134.76
519	34.07	189.35	5.07	-0.30	18.54	134.86
520	34.12	189.53	5.05	-0.30	18.04	134.83
521	34.20	194.02	4.83	-0.60	17.61	134.59
522	34.26	191.03	4.57	-0.70	16.96	134.17
523	34.33	190.09	4.23	-0.50	16.32	133.69
524	34.39	192.99	3.98	-0.50	15.31	133.30
525	34.46	202.62	3.83	-0.50	14.18	133.16
526	34.52	215.25	3.83	-0.50	12.85	133.22
527	34.58	234.88	3.83	-0.30	11.36	133.49
528	34.66	264.34	3.91	-0.30	10.20	133.89

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.72	279.11	4.12	-0.28	9.69	134.33
530	34.78	278.92	4.33	-0.25	9.87	134.67
531	34.85	274.06	4.45	-0.25	10.24	134.75
532	34.91	266.95	4.33	-0.25	10.61	134.60
533	34.98	255.45	4.19	-0.20	10.93	134.38
534	35.05	251.15	4.20	-0.20	11.15	134.16
535	35.11	248.07	4.05	-0.20	11.36	134.01
536	35.18	240.96	4.01	-0.10	11.54	133.91
537	35.24	240.21	4.09	-0.20	11.76	133.90
538	35.30	240.03	4.08	-0.30	11.92	133.95
539	35.38	237.78	4.11	-0.20	11.85	133.94
540	35.43	242.46	4.06	-0.40	11.65	133.90
541	35.51	245.82	3.98	-0.40	11.27	133.79
542	35.56	247.41	3.88	-0.40	10.83	133.65
543	35.63	253.58	3.78	-0.30	10.30	133.59
544	35.70	264.62	3.79	-0.20	9.72	133.49
545	35.76	267.52	3.62	-0.10	9.15	133.25
546	35.84	268.26	3.37	-0.20	8.63	132.87
547	35.90	270.88	3.22	-0.10	8.19	132.55
548	35.96	273.13	3.16	-0.20	7.81	132.36
549	36.03	278.83	3.08	-0.10	7.48	132.30
550	36.09	284.72	3.08	-0.10	7.19	132.31
551	36.16	289.68	3.11	-0.10	6.94	132.43
552	36.23	299.12	3.16	-0.20	6.74	132.56
553	36.29	303.98	3.18	-0.20	6.57	132.74
554	36.36	309.31	3.28	-0.20	6.53	132.95
555	36.43	313.71	3.39	-0.20	6.78	133.14
556	36.49	299.12	3.45	-0.10	6.82	133.28
557	36.55	315.20	3.45	-0.10	6.77	133.32
558	36.62	319.32	3.42	-0.10	6.40	133.33
559	36.69	323.24	3.38	-0.10	6.24	133.30
560	36.75	324.27	3.38	0.00	6.15	133.28
561	36.82	325.02	3.38	0.00	6.11	133.29
562	36.88	326.42	3.37	0.00	6.02	133.31
563	36.95	332.13	3.38	0.00	5.87	133.36
564	37.01	338.49	3.40	-0.20	5.67	133.47
565	37.08	347.65	3.46	-0.10	5.53	133.65
566	37.14	353.91	3.57	-0.10	5.53	133.92
567	37.21	356.34	3.73	-0.10	5.63	134.21
568	37.28	358.87	3.85	-0.10	5.68	134.33
569	37.34	358.12	3.73	-0.10	5.59	134.24
570	37.41	357.93	3.60	-0.10	5.49	134.08
571	37.48	356.63	3.61	-0.10	5.41	133.97
572	37.54	357.75	3.57	-0.03	5.34	133.86
573	37.60	356.34	3.44	0.00	5.25	133.68
574	37.67	352.42	3.37	0.00	5.13	133.50
575	37.74	356.06	3.32	0.00	5.08	133.39
576	37.80	354.29	3.30	0.10	5.07	133.33

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	37.86	349.14	3.30	0.00	5.08	133.31
578	37.93	354.10	3.30	0.00	5.16	133.33
579	38.00	350.08	3.34	0.00	5.23	133.48
580	38.07	353.91	3.50	0.00	5.42	133.79
581	38.13	359.52	3.71	0.10	5.58	134.15
582	38.20	361.58	3.83	0.00	5.73	134.39
583	38.26	358.40	3.85	0.10	5.62	134.52
584	38.32	377.01	3.85	0.10	5.46	134.60
585	38.39	380.00	3.90	0.10	5.29	134.72
586	38.45	380.84	3.96	0.00	5.24	134.81
587	38.52	387.95	3.96	0.10	5.23	134.91
588	38.59	388.79	4.03	0.05	5.17	134.98
589	38.65	390.85	4.04	0.10	5.13	134.99
590	38.72	392.25	3.96	0.00	5.01	134.92
591	38.78	394.59	3.90	0.00	4.97	134.95
592	38.85	397.02	4.06	0.00	4.96	135.07
593	38.91	402.91	4.12	0.00	4.93	135.23
594	38.98	410.20	4.12	0.00	4.86	135.29
595	39.05	408.52	4.12	0.00	4.86	135.38
596	39.12	409.46	4.24	0.00	4.90	135.49
597	39.17	416.19	4.30	0.00	4.83	135.51
598	39.24	417.50	4.13	0.00	4.50	135.46
599	39.31	438.72	4.04	0.10	4.08	135.33
600	39.38	452.28	3.97	0.00	3.66	135.30
601	39.44	465.28	3.94	0.00	3.37	135.38
602	39.50	482.67	4.05	0.03	3.18	135.40
603	39.57	479.12	3.93	0.03	3.01	135.26
604	39.64	477.71	3.68	0.02	2.93	135.01
605	39.70	471.45	3.68	0.00	1.31	131.85
606	39.76	461.91	0.00	0.10	0.00	126.73
607	39.84	447.04	0.00	0.00	N/A	87.36
608	39.90	443.49	0.00	-0.01	N/A	87.36
609	39.96	434.89	0.00	0.00	N/A	87.36
610	40.03	431.52	0.00	-0.10	N/A	87.36
611	40.10	418.71	0.00	0.00	N/A	87.36

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.07	0.00	0.00	0.00	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
2	0.13	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
3	0.20	0.01	0.00	0.01	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
4	0.27	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
5	0.33	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
6	0.40	0.02	0.00	0.02	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
7	0.47	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
8	0.53	0.03	0.00	0.03	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
9	0.59	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
10	0.66	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
11	0.73	0.04	0.00	0.04	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
12	0.79	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
13	0.85	0.05	0.00	0.05	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
14	0.93	0.06	0.00	0.06	1.00	0.468	0.83	0.565	1.00	1.00	2.000	No
15	0.99	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
16	1.05	0.06	0.00	0.06	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
17	1.12	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
18	1.19	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
19	1.25	0.07	0.00	0.07	1.00	0.468	0.83	0.564	1.00	1.00	2.000	No
20	1.32	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
21	1.38	0.08	0.00	0.08	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
22	1.45	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
23	1.51	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
24	1.58	0.09	0.00	0.09	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
25	1.64	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
26	1.71	0.10	0.00	0.10	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
27	1.77	0.11	0.00	0.11	1.00	0.467	0.83	0.564	1.00	1.00	2.000	No
28	1.84	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
29	1.91	0.11	0.00	0.11	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
30	1.97	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
31	2.04	0.12	0.00	0.12	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
32	2.11	0.13	0.00	0.13	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
33	2.17	0.13	0.00	0.13	1.00	0.467	0.83	0.563	1.00	1.00	2.000	No
34	2.23	0.13	0.00	0.13	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
35	2.30	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
36	2.37	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
37	2.44	0.14	0.00	0.14	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
38	2.50	0.15	0.00	0.15	1.00	0.466	0.83	0.563	1.00	1.00	2.000	No
39	2.57	0.15	0.00	0.15	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
40	2.63	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
41	2.69	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
42	2.76	0.16	0.00	0.16	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
43	2.83	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
44	2.89	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
45	2.96	0.17	0.00	0.17	1.00	0.466	0.83	0.562	1.00	1.00	2.000	No
46	3.03	0.18	0.00	0.18	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
47	3.09	0.18	0.00	0.18	0.99	0.466	0.83	0.562	1.00	1.00	2.000	No
48	3.16	0.18	0.00	0.18	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.22	0.19	0.00	0.19	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
50	3.28	0.19	0.00	0.19	0.99	0.465	0.83	0.562	1.00	1.00	2.000	No
51	3.35	0.19	0.00	0.19	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
52	3.41	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
53	3.48	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
54	3.54	0.20	0.00	0.20	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
55	3.61	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
56	3.68	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
57	3.75	0.21	0.00	0.21	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
58	3.81	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
59	3.88	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
60	3.94	0.22	0.00	0.22	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
61	4.01	0.23	0.00	0.23	0.99	0.465	0.83	0.561	1.00	1.00	2.000	No
62	4.07	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
63	4.14	0.23	0.00	0.23	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
64	4.20	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
65	4.27	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
66	4.33	0.24	0.00	0.24	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
67	4.40	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
68	4.47	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
69	4.53	0.25	0.00	0.25	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
70	4.59	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
71	4.66	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
72	4.72	0.26	0.00	0.26	0.99	0.464	0.83	0.560	1.00	1.00	2.000	No
73	4.80	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
74	4.86	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
75	4.93	0.27	0.00	0.27	0.99	0.464	0.83	0.559	1.00	1.00	2.000	No
76	4.99	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
77	5.06	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
78	5.12	0.28	0.00	0.28	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
79	5.19	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
80	5.25	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
81	5.32	0.29	0.00	0.29	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
82	5.38	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
83	5.46	0.30	0.00	0.30	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
84	5.52	0.31	0.00	0.31	0.99	0.463	0.83	0.559	1.00	1.00	2.000	No
85	5.59	0.31	0.00	0.31	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
86	5.65	0.31	0.00	0.31	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
87	5.72	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
88	5.78	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
89	5.85	0.32	0.00	0.32	0.99	0.463	0.83	0.558	1.00	1.00	2.000	No
90	5.92	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
91	5.99	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
92	6.05	0.33	0.00	0.33	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
93	6.12	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
94	6.19	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
95	6.24	0.34	0.00	0.34	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No
96	6.31	0.35	0.00	0.35	0.99	0.462	0.83	0.558	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.38	0.35	0.00	0.35	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
98	6.45	0.35	0.00	0.35	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
99	6.50	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
100	6.57	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
101	6.65	0.36	0.00	0.36	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
102	6.70	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
103	6.77	0.37	0.00	0.37	0.99	0.462	0.83	0.557	1.00	1.00	2.000	No
104	6.84	0.38	0.00	0.38	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
105	6.91	0.38	0.00	0.38	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
106	6.96	0.38	0.00	0.38	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
107	7.03	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
108	7.10	0.39	0.00	0.39	0.99	0.461	0.83	0.557	1.00	1.00	2.000	No
109	7.18	0.39	0.00	0.39	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
110	7.22	0.40	0.00	0.40	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
111	7.29	0.40	0.00	0.40	0.99	0.461	0.83	0.556	1.00	1.00	2.000	No
112	7.36	0.40	0.00	0.40	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
113	7.43	0.41	0.00	0.41	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
114	7.50	0.41	0.00	0.41	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
115	7.55	0.41	0.00	0.41	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
116	7.63	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
117	7.70	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
118	7.76	0.42	0.00	0.42	0.98	0.461	0.83	0.556	1.00	1.00	2.000	No
119	7.81	0.43	0.00	0.43	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
120	7.89	0.43	0.00	0.43	0.98	0.460	0.83	0.556	1.00	1.00	2.000	No
121	7.96	0.43	0.00	0.43	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
122	8.01	0.44	0.00	0.44	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
123	8.08	0.44	0.00	0.44	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
124	8.15	0.44	0.00	0.44	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
125	8.21	0.45	0.00	0.45	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
126	8.28	0.45	0.00	0.45	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
127	8.35	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
128	8.40	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
129	8.47	0.46	0.00	0.46	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
130	8.54	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
131	8.62	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
132	8.66	0.47	0.00	0.47	0.98	0.460	0.83	0.555	1.00	1.00	2.000	No
133	8.74	0.48	0.00	0.48	0.98	0.460	0.83	0.554	1.00	1.00	2.000	No
134	8.80	0.48	0.00	0.48	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
135	8.87	0.49	0.00	0.49	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
136	8.92	0.49	0.00	0.49	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
137	9.00	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
138	9.06	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
139	9.13	0.50	0.00	0.50	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
140	9.20	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
141	9.25	0.51	0.00	0.51	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
142	9.32	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
143	9.39	0.52	0.00	0.52	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
144	9.45	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.53	0.53	0.00	0.53	0.98	0.459	0.83	0.554	1.00	1.00	2.000	No
146	9.59	0.53	0.00	0.53	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
147	9.66	0.54	0.00	0.54	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
148	9.73	0.54	0.00	0.54	0.98	0.459	0.83	0.553	1.00	1.00	2.000	No
149	9.78	0.55	0.00	0.55	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
150	9.85	0.55	0.00	0.55	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
151	9.91	0.56	0.00	0.56	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
152	9.99	0.56	0.00	0.56	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
153	10.05	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
154	10.12	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
155	10.18	0.57	0.00	0.57	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
156	10.24	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
157	10.30	0.58	0.00	0.58	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
158	10.37	0.59	0.00	0.59	0.98	0.458	0.83	0.553	1.00	1.00	2.000	No
159	10.44	0.59	0.00	0.59	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
160	10.50	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
161	10.56	0.60	0.00	0.60	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
162	10.64	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
163	10.70	0.61	0.00	0.61	0.98	0.458	0.83	0.552	1.00	1.00	2.000	No
164	10.78	0.61	0.00	0.61	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
165	10.83	0.62	0.00	0.62	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
166	10.90	0.62	0.00	0.62	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
167	10.97	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
168	11.04	0.63	0.00	0.63	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
169	11.11	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
170	11.17	0.64	0.00	0.64	0.98	0.457	0.83	0.552	1.00	1.00	2.000	No
171	11.22	0.64	0.00	0.64	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
172	11.29	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
173	11.36	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
174	11.42	0.65	0.00	0.65	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
175	11.49	0.66	0.00	0.66	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
176	11.57	0.66	0.00	0.66	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
177	11.64	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
178	11.69	0.67	0.00	0.67	0.98	0.457	0.83	0.551	1.00	1.00	2.000	No
179	11.76	0.67	0.00	0.67	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
180	11.83	0.68	0.00	0.68	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
181	11.88	0.68	0.00	0.68	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
182	11.95	0.69	0.00	0.69	0.98	0.456	0.83	0.551	1.00	1.00	2.000	No
183	12.03	0.69	0.00	0.69	0.97	0.456	0.83	0.551	1.00	1.00	2.000	No
184	12.08	0.69	0.00	0.69	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
185	12.15	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
186	12.22	0.70	0.00	0.70	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
187	12.29	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
188	12.34	0.71	0.00	0.71	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
189	12.41	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
190	12.48	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
191	12.55	0.72	0.00	0.72	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
192	12.61	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.68	0.73	0.00	0.73	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
194	12.75	0.74	0.00	0.74	0.97	0.456	0.83	0.550	1.00	1.00	2.000	No
195	12.80	0.74	0.00	0.74	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
196	12.88	0.74	0.00	0.74	0.97	0.455	0.83	0.550	1.00	1.00	2.000	No
197	12.95	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
198	13.00	0.75	0.00	0.75	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
199	13.07	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
200	13.12	0.76	0.00	0.76	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
201	13.20	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
202	13.27	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
203	13.34	0.77	0.00	0.77	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
204	13.39	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
205	13.46	0.78	0.00	0.78	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
206	13.54	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
207	13.59	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
208	13.66	0.79	0.00	0.79	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
209	13.72	0.80	0.00	0.80	0.97	0.455	0.83	0.549	1.00	1.00	2.000	No
210	13.78	0.80	0.00	0.80	0.97	0.455	0.83	0.548	1.00	1.00	2.000	No
211	13.86	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
212	13.92	0.81	0.00	0.81	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
213	13.99	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
214	14.05	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
215	14.12	0.82	0.00	0.82	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
216	14.19	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
217	14.26	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
218	14.31	0.83	0.00	0.83	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
219	14.38	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
220	14.45	0.84	0.00	0.84	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
221	14.52	0.85	0.00	0.85	0.97	0.454	0.83	0.548	1.00	1.00	2.000	No
222	14.57	0.85	0.00	0.85	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
223	14.64	0.85	0.00	0.85	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
224	14.72	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
225	14.76	0.86	0.00	0.86	0.97	0.454	0.83	0.547	1.00	1.00	2.000	No
226	14.84	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
227	14.91	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
228	14.96	0.87	0.00	0.87	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
229	15.03	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
230	15.10	0.88	0.00	0.88	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
231	15.17	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
232	15.24	0.89	0.00	0.89	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
233	15.29	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
234	15.36	0.90	0.00	0.90	0.97	0.453	0.83	0.547	1.00	1.00	2.000	No
235	15.44	0.90	0.00	0.90	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
236	15.51	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
237	15.56	0.91	0.00	0.91	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
238	15.63	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
239	15.70	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No
240	15.75	0.92	0.00	0.92	0.97	0.453	0.83	0.546	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.82	0.93	0.00	0.93	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
242	15.89	0.93	0.00	0.93	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
243	15.96	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
244	16.01	0.94	0.00	0.94	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
245	16.09	0.95	0.00	0.95	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
246	16.16	0.95	0.00	0.95	0.97	0.452	0.83	0.546	1.00	1.00	2.000	No
247	16.21	0.95	0.00	0.95	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
248	16.28	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
249	16.35	0.96	0.00	0.96	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
250	16.42	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
251	16.48	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
252	16.55	0.97	0.00	0.97	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
253	16.62	0.98	0.00	0.98	0.97	0.452	0.83	0.545	1.00	1.00	2.000	No
254	16.69	0.98	0.00	0.98	0.96	0.452	0.83	0.545	1.00	1.00	2.000	No
255	16.73	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
256	16.81	0.99	0.00	0.99	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
257	16.88	1.00	0.00	1.00	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
258	16.93	1.00	0.00	1.00	0.96	0.451	0.83	0.545	1.00	1.00	2.000	No
259	17.00	1.00	0.00	1.00	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
260	17.07	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
261	17.14	1.01	0.00	1.01	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
262	17.21	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
263	17.27	1.02	0.00	1.02	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
264	17.34	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
265	17.40	1.03	0.00	1.03	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
266	17.46	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
267	17.52	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
268	17.60	1.04	0.00	1.04	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
269	17.66	1.05	0.00	1.05	0.96	0.451	0.83	0.544	1.00	1.00	2.000	No
270	17.73	1.05	0.00	1.05	0.96	0.450	0.83	0.544	1.00	1.00	2.000	No
271	17.80	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
272	17.85	1.06	0.00	1.06	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
273	17.91	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
274	17.98	1.07	0.00	1.07	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
275	18.06	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
276	18.11	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
277	18.18	1.08	0.00	1.08	0.96	0.450	0.83	0.543	1.00	1.00	2.000	No
278	18.25	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
279	18.31	1.09	0.00	1.09	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
280	18.38	1.10	0.00	1.10	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
281	18.44	1.10	0.00	1.10	0.96	0.450	0.83	0.543	0.99	1.00	2.000	No
282	18.51	1.11	0.00	1.11	0.96	0.450	0.83	0.542	0.99	1.00	2.000	No
283	18.58	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
284	18.64	1.11	0.00	1.11	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
285	18.70	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
286	18.77	1.12	0.00	1.12	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
287	18.83	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
288	18.91	1.13	0.00	1.13	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.97	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
290	19.03	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.99	1.00	2.000	No
291	19.10	1.14	0.00	1.14	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
292	19.17	1.15	0.00	1.15	0.96	0.449	0.83	0.542	0.98	1.00	2.000	No
293	19.24	1.15	0.00	1.15	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
294	19.30	1.16	0.00	1.16	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
295	19.37	1.16	0.00	1.16	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
296	19.43	1.17	0.00	1.17	0.96	0.449	0.83	0.541	0.98	1.00	2.000	No
297	19.50	1.17	0.00	1.17	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
298	19.56	1.18	0.00	1.18	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
299	19.62	1.18	0.00	1.18	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
300	19.69	1.18	0.00	1.18	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
301	19.75	1.19	0.00	1.19	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
302	19.82	1.19	0.00	1.19	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
303	19.89	1.20	0.00	1.20	0.96	0.448	0.83	0.541	0.98	1.00	2.000	No
304	19.95	1.20	0.00	1.20	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
305	20.02	1.21	0.00	1.21	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
306	20.08	1.21	0.00	1.21	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
307	20.15	1.21	0.00	1.21	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
308	20.22	1.22	0.00	1.22	0.96	0.448	0.83	0.540	0.97	1.00	2.000	No
309	20.28	1.22	0.00	1.22	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
310	20.34	1.23	0.00	1.23	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
311	20.42	1.23	0.00	1.23	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
312	20.48	1.24	0.00	1.24	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
313	20.55	1.24	0.00	1.24	0.96	0.447	0.83	0.540	0.97	1.00	2.000	No
314	20.61	1.24	0.00	1.24	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
315	20.67	1.25	0.00	1.25	0.96	0.447	0.83	0.539	0.97	1.00	2.000	No
316	20.74	1.25	0.00	1.25	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
317	20.81	1.26	0.00	1.26	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
318	20.87	1.26	0.00	1.26	0.95	0.447	0.83	0.539	0.97	1.00	2.000	No
319	20.93	1.27	0.00	1.27	0.95	0.447	0.83	0.539	0.96	1.00	2.000	No
320	21.01	1.27	0.00	1.27	0.95	0.447	0.83	0.539	0.96	1.00	2.000	No
321	21.07	1.27	0.00	1.27	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
322	21.13	1.28	0.00	1.28	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
323	21.20	1.28	0.00	1.28	0.95	0.446	0.83	0.539	0.96	1.00	2.000	No
324	21.27	1.29	0.00	1.29	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
325	21.33	1.29	0.00	1.29	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
326	21.39	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
327	21.46	1.30	0.00	1.30	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
328	21.53	1.31	0.00	1.31	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
329	21.59	1.31	0.00	1.31	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
330	21.66	1.31	0.00	1.31	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
331	21.73	1.32	0.00	1.32	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
332	21.79	1.32	0.00	1.32	0.95	0.446	0.83	0.538	0.96	1.00	2.000	No
333	21.85	1.33	0.00	1.33	0.95	0.445	0.83	0.538	0.96	1.00	2.000	No
334	21.92	1.33	0.00	1.33	0.95	0.445	0.83	0.537	0.96	1.00	2.000	No
335	21.99	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
336	22.05	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.12	1.34	0.00	1.34	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
338	22.18	1.35	0.00	1.35	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
339	22.25	1.35	0.00	1.35	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
340	22.31	1.36	0.00	1.36	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
341	22.38	1.36	0.00	1.36	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
342	22.45	1.37	0.00	1.37	0.95	0.445	0.83	0.537	0.95	1.00	2.000	No
343	22.52	1.37	0.00	1.37	0.95	0.445	0.83	0.536	0.95	1.00	2.000	No
344	22.59	1.37	0.00	1.37	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
345	22.64	1.38	0.00	1.38	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
346	22.70	1.38	0.00	1.38	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
347	22.77	1.39	0.00	1.39	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
348	22.84	1.39	0.00	1.39	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
349	22.90	1.40	0.00	1.40	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
350	22.98	1.40	0.00	1.40	0.95	0.444	0.83	0.536	0.95	1.00	2.000	No
351	23.05	1.40	0.00	1.40	0.95	0.444	0.83	0.536	0.94	1.00	2.000	No
352	23.10	1.41	0.00	1.41	0.95	0.444	0.83	0.535	0.94	1.00	2.000	No
353	23.16	1.41	0.00	1.41	0.95	0.444	0.83	0.535	0.94	1.00	2.000	No
354	23.23	1.42	0.00	1.42	0.95	0.444	0.83	0.535	0.94	1.00	2.000	No
355	23.30	1.42	0.00	1.42	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
356	23.37	1.43	0.00	1.43	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
357	23.43	1.43	0.00	1.43	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
358	23.49	1.43	0.00	1.43	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
359	23.56	1.44	0.00	1.44	0.95	0.443	0.83	0.535	0.94	1.00	2.000	No
360	23.63	1.44	0.00	1.44	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
361	23.70	1.45	0.00	1.45	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
362	23.76	1.45	0.00	1.45	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
363	23.82	1.46	0.00	1.46	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
364	23.89	1.46	0.00	1.46	0.95	0.443	0.83	0.534	0.94	1.00	2.000	No
365	23.95	1.46	0.00	1.46	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
366	24.02	1.47	0.00	1.47	0.95	0.442	0.83	0.534	0.94	1.00	2.000	No
367	24.08	1.47	0.00	1.47	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
368	24.15	1.48	0.00	1.48	0.94	0.442	0.83	0.534	0.94	1.00	2.000	No
369	24.22	1.48	0.00	1.48	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
370	24.28	1.49	0.00	1.49	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
371	24.35	1.49	0.00	1.49	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
372	24.41	1.50	0.00	1.50	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
373	24.48	1.50	0.00	1.50	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
374	24.55	1.51	0.00	1.51	0.94	0.442	0.83	0.533	0.93	1.00	2.000	No
375	24.61	1.51	0.00	1.51	0.94	0.441	0.83	0.533	0.93	1.00	2.000	No
376	24.67	1.51	0.00	1.51	0.94	0.441	0.83	0.533	0.93	1.00	2.000	No
377	24.74	1.52	0.00	1.52	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
378	24.81	1.52	0.00	1.52	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
379	24.88	1.53	0.00	1.53	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
380	24.94	1.53	0.00	1.53	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
381	25.01	1.54	0.00	1.54	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
382	25.07	1.54	0.00	1.54	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
383	25.13	1.55	0.00	1.55	0.94	0.441	0.83	0.532	0.93	1.00	2.000	No
384	25.20	1.55	0.00	1.55	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.27	1.55	0.00	1.55	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
386	25.33	1.56	0.00	1.56	0.94	0.440	0.83	0.531	0.93	1.00	2.000	No
387	25.40	1.56	0.00	1.56	0.94	0.440	0.83	0.531	0.92	1.00	2.000	No
388	25.46	1.57	0.00	1.57	0.94	0.440	0.83	0.531	0.92	1.00	2.000	No
389	25.53	1.57	0.00	1.57	0.94	0.440	0.83	0.531	0.92	1.00	2.000	No
390	25.60	1.58	0.00	1.58	0.94	0.440	0.83	0.531	0.92	1.00	2.000	No
391	25.66	1.58	0.00	1.58	0.94	0.440	0.83	0.531	0.92	1.00	2.000	No
392	25.73	1.59	0.00	1.59	0.94	0.440	0.83	0.530	0.92	1.00	2.000	No
393	25.79	1.59	0.00	1.59	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
394	25.86	1.59	0.00	1.59	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
395	25.93	1.60	0.00	1.60	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
396	25.99	1.60	0.00	1.60	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
397	26.05	1.61	0.00	1.61	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
398	26.12	1.61	0.00	1.61	0.94	0.439	0.83	0.530	0.92	1.00	2.000	No
399	26.19	1.62	0.00	1.62	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
400	26.25	1.62	0.00	1.62	0.94	0.439	0.83	0.529	0.92	1.00	2.000	No
401	26.32	1.63	0.00	1.63	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
402	26.39	1.63	0.00	1.63	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
403	26.45	1.63	0.00	1.63	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
404	26.52	1.64	0.00	1.64	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
405	26.59	1.64	0.00	1.64	0.94	0.438	0.83	0.529	0.92	1.00	2.000	No
406	26.65	1.65	0.00	1.65	0.94	0.438	0.83	0.528	0.92	1.00	2.000	No
407	26.71	1.65	0.00	1.65	0.94	0.438	0.83	0.528	0.91	1.00	2.000	No
408	26.78	1.66	0.00	1.66	0.94	0.438	0.83	0.528	0.91	1.00	2.000	No
409	26.84	1.66	0.00	1.66	0.93	0.438	0.83	0.528	0.91	1.00	2.000	No
410	26.91	1.66	0.00	1.66	0.93	0.437	0.83	0.528	0.91	1.00	2.000	No
411	26.97	1.67	0.00	1.67	0.93	0.437	0.83	0.528	0.91	1.00	2.000	No
412	27.04	1.67	0.00	1.67	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
413	27.10	1.68	0.00	1.68	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
414	27.17	1.68	0.00	1.68	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
415	27.23	1.69	0.00	1.69	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
416	27.30	1.69	0.00	1.69	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
417	27.37	1.70	0.00	1.70	0.93	0.437	0.83	0.527	0.91	1.00	2.000	No
418	27.43	1.70	0.00	1.70	0.93	0.436	0.83	0.527	0.91	1.00	2.000	No
419	27.50	1.70	0.00	1.70	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
420	27.56	1.71	0.00	1.71	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
421	27.63	1.71	0.00	1.71	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
422	27.70	1.72	0.00	1.72	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
423	27.76	1.72	0.00	1.72	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
424	27.83	1.73	0.00	1.73	0.93	0.436	0.83	0.526	0.91	1.00	2.000	No
425	27.89	1.73	0.00	1.73	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
426	27.96	1.74	0.00	1.74	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
427	28.02	1.74	0.00	1.74	0.93	0.435	0.83	0.525	0.91	1.00	2.000	No
428	28.09	1.74	0.00	1.74	0.93	0.435	0.83	0.525	0.90	1.00	2.000	No
429	28.16	1.75	0.00	1.75	0.93	0.435	0.83	0.525	0.90	1.00	2.000	No
430	28.22	1.75	0.00	1.75	0.93	0.435	0.83	0.525	0.90	1.00	2.000	No
431	28.28	1.76	0.00	1.76	0.93	0.435	0.83	0.524	0.90	1.00	2.000	No
432	28.35	1.76	0.00	1.76	0.93	0.435	0.83	0.524	0.90	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.42	1.77	0.00	1.77	0.93	0.434	0.83	0.524	0.90	1.00	2.000	No
434	28.48	1.77	0.00	1.77	0.93	0.434	0.83	0.524	0.90	1.00	2.000	No
435	28.55	1.77	0.00	1.77	0.93	0.434	0.83	0.524	0.90	1.00	2.000	No
436	28.62	1.78	0.00	1.78	0.93	0.434	0.83	0.524	0.90	1.00	2.000	No
437	28.68	1.78	0.00	1.78	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
438	28.75	1.79	0.00	1.79	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
439	28.81	1.79	0.00	1.79	0.93	0.434	0.83	0.523	0.90	1.00	2.000	No
440	28.88	1.80	0.00	1.80	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
441	28.94	1.80	0.00	1.80	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
442	29.01	1.81	0.00	1.81	0.93	0.433	0.83	0.523	0.90	1.00	2.000	No
443	29.07	1.81	0.00	1.81	0.93	0.433	0.83	0.522	0.90	1.00	2.000	No
444	29.14	1.81	0.00	1.81	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
445	29.21	1.82	0.00	1.82	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
446	29.27	1.82	0.00	1.82	0.92	0.433	0.83	0.522	0.90	1.00	2.000	No
447	29.33	1.83	0.00	1.83	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
448	29.41	1.83	0.00	1.83	0.92	0.432	0.83	0.522	0.90	1.00	2.000	No
449	29.47	1.84	0.00	1.84	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
450	29.53	1.84	0.00	1.84	0.92	0.432	0.83	0.521	0.90	1.00	2.000	No
451	29.60	1.85	0.00	1.85	0.92	0.432	0.83	0.521	0.89	1.00	2.000	No
452	29.66	1.85	0.00	1.85	0.92	0.432	0.83	0.521	0.89	1.00	2.000	No
453	29.73	1.86	0.00	1.86	0.92	0.431	0.83	0.521	0.89	1.00	2.000	No
454	29.79	1.86	0.00	1.86	0.92	0.431	0.83	0.520	0.89	1.00	2.000	No
455	29.86	1.86	0.00	1.86	0.92	0.431	0.83	0.520	0.89	1.00	2.000	No
456	29.92	1.87	0.00	1.87	0.92	0.431	0.83	0.520	0.89	1.00	2.000	No
457	29.99	1.87	0.00	1.87	0.92	0.431	0.83	0.520	0.89	1.00	2.000	No
458	30.05	1.88	0.00	1.88	0.92	0.431	0.83	0.520	0.89	1.00	2.000	No
459	30.12	1.88	0.00	1.88	0.92	0.431	0.83	0.520	0.89	1.00	2.000	No
460	30.18	1.89	0.00	1.89	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
461	30.25	1.89	0.00	1.89	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
462	30.32	1.89	0.00	1.89	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
463	30.38	1.90	0.00	1.90	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
464	30.45	1.90	0.00	1.90	0.92	0.430	0.83	0.519	0.89	1.00	2.000	No
465	30.52	1.91	0.00	1.91	0.92	0.430	0.83	0.518	0.89	1.00	2.000	No
466	30.58	1.91	0.00	1.91	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
467	30.65	1.92	0.00	1.92	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
468	30.72	1.92	0.00	1.92	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
469	30.78	1.93	0.00	1.93	0.92	0.429	0.83	0.518	0.89	1.00	2.000	No
470	30.84	1.93	0.00	1.93	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
471	30.91	1.93	0.00	1.93	0.92	0.429	0.83	0.517	0.89	1.00	2.000	No
472	30.97	1.94	0.00	1.94	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
473	31.05	1.94	0.00	1.94	0.92	0.428	0.83	0.517	0.89	1.00	2.000	No
474	31.11	1.95	0.00	1.95	0.91	0.428	0.83	0.517	0.89	1.00	2.000	No
475	31.17	1.95	0.00	1.95	0.91	0.428	0.83	0.516	0.88	1.00	2.000	No
476	31.24	1.96	0.00	1.96	0.91	0.428	0.83	0.516	0.88	1.00	2.000	No
477	31.30	1.96	0.00	1.96	0.91	0.428	0.83	0.516	0.88	1.00	2.000	No
478	31.37	1.96	0.00	1.96	0.91	0.427	0.83	0.516	0.88	1.00	2.000	No
479	31.44	1.97	0.00	1.97	0.91	0.427	0.83	0.516	0.88	1.00	2.000	No
480	31.50	1.97	0.00	1.97	0.91	0.427	0.83	0.515	0.88	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.57	1.98	0.00	1.98	0.91	0.427	0.83	0.515	0.88	1.00	2.000	No
482	31.63	1.98	0.00	1.98	0.91	0.427	0.83	0.515	0.88	1.00	2.000	No
483	31.70	1.99	0.00	1.99	0.91	0.427	0.83	0.515	0.88	1.00	2.000	No
484	31.76	1.99	0.00	1.99	0.91	0.426	0.83	0.515	0.88	1.00	2.000	No
485	31.83	1.99	0.00	1.99	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
486	31.89	2.00	0.00	2.00	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
487	31.97	2.00	0.00	2.00	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
488	32.03	2.01	0.00	2.01	0.91	0.426	0.83	0.514	0.88	1.00	2.000	No
489	32.09	2.01	0.00	2.01	0.91	0.426	0.83	0.513	0.88	1.00	2.000	No
490	32.16	2.02	0.00	2.02	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
491	32.22	2.02	0.00	2.02	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
492	32.28	2.02	0.00	2.02	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
493	32.36	2.03	0.00	2.03	0.91	0.425	0.83	0.513	0.88	1.00	2.000	No
494	32.42	2.03	0.00	2.03	0.91	0.425	0.83	0.512	0.88	1.00	2.000	No
495	32.49	2.04	0.00	2.04	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
496	32.55	2.04	0.00	2.04	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
497	32.61	2.05	0.00	2.05	0.91	0.424	0.83	0.512	0.88	1.00	2.000	No
498	32.69	2.05	0.00	2.05	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
499	32.76	2.06	0.00	2.06	0.91	0.424	0.83	0.511	0.88	1.00	2.000	No
500	32.83	2.06	0.00	2.06	0.90	0.423	0.83	0.511	0.88	1.00	2.000	No
501	32.88	2.06	0.00	2.06	0.90	0.423	0.83	0.511	0.87	1.00	2.000	No
502	32.95	2.07	0.00	2.07	0.90	0.423	0.83	0.511	0.87	1.00	2.000	No
503	33.02	2.07	0.00	2.07	0.90	0.423	0.83	0.510	0.87	1.00	2.000	No
504	33.07	2.08	0.00	2.08	0.90	0.423	0.83	0.510	0.87	1.00	2.000	No
505	33.15	2.08	0.00	2.08	0.90	0.423	0.83	0.510	0.87	1.00	2.000	No
506	33.22	2.09	0.00	2.09	0.90	0.422	0.83	0.510	0.87	1.00	2.000	No
507	33.29	2.09	0.00	2.09	0.90	0.422	0.83	0.509	0.87	1.00	2.000	No
508	33.34	2.09	0.00	2.09	0.90	0.422	0.83	0.509	0.87	1.00	2.000	No
509	33.41	2.10	0.00	2.10	0.90	0.422	0.83	0.509	0.87	1.00	2.000	No
510	33.48	2.10	0.00	2.10	0.90	0.422	0.83	0.509	0.87	1.00	2.000	No
511	33.55	2.11	0.00	2.11	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
512	33.60	2.11	0.00	2.11	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
513	33.67	2.12	0.00	2.12	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
514	33.74	2.12	0.00	2.12	0.90	0.421	0.83	0.508	0.87	1.00	2.000	No
515	33.81	2.13	0.00	2.13	0.90	0.421	0.83	0.507	0.87	1.00	2.000	No
516	33.86	2.13	0.00	2.13	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
517	33.93	2.13	0.00	2.13	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
518	33.99	2.14	0.00	2.14	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
519	34.07	2.14	0.00	2.14	0.90	0.420	0.83	0.507	0.87	1.00	2.000	No
520	34.12	2.15	0.00	2.15	0.90	0.420	0.83	0.506	0.87	1.00	2.000	No
521	34.20	2.15	0.00	2.15	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
522	34.26	2.16	0.00	2.16	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
523	34.33	2.16	0.00	2.16	0.90	0.419	0.83	0.506	0.87	1.00	2.000	No
524	34.39	2.16	0.00	2.16	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
525	34.46	2.17	0.00	2.17	0.89	0.419	0.83	0.505	0.87	1.00	2.000	No
526	34.52	2.17	0.00	2.17	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
527	34.58	2.18	0.00	2.18	0.89	0.418	0.83	0.505	0.87	1.00	2.000	No
528	34.66	2.18	0.00	2.18	0.89	0.418	0.83	0.504	0.87	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.72	2.19	0.00	2.19	0.89	0.418	0.83	0.504	0.86	1.00	2.000	No
530	34.78	2.19	0.00	2.19	0.89	0.418	0.83	0.504	0.86	1.00	2.000	No
531	34.85	2.20	0.00	2.20	0.89	0.417	0.83	0.504	0.86	1.00	2.000	No
532	34.91	2.20	0.00	2.20	0.89	0.417	0.83	0.503	0.86	1.00	2.000	No
533	34.98	2.20	0.00	2.20	0.89	0.417	0.83	0.503	0.86	1.00	2.000	No
534	35.05	2.21	0.00	2.21	0.89	0.417	0.83	0.503	0.86	1.00	2.000	No
535	35.11	2.21	0.00	2.21	0.89	0.416	0.83	0.503	0.86	1.00	2.000	No
536	35.18	2.22	0.00	2.22	0.89	0.416	0.83	0.502	0.86	1.00	2.000	No
537	35.24	2.22	0.00	2.22	0.89	0.416	0.83	0.502	0.86	1.00	2.000	No
538	35.30	2.23	0.00	2.23	0.89	0.416	0.83	0.502	0.86	1.00	2.000	No
539	35.38	2.23	0.00	2.23	0.89	0.416	0.83	0.501	0.86	1.00	2.000	No
540	35.43	2.23	0.00	2.23	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
541	35.51	2.24	0.00	2.24	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
542	35.56	2.24	0.00	2.24	0.89	0.415	0.83	0.501	0.86	1.00	2.000	No
543	35.63	2.25	0.00	2.25	0.89	0.415	0.83	0.500	0.86	1.00	2.000	No
544	35.70	2.25	0.00	2.25	0.89	0.414	0.83	0.500	0.86	1.00	2.000	No
545	35.76	2.26	0.00	2.26	0.89	0.414	0.83	0.500	0.86	1.00	2.000	No
546	35.84	2.26	0.00	2.26	0.88	0.414	0.83	0.500	0.86	1.00	2.000	No
547	35.90	2.27	0.00	2.27	0.88	0.414	0.83	0.499	0.86	1.00	2.000	No
548	35.96	2.27	0.00	2.27	0.88	0.414	0.83	0.499	0.86	1.00	2.000	No
549	36.03	2.27	0.00	2.27	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
550	36.09	2.28	0.00	2.28	0.88	0.413	0.83	0.499	0.86	1.00	2.000	No
551	36.16	2.28	0.00	2.28	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
552	36.23	2.29	0.00	2.29	0.88	0.413	0.83	0.498	0.86	1.00	2.000	No
553	36.29	2.29	0.00	2.29	0.88	0.412	0.83	0.498	0.86	1.00	2.000	No
554	36.36	2.30	0.00	2.30	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
555	36.43	2.30	0.00	2.30	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
556	36.49	2.30	0.00	2.30	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
557	36.55	2.31	0.00	2.31	0.88	0.412	0.83	0.497	0.86	1.00	2.000	No
558	36.62	2.31	0.00	2.31	0.88	0.411	0.83	0.496	0.86	1.00	2.000	No
559	36.69	2.32	0.00	2.32	0.88	0.411	0.83	0.496	0.85	1.00	2.000	No
560	36.75	2.32	0.00	2.32	0.88	0.411	0.83	0.496	0.85	1.00	2.000	No
561	36.82	2.33	0.00	2.33	0.88	0.411	0.83	0.495	0.85	1.00	2.000	No
562	36.88	2.33	0.00	2.33	0.88	0.410	0.83	0.495	0.85	1.00	2.000	No
563	36.95	2.34	0.00	2.34	0.88	0.410	0.83	0.495	0.85	1.00	2.000	No
564	37.01	2.34	0.00	2.34	0.88	0.410	0.83	0.495	0.85	1.00	2.000	No
565	37.08	2.34	0.00	2.34	0.88	0.410	0.83	0.494	0.85	1.00	2.000	No
566	37.14	2.35	0.00	2.35	0.87	0.409	0.83	0.494	0.85	1.00	2.000	No
567	37.21	2.35	0.00	2.35	0.87	0.409	0.83	0.494	0.85	1.00	2.000	No
568	37.28	2.36	0.00	2.36	0.87	0.409	0.83	0.493	0.85	1.00	2.000	No
569	37.34	2.36	0.00	2.36	0.87	0.409	0.83	0.493	0.85	1.00	2.000	No
570	37.41	2.37	0.00	2.37	0.87	0.408	0.83	0.493	0.85	1.00	2.000	No
571	37.48	2.37	0.00	2.37	0.87	0.408	0.83	0.493	0.85	1.00	2.000	No
572	37.54	2.37	0.00	2.37	0.87	0.408	0.83	0.492	0.85	1.00	2.000	No
573	37.60	2.38	0.00	2.38	0.87	0.408	0.83	0.492	0.85	1.00	2.000	No
574	37.67	2.38	0.00	2.38	0.87	0.407	0.83	0.492	0.85	1.00	2.000	No
575	37.74	2.39	0.00	2.39	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No
576	37.80	2.39	0.00	2.39	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	37.86	2.40	0.00	2.40	0.87	0.407	0.83	0.491	0.85	1.00	2.000	No
578	37.93	2.40	0.00	2.40	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
579	38.00	2.41	0.00	2.41	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
580	38.07	2.41	0.00	2.41	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
581	38.13	2.41	0.00	2.41	0.87	0.406	0.83	0.490	0.85	1.00	2.000	No
582	38.20	2.42	0.00	2.42	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
583	38.26	2.42	0.00	2.42	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
584	38.32	2.43	0.00	2.43	0.87	0.405	0.83	0.489	0.85	1.00	2.000	No
585	38.39	2.43	0.00	2.43	0.86	0.405	0.83	0.488	0.85	1.00	2.000	No
586	38.45	2.44	0.00	2.44	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
587	38.52	2.44	0.00	2.44	0.86	0.404	0.83	0.488	0.85	1.00	2.000	No
588	38.59	2.45	0.00	2.45	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
589	38.65	2.45	0.00	2.45	0.86	0.404	0.83	0.487	0.85	1.00	2.000	No
590	38.72	2.45	0.00	2.45	0.86	0.403	0.83	0.487	0.85	1.00	2.000	No
591	38.78	2.46	0.00	2.46	0.86	0.403	0.83	0.487	0.84	1.00	2.000	No
592	38.85	2.46	0.00	2.46	0.86	0.403	0.83	0.486	0.84	1.00	2.000	No
593	38.91	2.47	0.00	2.47	0.86	0.403	0.83	0.486	0.84	1.00	2.000	No
594	38.98	2.47	0.00	2.47	0.86	0.402	0.83	0.486	0.84	1.00	2.000	No
595	39.05	2.48	0.00	2.48	0.86	0.402	0.83	0.485	0.84	1.00	2.000	No
596	39.12	2.48	0.00	2.48	0.86	0.402	0.83	0.485	0.84	1.00	2.000	No
597	39.17	2.48	0.00	2.48	0.86	0.402	0.83	0.485	0.84	1.00	2.000	No
598	39.24	2.49	0.00	2.49	0.86	0.401	0.83	0.484	0.84	1.00	2.000	No
599	39.31	2.49	0.00	2.49	0.86	0.401	0.83	0.484	0.84	1.00	2.000	No
600	39.38	2.50	0.00	2.50	0.86	0.401	0.83	0.484	0.84	1.00	2.000	No
601	39.44	2.50	0.00	2.50	0.86	0.401	0.83	0.483	0.84	1.00	2.000	No
602	39.50	2.51	0.00	2.51	0.86	0.400	0.83	0.483	0.84	1.00	2.000	No
603	39.57	2.51	0.00	2.51	0.85	0.400	0.83	0.483	0.84	1.00	2.000	No
604	39.64	2.52	0.00	2.52	0.85	0.400	0.83	0.482	0.84	1.00	2.000	No
605	39.70	2.52	0.00	2.52	0.85	0.400	0.83	0.482	0.84	1.00	2.000	No
606	39.76	2.52	0.00	2.52	0.85	0.399	0.83	0.482	0.84	1.00	2.000	No
607	39.84	2.53	0.00	2.53	0.85	0.399	0.83	0.481	0.84	1.00	2.000	No
608	39.90	2.53	0.00	2.53	0.85	0.399	0.83	0.481	0.84	1.00	2.000	No
609	39.96	2.53	0.00	2.53	0.85	0.398	0.83	0.481	0.84	1.00	2.000	No
610	40.03	2.54	0.00	2.54	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No
611	40.10	2.54	0.00	2.54	0.85	0.398	0.83	0.480	0.84	1.00	2.000	No

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.07	147.18	1.27	0.26	0.50	236.45	1.00	236.45	4.000	No	No	2.00
2	0.13	175.04	1.24	0.30	0.50	281.21	1.00	281.21	4.000	No	No	2.00
3	0.20	194.68	1.26	0.38	0.50	312.76	1.00	312.76	4.000	No	No	2.00
4	0.27	181.27	1.37	0.51	0.50	291.22	1.00	291.22	4.000	No	No	2.00
5	0.33	160.61	1.48	0.65	0.50	258.01	1.00	258.01	4.000	No	No	2.00
6	0.40	140.47	1.59	0.81	0.50	225.65	1.00	225.65	4.000	No	No	2.00
7	0.47	122.05	1.68	0.95	0.51	196.05	1.00	196.05	4.000	No	No	2.00
8	0.53	107.25	1.75	1.05	0.53	172.26	1.08	186.55	4.000	No	No	2.00
9	0.59	97.80	1.78	1.05	0.54	157.08	1.13	176.87	4.000	No	No	2.00
10	0.66	90.32	1.79	1.01	0.55	145.05	1.14	166.08	4.000	No	No	2.00
11	0.73	84.03	1.81	1.00	0.55	134.94	1.17	157.38	4.000	No	No	2.00
12	0.79	78.26	1.84	1.01	0.56	125.66	1.19	149.55	4.000	No	No	2.00
13	0.85	72.90	1.87	1.02	0.57	117.05	1.21	141.91	4.000	No	No	2.00
14	0.93	69.24	1.88	1.02	0.57	111.16	1.22	136.08	4.000	No	No	2.00
15	0.99	67.39	1.88	1.00	0.57	108.17	1.23	132.59	4.000	No	No	2.00
16	1.05	67.35	1.87	0.96	0.57	108.11	1.22	131.60	4.000	No	No	2.00
17	1.12	69.06	1.85	0.92	0.56	110.84	1.20	133.20	4.000	No	No	2.00
18	1.19	73.56	1.82	0.87	0.55	118.07	1.17	138.33	4.000	No	No	2.00
19	1.25	80.82	1.77	0.82	0.54	129.73	1.11	144.53	4.000	No	No	2.00
20	1.32	88.33	1.73	0.80	0.53	141.79	1.05	149.31	4.000	No	No	2.00
21	1.38	94.60	1.72	0.82	0.52	151.85	1.02	155.27	4.000	No	No	2.00
22	1.45	99.37	1.71	0.85	0.52	159.51	1.01	161.39	4.000	No	No	2.00
23	1.51	102.80	1.71	0.87	0.52	165.02	1.00	165.25	4.000	No	No	2.00
24	1.58	105.07	1.70	0.86	0.52	168.66	1.00	168.66	4.000	No	No	2.00
25	1.64	106.35	1.69	0.86	0.52	170.71	1.00	170.71	4.000	No	No	2.00
26	1.71	104.42	1.69	0.84	0.51	167.59	1.00	167.59	4.000	No	No	2.00
27	1.77	100.33	1.66	0.73	0.51	161.03	1.00	161.03	4.000	No	No	2.00
28	1.84	94.10	1.65	0.64	0.50	151.01	1.00	151.01	4.000	No	No	2.00
29	1.91	88.40	1.65	0.60	0.50	141.84	1.00	141.84	4.000	No	No	2.00
30	1.97	82.48	1.70	0.66	0.52	132.32	1.00	132.32	4.000	No	No	2.00
31	2.04	76.49	1.74	0.69	0.53	122.70	1.07	131.15	4.000	No	No	2.00
32	2.11	67.98	1.79	0.72	0.55	109.02	1.15	124.89	4.000	No	No	2.00
33	2.17	62.68	1.82	0.71	0.55	100.50	1.17	117.54	4.000	No	No	2.00
34	2.23	58.07	1.83	0.68	0.56	93.08	1.19	110.36	4.000	No	No	2.00
35	2.30	56.98	1.82	0.63	0.55	91.32	1.18	107.36	4.000	No	No	2.00
36	2.37	53.61	1.85	0.64	0.56	85.91	1.20	102.88	4.000	No	No	2.00
37	2.44	50.78	1.87	0.66	0.57	81.35	1.22	99.19	4.000	No	No	2.00
38	2.50	47.97	1.90	0.68	0.58	76.83	1.24	95.14	4.000	No	No	2.00
39	2.57	45.35	1.92	0.69	0.59	72.62	1.25	91.00	4.000	No	No	2.00
40	2.63	42.58	1.95	0.69	0.59	68.16	1.27	86.55	4.000	No	No	2.00
41	2.69	39.99	1.97	0.70	0.60	64.00	1.29	82.38	4.000	No	No	2.00
42	2.76	37.50	2.00	0.70	0.61	59.99	1.31	78.40	4.000	No	No	2.00
43	2.83	35.31	2.02	0.70	0.61	56.47	1.33	74.86	4.000	No	No	2.00
44	2.89	33.38	2.04	0.69	0.62	53.36	1.34	71.68	4.000	No	No	2.00
45	2.96	31.70	2.05	0.67	0.62	50.65	1.36	68.79	4.000	No	No	2.00
46	3.03	30.20	2.06	0.65	0.63	48.24	1.37	66.17	4.000	No	No	2.00
47	3.09	28.96	2.07	0.63	0.63	46.23	1.38	63.95	4.000	No	No	2.00
48	3.16	27.99	2.08	0.61	0.63	44.67	1.39	62.14	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.22	27.18	2.09	0.60	0.63	43.37	1.40	60.64	4.000	No	No	2.00
50	3.28	26.52	2.09	0.58	0.63	42.31	1.40	59.37	4.000	No	No	2.00
51	3.35	25.93	2.09	0.57	0.64	41.35	1.41	58.29	4.000	No	No	2.00
52	3.41	25.46	2.10	0.55	0.64	40.60	1.41	57.35	4.000	No	No	2.00
53	3.48	25.12	2.09	0.53	0.64	40.04	1.41	56.48	4.000	No	No	2.00
54	3.54	24.68	2.09	0.52	0.64	39.33	1.41	55.49	4.000	No	No	2.00
55	3.61	24.22	2.10	0.50	0.64	38.58	1.41	54.53	4.000	No	No	2.00
56	3.68	23.53	2.11	0.49	0.64	37.47	1.00	37.47	4.000	No	No	2.00
57	3.75	23.16	2.11	0.49	0.64	36.87	1.00	36.87	4.000	No	No	2.00
58	3.81	22.94	2.11	0.48	0.64	36.51	1.00	36.51	4.000	No	No	2.00
59	3.88	23.00	2.10	0.46	0.64	36.60	1.00	36.60	4.000	No	No	2.00
60	3.94	23.06	2.10	0.45	0.64	36.70	1.00	36.70	4.000	No	No	2.00
61	4.01	23.38	2.09	0.45	0.64	37.19	1.00	37.19	4.000	No	No	2.00
62	4.07	23.75	2.08	0.45	0.63	37.79	1.00	37.79	4.000	No	No	2.00
63	4.14	24.22	2.08	0.45	0.63	38.53	1.00	38.53	4.000	No	No	2.00
64	4.20	24.65	2.08	0.46	0.63	39.23	1.00	39.23	4.000	No	No	2.00
65	4.27	25.31	2.07	0.47	0.63	40.28	1.00	40.28	4.000	No	No	2.00
66	4.33	25.87	2.06	0.48	0.63	41.17	1.00	41.17	4.000	No	No	2.00
67	4.40	26.31	2.06	0.49	0.63	41.87	1.00	41.87	4.000	No	No	2.00
68	4.47	26.46	2.06	0.51	0.63	42.11	1.37	57.77	4.000	No	No	2.00
69	4.53	26.53	2.07	0.52	0.63	42.21	1.38	58.15	4.000	No	No	2.00
70	4.59	26.43	2.07	0.53	0.63	42.05	1.38	58.05	4.000	No	No	2.00
71	4.66	26.21	2.07	0.51	0.63	41.69	1.38	57.50	4.000	No	No	2.00
72	4.72	25.93	2.06	0.48	0.63	41.24	1.00	41.24	4.000	No	No	2.00
73	4.80	25.65	2.06	0.46	0.63	40.78	1.00	40.78	4.000	No	No	2.00
74	4.86	25.53	2.06	0.45	0.63	40.58	1.00	40.58	4.000	No	No	2.00
75	4.93	25.50	2.07	0.47	0.63	40.53	1.00	40.53	4.000	No	No	2.00
76	4.99	25.40	2.07	0.49	0.63	40.37	1.00	40.37	4.000	No	No	2.00
77	5.06	25.37	2.08	0.51	0.63	40.31	1.39	56.18	4.000	No	No	2.00
78	5.12	25.12	2.09	0.52	0.64	39.90	1.41	56.08	4.000	No	No	2.00
79	5.19	25.18	2.09	0.53	0.64	40.00	1.41	56.26	4.000	No	No	2.00
80	5.25	25.34	2.10	0.54	0.64	40.25	1.41	56.81	4.000	No	No	2.00
81	5.32	25.84	2.10	0.56	0.64	41.04	1.41	57.96	4.000	No	No	2.00
82	5.38	26.46	2.09	0.59	0.64	42.04	1.41	59.26	4.000	No	No	2.00
83	5.46	27.21	2.09	0.59	0.63	43.23	1.40	60.44	4.000	No	No	2.00
84	5.52	28.27	2.06	0.58	0.63	44.93	1.37	61.65	4.000	No	No	2.00
85	5.59	29.42	2.04	0.55	0.62	46.77	1.35	62.97	4.000	No	No	2.00
86	5.65	30.57	2.02	0.54	0.61	48.62	1.32	64.40	4.000	No	No	2.00
87	5.72	31.51	2.01	0.53	0.61	50.12	1.31	65.73	4.000	No	No	2.00
88	5.78	32.16	2.00	0.52	0.61	51.16	1.30	66.72	4.000	No	No	2.00
89	5.85	32.57	1.99	0.53	0.61	51.81	1.30	67.41	4.000	No	No	2.00
90	5.92	32.57	2.00	0.54	0.61	51.80	1.30	67.54	4.000	No	No	2.00
91	5.99	32.23	2.01	0.56	0.61	51.25	1.31	67.33	4.000	No	No	2.00
92	6.05	31.67	2.03	0.59	0.62	50.34	1.33	67.02	4.000	No	No	2.00
93	6.12	31.17	2.05	0.63	0.62	49.53	1.35	66.87	4.000	No	No	2.00
94	6.19	30.98	2.05	0.64	0.62	49.23	1.36	66.85	4.000	No	No	2.00
95	6.24	31.23	2.05	0.63	0.62	49.62	1.35	67.11	4.000	No	No	2.00
96	6.31	31.85	2.04	0.62	0.62	50.61	1.34	67.78	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.38	32.51	2.03	0.62	0.62	51.66	1.33	68.75	4.000	No	No	2.00
98	6.45	32.82	2.03	0.62	0.62	52.16	1.33	69.38	4.000	No	No	2.00
99	6.50	32.76	2.03	0.64	0.62	52.06	1.34	69.53	4.000	No	No	2.00
100	6.57	32.32	2.04	0.65	0.62	51.35	1.35	69.13	4.000	No	No	2.00
101	6.65	31.92	2.05	0.66	0.62	50.69	1.35	68.68	4.000	No	No	2.00
102	6.70	31.67	2.05	0.67	0.62	50.29	1.36	68.40	4.000	No	No	2.00
103	6.77	31.60	2.06	0.67	0.62	50.18	1.36	68.32	4.000	No	No	2.00
104	6.84	31.64	2.06	0.67	0.62	50.23	1.36	68.35	4.000	No	No	2.00
105	6.91	31.57	2.06	0.67	0.62	50.12	1.36	68.26	4.000	No	No	2.00
106	6.96	31.26	2.06	0.68	0.63	49.62	1.37	67.90	4.000	No	No	2.00
107	7.03	30.55	2.08	0.69	0.63	48.46	1.38	67.10	4.000	No	No	2.00
108	7.10	29.55	2.09	0.70	0.64	46.85	1.41	65.87	4.000	No	No	2.00
109	7.18	28.52	2.11	0.70	0.64	45.19	1.43	64.48	4.000	No	No	2.00
110	7.22	27.27	2.12	0.70	0.64	43.18	1.45	62.62	4.000	No	No	2.00
111	7.29	25.84	2.14	0.70	0.65	40.87	1.49	60.74	4.000	No	No	2.00
112	7.36	24.53	2.16	0.69	0.66	38.76	1.52	59.06	4.000	No	No	2.00
113	7.43	23.44	2.18	0.69	0.66	37.00	1.56	57.74	4.000	No	No	2.00
114	7.50	22.56	2.19	0.69	0.67	35.59	1.59	56.62	4.000	No	No	2.00
115	7.55	21.79	2.20	0.69	0.67	34.34	1.62	55.78	4.000	No	No	2.00
116	7.63	21.23	2.21	0.69	0.67	33.43	1.65	55.23	4.000	No	No	2.00
117	7.70	20.91	2.22	0.68	0.67	32.92	1.66	54.65	4.000	No	No	2.00
118	7.76	20.72	2.22	0.67	0.67	32.61	1.66	54.09	4.000	No	No	2.00
119	7.81	20.76	2.21	0.65	0.67	32.66	1.64	53.73	4.000	No	No	2.00
120	7.89	20.91	2.21	0.64	0.67	32.91	1.63	53.58	4.000	No	No	2.00
121	7.96	21.16	2.20	0.64	0.67	33.30	1.62	53.94	4.000	No	No	2.00
122	8.01	21.72	2.20	0.68	0.67	34.20	1.62	55.55	4.000	No	No	2.00
123	8.08	22.63	2.22	0.78	0.67	35.65	1.66	59.22	4.000	No	No	2.00
124	8.15	23.75	2.25	0.98	0.68	37.45	1.76	65.80	4.000	No	No	2.00
125	8.21	25.90	2.30	1.36	0.70	40.89	1.92	78.47	4.000	No	No	2.00
126	8.28	28.99	2.35	1.90	0.71	45.85	2.12	97.42	4.000	No	No	2.00
127	8.35	32.57	2.37	2.31	0.72	51.60	2.20	113.58	4.000	No	No	2.00
128	8.40	35.90	2.35	2.46	0.71	56.95	2.14	121.85	4.000	No	No	2.00
129	8.47	39.05	2.32	2.45	0.71	62.00	2.02	125.31	4.000	No	No	2.00
130	8.54	43.04	2.30	2.52	0.70	68.40	1.94	132.46	4.000	No	No	2.00
131	8.62	52.02	2.23	2.42	0.68	82.82	1.70	140.59	4.000	No	No	2.00
132	8.66	67.29	2.12	2.14	0.64	105.88	1.45	153.53	4.000	No	No	2.00
133	8.74	87.18	2.00	1.82	0.61	132.76	1.31	173.73	4.000	No	No	2.00
134	8.80	106.60	1.91	1.61	0.58	158.26	1.24	196.85	4.000	No	No	2.00
135	8.87	119.72	1.88	1.61	0.57	175.72	1.22	214.96	4.000	No	No	2.00
136	8.92	125.55	1.90	1.80	0.58	184.47	1.24	228.61	4.000	No	No	2.00
137	9.00	125.61	1.95	2.09	0.59	185.54	1.27	236.08	4.000	No	No	2.00
138	9.06	125.27	1.99	2.34	0.61	185.76	1.30	241.66	4.000	No	No	2.00
139	9.13	127.70	2.01	2.46	0.61	188.92	1.31	247.78	4.000	No	No	2.00
140	9.20	128.45	2.03	2.65	0.62	190.07	1.33	253.46	4.000	No	No	2.00
141	9.25	125.67	2.08	3.00	0.63	187.02	1.39	259.56	4.000	No	No	2.00
142	9.32	119.66	2.15	3.54	0.65	179.70	1.50	268.97	4.000	No	No	2.00
143	9.39	115.02	2.20	4.00	0.67	173.59	1.61	279.66	4.000	No	No	2.00
144	9.45	113.55	2.22	4.20	0.67	171.25	1.66	285.08	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.53	111.14	2.23	4.31	0.68	167.01	1.71	285.23	4.000	No	No	2.00
146	9.59	111.58	2.24	4.34	0.68	166.96	1.72	286.47	4.000	No	No	2.00
147	9.66	118.09	2.22	4.24	0.67	174.95	1.66	290.22	4.000	No	No	2.00
148	9.73	130.74	2.18	3.99	0.66	191.04	1.56	297.21	4.000	No	No	2.00
149	9.78	142.39	2.15	3.88	0.65	206.06	1.50	308.55	4.000	No	No	2.00
150	9.85	150.46	2.14	3.90	0.65	216.24	1.48	320.04	4.000	No	No	2.00
151	9.91	158.06	2.13	3.91	0.65	225.62	1.46	330.24	4.000	No	No	2.00
152	9.99	167.15	2.10	3.76	0.64	236.09	1.42	336.23	4.000	No	No	2.00
153	10.05	173.91	2.08	3.55	0.63	243.17	1.39	337.02	4.000	No	No	2.00
154	10.12	177.45	2.05	3.35	0.62	245.76	1.36	333.63	4.000	No	No	2.00
155	10.18	178.57	2.04	3.20	0.62	245.40	1.34	328.84	4.000	No	No	2.00
156	10.24	176.05	2.03	3.12	0.62	240.70	1.33	321.33	4.000	No	No	2.00
157	10.30	177.03	2.01	2.98	0.61	240.21	1.32	317.00	4.000	No	No	2.00
158	10.37	178.35	2.00	2.84	0.61	240.12	1.30	313.21	4.000	No	No	2.00
159	10.44	183.07	1.97	2.67	0.60	244.18	1.28	313.54	4.000	No	No	2.00
160	10.50	185.32	1.95	2.56	0.59	245.48	1.27	312.50	4.000	No	No	2.00
161	10.56	187.50	1.94	2.47	0.59	246.74	1.26	311.70	4.000	No	No	2.00
162	10.64	189.47	1.92	2.37	0.59	247.41	1.25	310.00	4.000	No	No	2.00
163	10.70	190.65	1.90	2.21	0.58	247.04	1.24	305.46	4.000	No	No	2.00
164	10.78	190.56	1.87	2.04	0.57	244.57	1.22	297.93	4.000	No	No	2.00
165	10.83	188.47	1.83	1.77	0.56	239.51	1.18	283.24	4.000	No	No	2.00
166	10.90	182.77	1.77	1.44	0.54	229.16	1.12	255.72	4.000	No	No	2.00
167	10.97	172.77	1.70	1.10	0.52	213.39	1.00	213.39	4.000	No	No	2.00
168	11.04	159.93	1.64	0.84	0.50	195.04	1.00	195.04	4.000	No	No	2.00
169	11.11	146.18	1.63	0.72	0.50	177.48	1.00	177.48	4.000	No	No	2.00
170	11.17	128.10	1.66	0.69	0.51	155.42	1.00	155.42	4.000	No	No	2.00
171	11.22	113.89	1.70	0.69	0.52	138.53	1.00	138.53	4.000	No	No	2.00
172	11.29	102.39	1.74	0.70	0.53	124.81	1.07	133.26	4.000	No	No	2.00
173	11.36	98.68	1.75	0.69	0.53	120.00	1.08	129.45	4.000	No	No	2.00
174	11.42	93.57	1.77	0.70	0.54	113.80	1.12	127.11	4.000	No	No	2.00
175	11.49	87.46	1.82	0.76	0.55	106.60	1.17	124.68	4.000	No	No	2.00
176	11.57	79.86	1.89	0.91	0.58	97.96	1.23	120.66	4.000	No	No	2.00
177	11.64	72.75	1.98	1.14	0.60	89.93	1.29	116.22	4.000	No	No	2.00
178	11.69	66.36	2.08	1.47	0.63	82.88	1.39	115.43	4.000	No	No	2.00
179	11.76	61.53	2.18	1.90	0.66	77.47	1.56	121.11	4.000	No	No	2.00
180	11.83	57.16	2.28	2.45	0.69	72.53	1.84	133.40	4.000	No	No	2.00
181	11.88	52.65	2.38	3.20	0.72	67.44	2.27	153.41	4.000	No	No	2.00
182	11.95	51.18	2.44	3.81	0.74	65.76	2.62	172.11	4.000	No	No	2.00
183	12.03	49.53	2.50	4.37	0.76	63.71	2.96	188.47	4.000	No	No	2.00
184	12.08	51.18	2.49	4.45	0.76	65.62	2.94	192.89	4.000	No	No	2.00
185	12.15	53.11	2.48	4.32	0.75	67.65	2.82	190.78	4.000	No	No	2.00
186	12.22	59.41	2.40	3.77	0.73	74.75	2.39	178.73	4.000	No	No	2.00
187	12.29	68.11	2.31	3.15	0.70	84.43	1.96	165.63	4.000	No	No	2.00
188	12.34	80.48	2.19	2.52	0.67	98.26	1.60	157.18	4.000	No	No	2.00
189	12.41	94.35	2.08	2.04	0.63	113.38	1.40	158.32	4.000	No	No	2.00
190	12.48	106.44	1.99	1.70	0.61	126.20	1.30	164.45	4.000	No	No	2.00
191	12.55	113.30	1.94	1.52	0.59	133.09	1.27	168.40	4.000	No	No	2.00
192	12.61	115.42	1.93	1.47	0.59	135.02	1.26	169.54	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.68	114.98	1.94	1.53	0.59	134.21	1.26	169.72	4.000	No	No	2.00
194	12.75	113.27	1.97	1.65	0.60	132.11	1.29	169.79	4.000	No	No	2.00
195	12.80	110.55	2.01	1.85	0.61	129.17	1.32	170.49	4.000	No	No	2.00
196	12.88	108.06	2.06	2.10	0.63	126.39	1.37	173.03	4.000	No	No	2.00
197	12.95	106.44	2.10	2.35	0.64	124.49	1.42	177.06	4.000	No	No	2.00
198	13.00	106.13	2.12	2.47	0.64	124.02	1.45	179.99	4.000	No	No	2.00
199	13.07	105.07	2.13	2.49	0.65	122.33	1.46	178.75	4.000	No	No	2.00
200	13.12	105.08	2.11	2.33	0.64	121.78	1.43	174.00	4.000	No	No	2.00
201	13.20	103.77	2.08	2.11	0.63	119.46	1.39	166.17	4.000	No	No	2.00
202	13.27	105.05	2.02	1.78	0.62	119.86	1.33	159.27	4.000	No	No	2.00
203	13.34	106.10	1.97	1.49	0.60	119.99	1.28	153.97	4.000	No	No	2.00
204	13.39	109.87	1.89	1.20	0.58	123.14	1.23	151.91	4.000	No	No	2.00
205	13.46	113.11	1.84	1.01	0.56	125.73	1.19	149.71	4.000	No	No	2.00
206	13.54	115.70	1.81	0.92	0.55	127.85	1.16	148.24	4.000	No	No	2.00
207	13.59	116.88	1.82	0.97	0.55	129.02	1.17	151.07	4.000	No	No	2.00
208	13.66	114.55	1.86	1.11	0.57	126.50	1.21	153.24	4.000	No	No	2.00
209	13.72	113.52	1.91	1.28	0.58	125.49	1.24	155.86	4.000	No	No	2.00
210	13.78	112.52	1.95	1.43	0.59	124.45	1.27	157.70	4.000	No	No	2.00
211	13.86	113.18	1.97	1.54	0.60	124.94	1.28	160.10	4.000	No	No	2.00
212	13.92	111.40	1.99	1.64	0.61	122.84	1.30	159.79	4.000	No	No	2.00
213	13.99	109.06	2.01	1.72	0.61	120.02	1.32	158.23	4.000	No	No	2.00
214	14.05	107.03	2.02	1.75	0.62	117.59	1.33	156.31	4.000	No	No	2.00
215	14.12	105.16	2.03	1.72	0.62	115.13	1.33	153.11	4.000	No	No	2.00
216	14.19	102.79	2.02	1.63	0.61	112.08	1.32	148.23	4.000	No	No	2.00
217	14.26	100.49	2.00	1.52	0.61	109.08	1.31	142.90	4.000	No	No	2.00
218	14.31	98.09	1.99	1.39	0.60	106.08	1.30	137.47	4.000	No	No	2.00
219	14.38	96.06	1.97	1.27	0.60	103.41	1.28	132.62	4.000	No	No	2.00
220	14.45	94.07	1.95	1.16	0.59	100.79	1.27	127.94	4.000	No	No	2.00
221	14.52	92.67	1.94	1.08	0.59	98.90	1.26	124.72	4.000	No	No	2.00
222	14.57	91.95	1.93	1.06	0.59	97.90	1.26	123.29	4.000	No	No	2.00
223	14.64	92.01	1.94	1.07	0.59	97.69	1.26	123.19	4.000	No	No	2.00
224	14.72	92.51	1.94	1.10	0.59	97.96	1.27	124.03	4.000	No	No	2.00
225	14.76	93.48	1.96	1.18	0.60	98.89	1.28	126.35	4.000	No	No	2.00
226	14.84	94.44	1.99	1.32	0.61	99.77	1.30	129.58	4.000	No	No	2.00
227	14.91	95.28	2.02	1.46	0.61	100.52	1.32	132.96	4.000	No	No	2.00
228	14.96	95.87	2.04	1.58	0.62	101.04	1.34	135.81	4.000	No	No	2.00
229	15.03	95.84	2.06	1.67	0.63	100.80	1.36	137.47	4.000	No	No	2.00
230	15.10	96.43	2.07	1.74	0.63	101.16	1.38	139.33	4.000	No	No	2.00
231	15.17	98.30	2.07	1.77	0.63	102.81	1.38	141.60	4.000	No	No	2.00
232	15.24	101.58	2.06	1.76	0.63	105.87	1.36	144.47	4.000	No	No	2.00
233	15.29	105.69	2.04	1.73	0.62	109.85	1.35	147.83	4.000	No	No	2.00
234	15.36	109.47	2.03	1.70	0.62	113.38	1.33	150.88	4.000	No	No	2.00
235	15.44	112.83	2.02	1.70	0.61	116.49	1.32	154.20	4.000	No	No	2.00
236	15.51	115.02	2.02	1.75	0.61	118.41	1.33	157.16	4.000	No	No	2.00
237	15.56	116.36	2.04	1.84	0.62	119.61	1.34	160.33	4.000	No	No	2.00
238	15.63	117.07	2.05	1.94	0.62	120.04	1.36	162.85	4.000	No	No	2.00
239	15.70	117.94	2.06	2.01	0.63	120.62	1.37	165.01	4.000	No	No	2.00
240	15.75	119.28	2.06	2.02	0.63	121.73	1.37	166.39	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.82	120.84	2.05	2.00	0.62	122.90	1.36	167.05	4.000	No	No	2.00
242	15.89	123.02	2.04	1.94	0.62	124.69	1.35	167.73	4.000	No	No	2.00
243	15.96	124.95	2.03	1.89	0.62	126.22	1.33	168.15	4.000	No	No	2.00
244	16.01	127.14	2.01	1.83	0.61	128.11	1.32	168.89	4.000	No	No	2.00
245	16.09	127.35	1.99	1.71	0.61	127.85	1.30	166.38	4.000	No	No	2.00
246	16.16	126.20	1.96	1.53	0.60	126.20	1.28	161.35	4.000	No	No	2.00
247	16.21	124.02	1.94	1.38	0.59	123.64	1.26	155.81	4.000	No	No	2.00
248	16.28	122.48	1.92	1.31	0.59	121.71	1.25	152.54	4.000	No	No	2.00
249	16.35	121.81	1.93	1.32	0.59	120.72	1.26	151.73	4.000	No	No	2.00
250	16.42	121.59	1.93	1.33	0.59	120.18	1.26	151.26	4.000	No	No	2.00
251	16.48	120.86	1.94	1.35	0.59	119.24	1.26	150.67	4.000	No	No	2.00
252	16.55	125.74	1.94	1.38	0.59	123.73	1.26	155.95	4.000	No	No	2.00
253	16.62	133.65	1.94	1.49	0.59	131.24	1.26	165.83	4.000	No	No	2.00
254	16.69	143.19	1.95	1.63	0.59	140.31	1.27	178.12	4.000	No	No	2.00
255	16.73	147.68	1.99	1.87	0.60	144.58	1.30	187.31	4.000	No	No	2.00
256	16.81	147.27	2.04	2.18	0.62	143.90	1.34	193.04	4.000	No	No	2.00
257	16.88	145.93	2.09	2.50	0.63	142.27	1.40	199.01	4.000	No	No	2.00
258	16.93	144.74	2.12	2.78	0.65	140.90	1.46	205.39	4.000	No	No	2.00
259	17.00	146.27	2.15	2.98	0.65	142.01	1.50	212.40	4.000	No	No	2.00
260	17.07	149.41	2.16	3.15	0.66	144.71	1.53	220.69	4.000	No	No	2.00
261	17.14	153.47	2.17	3.27	0.66	148.17	1.54	227.92	4.000	No	No	2.00
262	17.21	157.84	2.17	3.33	0.66	151.98	1.54	233.62	4.000	No	No	2.00
263	17.27	160.36	2.17	3.38	0.66	153.97	1.54	237.42	4.000	No	No	2.00
264	17.34	160.42	2.18	3.51	0.66	153.65	1.57	241.47	4.000	No	No	2.00
265	17.40	159.58	2.20	3.68	0.67	152.44	1.62	246.62	4.000	No	No	2.00
266	17.46	161.54	2.21	3.79	0.67	153.91	1.64	252.11	4.000	No	No	2.00
267	17.52	169.64	2.19	3.68	0.66	161.21	1.58	255.35	4.000	No	No	2.00
268	17.60	178.46	2.15	3.46	0.65	169.06	1.51	255.35	4.000	No	No	2.00
269	17.66	186.28	2.11	3.16	0.64	175.98	1.44	252.67	4.000	No	No	2.00
270	17.73	192.45	2.07	2.84	0.63	181.32	1.37	248.87	4.000	No	No	2.00
271	17.80	200.99	2.01	2.51	0.61	188.88	1.32	248.86	4.000	No	No	2.00
272	17.85	211.31	1.96	2.23	0.60	198.28	1.28	252.92	4.000	No	No	2.00
273	17.91	218.57	1.92	2.04	0.58	204.63	1.25	255.62	4.000	No	No	2.00
274	17.98	224.81	1.89	1.90	0.57	209.99	1.23	257.90	4.000	No	No	2.00
275	18.06	227.65	1.87	1.84	0.57	212.11	1.22	258.55	4.000	No	No	2.00
276	18.11	227.46	1.87	1.84	0.57	211.51	1.22	257.93	4.000	No	No	2.00
277	18.18	227.29	1.88	1.88	0.57	210.81	1.23	258.34	4.000	No	No	2.00
278	18.25	223.15	1.90	1.95	0.58	206.38	1.24	255.55	4.000	No	No	2.00
279	18.31	225.17	1.90	1.98	0.58	207.84	1.24	257.64	4.000	No	No	2.00
280	18.38	229.39	1.89	1.92	0.57	211.24	1.23	259.74	4.000	No	No	2.00
281	18.44	242.05	1.84	1.71	0.56	222.64	1.19	264.67	4.000	No	No	2.00
282	18.51	254.05	1.77	1.46	0.54	233.36	1.11	259.97	4.000	No	No	2.00
283	18.58	260.19	1.71	1.24	0.52	238.70	1.00	239.66	4.000	No	No	2.00
284	18.64	261.88	1.67	1.10	0.51	240.02	1.00	240.02	4.000	No	No	2.00
285	18.70	260.91	1.65	1.04	0.50	238.71	1.00	238.71	4.000	No	No	2.00
286	18.77	261.38	1.64	1.01	0.50	238.69	1.00	238.69	4.000	No	No	2.00
287	18.83	261.81	1.64	1.00	0.50	238.67	1.00	238.67	4.000	No	No	2.00
288	18.91	260.88	1.64	1.00	0.50	237.28	1.00	237.28	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.97	258.95	1.64	0.99	0.50	235.10	1.00	235.10	4.000	No	No	2.00
290	19.03	255.92	1.64	0.98	0.50	231.92	1.00	231.92	4.000	No	No	2.00
291	19.10	254.49	1.65	1.02	0.50	230.11	1.00	230.11	4.000	No	No	2.00
292	19.17	256.95	1.66	1.05	0.51	231.83	1.00	231.83	4.000	No	No	2.00
293	19.24	264.68	1.66	1.07	0.51	238.39	1.00	238.39	4.000	No	No	2.00
294	19.30	275.00	1.64	1.05	0.50	247.33	1.00	247.33	4.000	No	No	2.00
295	19.37	282.40	1.65	1.09	0.50	253.50	1.00	253.50	4.000	No	No	2.00
296	19.43	287.02	1.67	1.17	0.51	257.10	1.00	257.10	4.000	No	No	2.00
297	19.50	286.98	1.69	1.26	0.52	256.35	1.00	256.35	4.000	No	No	2.00
298	19.56	287.84	1.71	1.32	0.52	256.53	1.00	257.65	4.000	No	No	2.00
299	19.62	289.09	1.72	1.35	0.52	257.07	1.02	262.33	4.000	No	No	2.00
300	19.69	293.86	1.71	1.33	0.52	260.90	1.00	262.01	4.000	No	No	2.00
301	19.75	297.57	1.68	1.25	0.51	263.92	1.00	263.92	4.000	No	No	2.00
302	19.82	300.06	1.65	1.15	0.50	265.88	1.00	265.88	4.000	No	No	2.00
303	19.89	299.06	1.63	1.05	0.50	264.64	1.00	264.64	4.000	No	No	2.00
304	19.95	298.27	1.61	1.01	0.50	263.46	1.00	263.46	4.000	No	No	2.00
305	20.02	296.91	1.61	1.00	0.50	261.79	1.00	261.79	4.000	No	No	2.00
306	20.08	296.94	1.61	0.99	0.50	261.35	1.00	261.35	4.000	No	No	2.00
307	20.15	298.08	1.60	0.97	0.50	261.88	1.00	261.88	4.000	No	No	2.00
308	20.22	302.12	1.59	0.96	0.50	264.95	1.00	264.95	4.000	No	No	2.00
309	20.28	308.07	1.59	0.96	0.50	269.73	1.00	269.73	4.000	No	No	2.00
310	20.34	314.24	1.59	0.97	0.50	274.67	1.00	274.67	4.000	No	No	2.00
311	20.42	317.92	1.59	0.99	0.50	277.35	1.00	277.35	4.000	No	No	2.00
312	20.48	317.70	1.59	0.99	0.50	276.71	1.00	276.71	4.000	No	No	2.00
313	20.55	314.14	1.60	1.00	0.50	273.10	1.00	273.10	4.000	No	No	2.00
314	20.61	307.91	1.61	1.00	0.50	267.23	1.00	267.23	4.000	No	No	2.00
315	20.67	303.24	1.61	1.00	0.50	262.68	1.00	262.68	4.000	No	No	2.00
316	20.74	300.43	1.60	0.97	0.50	259.78	1.00	259.78	4.000	No	No	2.00
317	20.81	298.41	1.58	0.90	0.50	257.55	1.00	257.55	4.000	No	No	2.00
318	20.87	295.82	1.55	0.82	0.50	254.88	1.00	254.88	4.000	No	No	2.00
319	20.93	290.52	1.53	0.75	0.50	249.91	1.00	249.91	4.000	No	No	2.00
320	21.01	285.41	1.53	0.73	0.50	245.02	1.00	245.02	4.000	No	No	2.00
321	21.07	280.73	1.55	0.77	0.50	240.61	1.00	240.61	4.000	No	No	2.00
322	21.13	279.21	1.57	0.82	0.50	238.92	1.00	238.92	4.000	No	No	2.00
323	21.20	276.03	1.60	0.87	0.50	235.79	1.00	235.79	4.000	No	No	2.00
324	21.27	279.74	1.60	0.89	0.50	238.53	1.00	238.53	4.000	No	No	2.00
325	21.33	284.41	1.60	0.90	0.50	242.16	1.00	242.16	4.000	No	No	2.00
326	21.39	289.90	1.59	0.90	0.50	246.44	1.00	246.44	4.000	No	No	2.00
327	21.46	287.71	1.61	0.93	0.50	244.12	1.00	244.12	4.000	No	No	2.00
328	21.53	285.03	1.62	0.95	0.50	241.43	1.00	241.43	4.000	No	No	2.00
329	21.59	285.31	1.62	0.96	0.50	241.29	1.00	241.29	4.000	No	No	2.00
330	21.66	288.65	1.62	0.96	0.50	243.75	1.00	243.75	4.000	No	No	2.00
331	21.73	289.68	1.62	0.97	0.50	244.16	1.00	244.16	4.000	No	No	2.00
332	21.79	290.27	1.62	0.98	0.50	244.31	1.00	244.31	4.000	No	No	2.00
333	21.85	291.36	1.62	0.98	0.50	244.82	1.00	244.82	4.000	No	No	2.00
334	21.92	295.38	1.61	0.95	0.50	247.82	1.00	247.82	4.000	No	No	2.00
335	21.99	298.72	1.60	0.93	0.50	250.18	1.00	250.18	4.000	No	No	2.00
336	22.05	298.90	1.60	0.92	0.50	249.95	1.00	249.95	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.12	296.81	1.60	0.92	0.50	247.80	1.00	247.80	4.000	No	No	2.00
338	22.18	293.64	1.60	0.92	0.50	244.73	1.00	244.73	4.000	No	No	2.00
339	22.25	289.87	1.61	0.92	0.50	241.18	1.00	241.18	4.000	No	No	2.00
340	22.31	286.53	1.61	0.91	0.50	238.04	1.00	238.04	4.000	No	No	2.00
341	22.38	283.29	1.61	0.91	0.50	234.93	1.00	234.93	4.000	No	No	2.00
342	22.45	279.52	1.62	0.92	0.50	231.38	1.00	231.38	4.000	No	No	2.00
343	22.52	272.91	1.64	0.95	0.50	225.54	1.00	225.54	4.000	No	No	2.00
344	22.59	264.96	1.66	0.99	0.51	218.25	1.00	218.25	4.000	No	No	2.00
345	22.64	257.20	1.68	1.03	0.51	211.14	1.00	211.14	4.000	No	No	2.00
346	22.70	246.01	1.70	1.04	0.52	201.32	1.00	201.32	4.000	No	No	2.00
347	22.77	236.57	1.71	1.03	0.52	193.06	1.01	194.82	4.000	No	No	2.00
348	22.84	230.87	1.71	1.00	0.52	188.12	1.00	188.70	4.000	No	No	2.00
349	22.90	235.54	1.69	0.96	0.51	191.95	1.00	191.95	4.000	No	No	2.00
350	22.98	245.98	1.66	0.90	0.50	200.70	1.00	200.70	4.000	No	No	2.00
351	23.05	252.81	1.64	0.87	0.50	206.23	1.00	206.23	4.000	No	No	2.00
352	23.10	259.42	1.62	0.84	0.50	211.41	1.00	211.41	4.000	No	No	2.00
353	23.16	265.96	1.60	0.81	0.50	216.44	1.00	216.44	4.000	No	No	2.00
354	23.23	277.87	1.57	0.78	0.50	225.82	1.00	225.82	4.000	No	No	2.00
355	23.30	290.37	1.56	0.78	0.50	235.65	1.00	235.65	4.000	No	No	2.00
356	23.37	304.52	1.56	0.81	0.50	246.80	1.00	246.80	4.000	No	No	2.00
357	23.43	319.91	1.56	0.84	0.50	258.95	1.00	258.95	4.000	No	No	2.00
358	23.49	344.23	1.54	0.85	0.50	278.34	1.00	278.34	4.000	No	No	2.00
359	23.56	370.28	1.52	0.86	0.50	299.00	1.00	299.00	4.000	No	No	2.00
360	23.63	396.21	1.51	0.87	0.50	319.50	1.00	319.50	4.000	No	No	2.00
361	23.70	413.92	1.50	0.88	0.50	333.32	1.00	333.32	4.000	No	No	2.00
362	23.76	420.74	1.50	0.89	0.50	338.33	1.00	338.33	4.000	No	No	2.00
363	23.82	420.90	1.51	0.92	0.50	337.95	1.00	337.95	4.000	No	No	2.00
364	23.89	412.70	1.53	0.95	0.50	330.83	1.00	330.83	4.000	No	No	2.00
365	23.95	405.40	1.54	0.98	0.50	324.49	1.00	324.49	4.000	No	No	2.00
366	24.02	400.17	1.57	1.03	0.50	319.77	1.00	319.77	4.000	No	No	2.00
367	24.08	402.57	1.58	1.08	0.50	321.25	1.00	321.25	4.000	No	No	2.00
368	24.15	416.25	1.59	1.13	0.50	331.69	1.00	331.69	4.000	No	No	2.00
369	24.22	424.88	1.60	1.18	0.50	338.04	1.00	338.04	4.000	No	No	2.00
370	24.28	429.95	1.61	1.25	0.50	341.58	1.00	341.58	4.000	No	No	2.00
371	24.35	425.51	1.63	1.30	0.50	337.53	1.00	337.53	4.000	No	No	2.00
372	24.41	426.41	1.62	1.27	0.50	337.77	1.00	337.77	4.000	No	No	2.00
373	24.48	431.66	1.60	1.19	0.50	341.38	1.00	341.38	4.000	No	No	2.00
374	24.55	437.54	1.56	1.08	0.50	345.49	1.00	345.49	4.000	No	No	2.00
375	24.61	444.71	1.53	1.00	0.50	350.73	1.00	350.73	4.000	No	No	2.00
376	24.67	448.29	1.51	0.96	0.50	353.04	1.00	353.04	4.000	No	No	2.00
377	24.74	453.56	1.52	0.99	0.50	356.68	1.00	356.68	4.000	No	No	2.00
378	24.81	458.02	1.56	1.10	0.50	359.63	1.00	359.63	4.000	No	No	2.00
379	24.88	465.59	1.61	1.30	0.50	365.04	1.00	365.04	4.000	No	No	2.00
380	24.94	479.80	1.63	1.38	0.50	375.68	1.00	375.68	4.000	No	No	2.00
381	25.01	497.54	1.62	1.39	0.50	389.01	1.00	389.01	4.000	No	No	2.00
382	25.07	522.66	1.59	1.33	0.50	408.10	1.00	408.10	4.000	No	No	2.00
383	25.13	561.40	1.56	1.27	0.50	437.86	1.00	437.86	4.000	No	No	2.00
384	25.20	624.83	1.50	1.14	0.50	486.73	1.00	486.73	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.27	679.38	1.46	1.07	0.50	528.54	1.00	528.54	4.000	No	No	2.00
386	25.33	705.34	1.46	1.11	0.50	548.02	1.00	548.02	4.000	No	No	2.00
387	25.40	689.63	1.50	1.22	0.50	535.02	1.00	535.02	4.000	No	No	2.00
388	25.46	649.98	1.54	1.32	0.50	503.47	1.00	503.47	4.000	No	No	2.00
389	25.53	601.33	1.57	1.36	0.50	464.99	1.00	464.99	4.000	No	No	2.00
390	25.60	530.64	1.62	1.43	0.50	409.58	1.00	409.58	4.000	No	No	2.00
391	25.66	473.07	1.66	1.48	0.51	363.51	1.00	363.51	4.000	No	No	2.00
392	25.73	421.27	1.71	1.55	0.52	321.27	1.01	323.00	4.000	No	No	2.00
393	25.79	395.19	1.72	1.54	0.52	300.37	1.03	310.87	4.000	No	No	2.00
394	25.86	370.31	1.74	1.52	0.53	280.50	1.06	297.20	4.000	No	No	2.00
395	25.93	349.43	1.74	1.49	0.53	264.00	1.07	282.95	4.000	No	No	2.00
396	25.99	317.55	1.78	1.51	0.54	238.47	1.12	267.82	4.000	No	No	2.00
397	26.05	306.29	1.77	1.46	0.54	229.70	1.12	257.20	4.000	No	No	2.00
398	26.12	298.22	1.77	1.41	0.54	223.39	1.11	248.96	4.000	No	No	2.00
399	26.19	307.94	1.74	1.31	0.53	231.29	1.06	245.46	4.000	No	No	2.00
400	26.25	302.02	1.73	1.26	0.53	226.78	1.05	237.17	4.000	No	No	2.00
401	26.32	297.28	1.71	1.19	0.52	223.32	1.01	226.09	4.000	No	No	2.00
402	26.39	294.82	1.68	1.08	0.51	221.96	1.00	221.96	4.000	No	No	2.00
403	26.45	293.58	1.67	1.03	0.51	221.17	1.00	221.17	4.000	No	No	2.00
404	26.52	293.23	1.66	0.99	0.50	220.95	1.00	220.95	4.000	No	No	2.00
405	26.59	293.70	1.65	0.96	0.50	221.25	1.00	221.25	4.000	No	No	2.00
406	26.65	297.50	1.63	0.93	0.50	224.07	1.00	224.07	4.000	No	No	2.00
407	26.71	304.95	1.62	0.90	0.50	229.41	1.00	229.41	4.000	No	No	2.00
408	26.78	313.65	1.60	0.88	0.50	235.68	1.00	235.68	4.000	No	No	2.00
409	26.84	321.38	1.59	0.88	0.50	241.22	1.00	241.22	4.000	No	No	2.00
410	26.91	330.10	1.58	0.87	0.50	247.46	1.00	247.46	4.000	No	No	2.00
411	26.97	335.03	1.57	0.86	0.50	250.86	1.00	250.86	4.000	No	No	2.00
412	27.04	347.87	1.55	0.81	0.50	260.16	1.00	260.16	4.000	No	No	2.00
413	27.10	361.68	1.52	0.76	0.50	270.21	1.00	270.21	4.000	No	No	2.00
414	27.17	382.21	1.48	0.73	0.50	285.22	1.00	285.22	4.000	No	No	2.00
415	27.23	403.00	1.47	0.73	0.50	300.45	1.00	300.45	4.000	No	No	2.00
416	27.30	424.32	1.47	0.77	0.50	315.97	1.00	315.97	4.000	No	No	2.00
417	27.37	441.19	1.48	0.83	0.50	328.15	1.00	328.15	4.000	No	No	2.00
418	27.43	444.74	1.51	0.89	0.50	330.36	1.00	330.36	4.000	No	No	2.00
419	27.50	435.14	1.54	0.97	0.50	322.77	1.00	322.77	4.000	No	No	2.00
420	27.56	415.97	1.58	1.05	0.50	308.12	1.00	308.12	4.000	No	No	2.00
421	27.63	393.19	1.63	1.14	0.50	290.77	1.00	290.77	4.000	No	No	2.00
422	27.70	373.64	1.66	1.20	0.51	275.14	1.00	275.14	4.000	No	No	2.00
423	27.76	359.34	1.67	1.22	0.51	263.59	1.00	263.59	4.000	No	No	2.00
424	27.83	350.02	1.67	1.19	0.51	256.41	1.00	256.41	4.000	No	No	2.00
425	27.89	343.63	1.66	1.13	0.51	251.80	1.00	251.80	4.000	No	No	2.00
426	27.96	338.61	1.64	1.05	0.50	248.57	1.00	248.57	4.000	No	No	2.00
427	28.02	336.05	1.61	0.95	0.50	246.41	1.00	246.41	4.000	No	No	2.00
428	28.09	334.34	1.59	0.88	0.50	244.85	1.00	244.85	4.000	No	No	2.00
429	28.16	334.84	1.58	0.85	0.50	244.88	1.00	244.88	4.000	No	No	2.00
430	28.22	335.93	1.58	0.84	0.50	245.40	1.00	245.40	4.000	No	No	2.00
431	28.28	339.64	1.57	0.85	0.50	247.84	1.00	247.84	4.000	No	No	2.00
432	28.35	347.68	1.57	0.86	0.50	253.40	1.00	253.40	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.42	361.42	1.57	0.88	0.50	263.12	1.00	263.12	4.000	No	No	2.00
434	28.48	381.77	1.56	0.91	0.50	277.70	1.00	277.70	4.000	No	No	2.00
435	28.55	403.69	1.56	0.95	0.50	293.32	1.00	293.32	4.000	No	No	2.00
436	28.62	423.10	1.56	0.98	0.50	307.09	1.00	307.09	4.000	No	No	2.00
437	28.68	434.73	1.56	1.00	0.50	315.19	1.00	315.19	4.000	No	No	2.00
438	28.75	442.18	1.56	1.01	0.50	320.18	1.00	320.18	4.000	No	No	2.00
439	28.81	434.70	1.58	1.05	0.50	314.35	1.00	314.35	4.000	No	No	2.00
440	28.88	422.54	1.59	1.07	0.50	305.14	1.00	305.14	4.000	No	No	2.00
441	28.94	403.34	1.60	1.06	0.50	290.86	1.00	290.86	4.000	No	No	2.00
442	29.01	388.41	1.60	1.03	0.50	279.69	1.00	279.69	4.000	No	No	2.00
443	29.07	371.21	1.63	1.06	0.50	266.94	1.00	266.94	4.000	No	No	2.00
444	29.14	355.97	1.69	1.24	0.52	253.41	1.00	253.41	4.000	No	No	2.00
445	29.21	349.83	1.78	1.57	0.54	245.19	1.13	276.76	4.000	No	No	2.00
446	29.27	342.88	1.86	1.92	0.57	236.85	1.21	286.29	4.000	No	No	2.00
447	29.33	345.00	1.86	1.93	0.57	237.97	1.21	287.84	4.000	No	No	2.00
448	29.41	351.17	1.81	1.70	0.55	243.93	1.16	283.83	4.000	No	No	2.00
449	29.47	367.88	1.73	1.42	0.53	258.59	1.05	272.10	4.000	No	No	2.00
450	29.53	401.38	1.67	1.28	0.51	284.74	1.00	284.74	4.000	No	No	2.00
451	29.60	441.84	1.64	1.26	0.50	314.81	1.00	314.81	4.000	No	No	2.00
452	29.66	438.88	1.66	1.34	0.51	311.11	1.00	311.11	4.000	No	No	2.00
453	29.73	396.95	1.74	1.53	0.53	277.22	1.07	296.57	4.000	No	No	2.00
454	29.79	329.57	1.86	1.86	0.57	225.00	1.21	272.43	4.000	No	No	2.00
455	29.86	307.60	1.90	1.94	0.58	208.42	1.23	257.37	4.000	No	No	2.00
456	29.92	297.90	1.89	1.85	0.57	201.77	1.23	248.18	4.000	No	No	2.00
457	29.99	297.12	1.85	1.66	0.56	202.28	1.20	243.03	4.000	No	No	2.00
458	30.05	289.99	1.83	1.51	0.56	197.98	1.18	233.61	4.000	No	No	2.00
459	30.12	286.12	1.81	1.41	0.55	195.71	1.16	227.14	4.000	No	No	2.00
460	30.18	283.63	1.78	1.31	0.54	194.51	1.13	220.68	4.000	No	No	2.00
461	30.25	277.83	1.78	1.26	0.54	190.49	1.13	214.46	4.000	No	No	2.00
462	30.32	271.47	1.78	1.24	0.54	185.76	1.13	209.88	4.000	No	No	2.00
463	30.38	267.42	1.79	1.25	0.54	182.51	1.14	207.83	4.000	No	No	2.00
464	30.45	268.35	1.78	1.22	0.54	183.22	1.13	206.40	4.000	No	No	2.00
465	30.52	271.07	1.76	1.16	0.54	185.46	1.10	204.10	4.000	No	No	2.00
466	30.58	272.19	1.74	1.11	0.53	186.56	1.07	200.19	4.000	No	No	2.00
467	30.65	259.60	1.76	1.10	0.53	177.23	1.09	194.04	4.000	No	No	2.00
468	30.72	247.48	1.76	1.07	0.54	168.46	1.11	186.28	4.000	No	No	2.00
469	30.78	237.47	1.76	1.02	0.54	161.46	1.10	178.06	4.000	No	No	2.00
470	30.84	240.87	1.72	0.92	0.53	164.73	1.04	170.77	4.000	No	No	2.00
471	30.91	244.98	1.69	0.85	0.52	168.28	1.00	168.28	4.000	No	No	2.00
472	30.97	250.44	1.67	0.81	0.51	172.49	1.00	172.49	4.000	No	No	2.00
473	31.05	258.23	1.66	0.81	0.51	178.07	1.00	178.07	4.000	No	No	2.00
474	31.11	269.82	1.65	0.81	0.50	186.35	1.00	186.35	4.000	No	No	2.00
475	31.17	285.44	1.64	0.83	0.50	197.34	1.00	197.34	4.000	No	No	2.00
476	31.24	303.20	1.63	0.85	0.50	209.45	1.00	209.45	4.000	No	No	2.00
477	31.30	322.93	1.61	0.87	0.50	222.94	1.00	222.94	4.000	No	No	2.00
478	31.37	337.74	1.61	0.89	0.50	232.95	1.00	232.95	4.000	No	No	2.00
479	31.44	349.89	1.60	0.90	0.50	241.10	1.00	241.10	4.000	No	No	2.00
480	31.50	354.69	1.61	0.93	0.50	244.16	1.00	244.16	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.57	353.51	1.63	1.00	0.50	243.07	1.00	243.07	4.000	No	No	2.00
482	31.63	341.88	1.69	1.16	0.52	232.46	1.00	232.46	4.000	No	No	2.00
483	31.70	314.08	1.79	1.43	0.55	209.23	1.14	239.26	4.000	No	No	2.00
484	31.76	269.88	1.92	1.82	0.59	174.97	1.25	219.10	4.000	No	No	2.00
485	31.83	219.17	2.06	2.25	0.63	138.04	1.37	188.48	4.000	No	No	2.00
486	31.89	172.70	2.18	2.58	0.66	105.92	1.56	165.68	4.000	No	No	2.00
487	31.97	142.34	2.26	2.71	0.69	85.62	1.78	152.18	4.000	No	No	2.00
488	32.03	120.37	2.32	2.81	0.71	71.20	2.02	143.88	4.000	No	No	2.00
489	32.09	106.69	2.38	2.94	0.72	62.22	2.27	141.05	4.000	No	No	2.00
490	32.16	97.19	2.42	3.03	0.73	56.03	2.49	139.29	4.000	No	No	2.00
491	32.22	99.15	2.40	2.88	0.73	57.35	2.36	135.59	4.000	No	No	2.00
492	32.28	105.63	2.35	2.68	0.71	61.62	2.15	132.21	4.000	No	No	2.00
493	32.36	113.47	2.31	2.55	0.70	66.67	1.98	131.84	4.000	No	No	2.00
494	32.42	116.45	2.31	2.62	0.70	68.35	1.98	135.42	4.000	No	No	2.00
495	32.49	119.59	2.32	2.76	0.71	69.99	2.02	141.08	4.000	No	No	2.00
496	32.55	122.73	2.33	2.87	0.71	71.70	2.04	145.95	4.000	No	No	2.00
497	32.61	124.99	2.33	2.94	0.71	72.89	2.05	149.33	4.000	No	No	2.00
498	32.69	126.24	2.34	3.05	0.71	73.36	2.09	153.18	4.000	No	No	2.00
499	32.76	126.43	2.36	3.21	0.72	73.11	2.17	158.38	4.000	No	No	2.00
500	32.83	127.18	2.37	3.36	0.72	73.22	2.23	163.54	4.000	No	No	2.00
501	32.88	129.62	2.37	3.43	0.72	74.53	2.24	167.05	4.000	No	No	2.00
502	32.95	132.87	2.36	3.41	0.72	76.44	2.20	167.94	4.000	No	No	2.00
503	33.02	136.20	2.35	3.35	0.71	78.46	2.14	167.63	4.000	No	No	2.00
504	33.07	140.28	2.33	3.27	0.71	81.05	2.06	166.75	4.000	No	No	2.00
505	33.15	145.99	2.31	3.16	0.70	84.66	1.96	166.03	4.000	No	No	2.00
506	33.22	152.69	2.29	3.06	0.69	88.89	1.87	166.41	4.000	No	No	2.00
507	33.29	157.43	2.27	3.03	0.69	91.79	1.83	167.63	4.000	No	No	2.00
508	33.34	159.66	2.27	3.05	0.69	93.03	1.82	169.49	4.000	No	No	2.00
509	33.41	160.29	2.28	3.09	0.69	93.18	1.83	170.97	4.000	No	No	2.00
510	33.48	161.42	2.28	3.11	0.69	93.69	1.84	172.04	4.000	No	No	2.00
511	33.55	163.75	2.27	3.08	0.69	95.04	1.81	172.35	4.000	No	No	2.00
512	33.60	167.40	2.25	3.01	0.68	97.37	1.77	172.06	4.000	No	No	2.00
513	33.67	171.11	2.24	2.93	0.68	99.73	1.72	171.18	4.000	No	No	2.00
514	33.74	175.06	2.22	2.83	0.67	102.30	1.66	170.20	4.000	No	No	2.00
515	33.81	177.68	2.21	2.76	0.67	103.96	1.63	169.53	4.000	No	No	2.00
516	33.86	180.36	2.20	2.72	0.67	105.64	1.61	169.87	4.000	No	No	2.00
517	33.93	181.95	2.20	2.72	0.67	106.46	1.60	170.74	4.000	No	No	2.00
518	33.99	185.19	2.19	2.72	0.67	108.36	1.59	172.40	4.000	No	No	2.00
519	34.07	187.50	2.19	2.71	0.66	109.65	1.58	173.34	4.000	No	No	2.00
520	34.12	190.96	2.17	2.64	0.66	111.93	1.55	173.15	4.000	No	No	2.00
521	34.20	191.52	2.16	2.54	0.66	112.40	1.52	170.75	4.000	No	No	2.00
522	34.26	191.70	2.14	2.40	0.65	112.86	1.48	167.03	4.000	No	No	2.00
523	34.33	191.36	2.12	2.25	0.64	112.98	1.44	163.22	4.000	No	No	2.00
524	34.39	195.23	2.08	2.08	0.63	115.97	1.40	161.84	4.000	No	No	2.00
525	34.46	203.61	2.04	1.93	0.62	121.88	1.35	164.39	4.000	No	No	2.00
526	34.52	217.58	2.00	1.78	0.61	131.53	1.30	171.53	4.000	No	No	2.00
527	34.58	238.15	1.94	1.63	0.59	145.71	1.26	184.01	4.000	No	No	2.00
528	34.66	259.44	1.89	1.54	0.58	160.27	1.23	197.37	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.72	274.12	1.87	1.52	0.57	170.01	1.22	206.80	4.000	No	No	2.00
530	34.78	277.36	1.88	1.56	0.57	171.58	1.22	209.63	4.000	No	No	2.00
531	34.85	273.31	1.89	1.61	0.58	168.28	1.23	207.41	4.000	No	No	2.00
532	34.91	265.48	1.91	1.64	0.58	162.67	1.24	202.19	4.000	No	No	2.00
533	34.98	257.85	1.92	1.66	0.58	157.33	1.25	196.88	4.000	No	No	2.00
534	35.05	251.55	1.93	1.66	0.59	152.95	1.26	192.31	4.000	No	No	2.00
535	35.11	246.72	1.94	1.67	0.59	149.55	1.26	188.86	4.000	No	No	2.00
536	35.18	243.08	1.95	1.68	0.59	146.90	1.27	186.21	4.000	No	No	2.00
537	35.24	240.40	1.96	1.71	0.59	144.82	1.27	184.42	4.000	No	No	2.00
538	35.30	239.34	1.96	1.73	0.60	143.82	1.28	183.75	4.000	No	No	2.00
539	35.38	240.09	1.96	1.72	0.60	144.16	1.28	183.94	4.000	No	No	2.00
540	35.43	242.02	1.95	1.69	0.59	145.43	1.27	184.78	4.000	No	No	2.00
541	35.51	245.22	1.94	1.64	0.59	147.68	1.26	186.15	4.000	No	No	2.00
542	35.56	248.93	1.92	1.57	0.58	150.39	1.25	187.80	4.000	No	No	2.00
543	35.63	255.20	1.90	1.51	0.58	154.78	1.23	191.05	4.000	No	No	2.00
544	35.70	261.90	1.87	1.44	0.57	159.57	1.22	194.23	4.000	No	No	2.00
545	35.76	266.80	1.85	1.36	0.56	163.34	1.20	195.66	4.000	No	No	2.00
546	35.84	268.88	1.82	1.28	0.56	165.30	1.18	194.60	4.000	No	No	2.00
547	35.90	270.75	1.80	1.21	0.55	167.04	1.16	193.21	4.000	No	No	2.00
548	35.96	274.28	1.79	1.16	0.54	169.78	1.14	192.72	4.000	No	No	2.00
549	36.03	278.89	1.77	1.12	0.54	173.08	1.11	192.85	4.000	No	No	2.00
550	36.09	284.41	1.76	1.10	0.53	176.93	1.09	193.37	4.000	No	No	2.00
551	36.16	291.17	1.74	1.08	0.53	181.51	1.07	194.67	4.000	No	No	2.00
552	36.23	297.59	1.73	1.07	0.53	185.78	1.05	195.69	4.000	No	No	2.00
553	36.29	304.13	1.72	1.06	0.53	190.09	1.04	197.17	4.000	No	No	2.00
554	36.36	309.00	1.72	1.07	0.52	193.05	1.03	199.32	4.000	No	No	2.00
555	36.43	307.38	1.73	1.11	0.53	191.26	1.06	202.31	4.000	No	No	2.00
556	36.49	309.34	1.74	1.12	0.53	192.23	1.06	204.00	4.000	No	No	2.00
557	36.55	311.21	1.73	1.11	0.53	193.31	1.06	204.22	4.000	No	No	2.00
558	36.62	319.25	1.71	1.08	0.52	199.02	1.02	202.77	4.000	No	No	2.00
559	36.69	322.28	1.71	1.06	0.52	201.12	1.00	201.18	4.000	No	No	2.00
560	36.75	324.18	1.70	1.05	0.52	202.37	1.00	202.37	4.000	No	No	2.00
561	36.82	325.24	1.70	1.05	0.52	202.92	1.00	202.92	4.000	No	No	2.00
562	36.88	327.86	1.69	1.04	0.52	204.61	1.00	204.61	4.000	No	No	2.00
563	36.95	332.35	1.69	1.03	0.51	207.60	1.00	207.60	4.000	No	No	2.00
564	37.01	339.42	1.68	1.01	0.51	212.41	1.00	212.41	4.000	No	No	2.00
565	37.08	346.68	1.67	1.01	0.51	217.15	1.00	217.15	4.000	No	No	2.00
566	37.14	352.63	1.67	1.02	0.51	220.71	1.00	220.71	4.000	No	No	2.00
567	37.21	356.37	1.67	1.05	0.51	222.56	1.00	222.56	4.000	No	No	2.00
568	37.28	357.78	1.68	1.06	0.51	223.06	1.00	223.06	4.000	No	No	2.00
569	37.34	358.31	1.67	1.05	0.51	223.45	1.00	223.45	4.000	No	No	2.00
570	37.41	357.56	1.67	1.03	0.51	223.06	1.00	223.06	4.000	No	No	2.00
571	37.48	357.44	1.66	1.01	0.51	223.01	1.00	223.01	4.000	No	No	2.00
572	37.54	356.91	1.66	1.00	0.51	222.69	1.00	222.69	4.000	No	No	2.00
573	37.60	355.50	1.65	0.98	0.50	221.88	1.00	221.88	4.000	No	No	2.00
574	37.67	354.94	1.65	0.96	0.50	221.68	1.00	221.68	4.000	No	No	2.00
575	37.74	354.26	1.64	0.95	0.50	221.21	1.00	221.21	4.000	No	No	2.00
576	37.80	353.16	1.64	0.94	0.50	220.34	1.00	220.34	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	37.86	352.51	1.64	0.94	0.50	219.69	1.00	219.69	4.000	No	No	2.00
578	37.93	351.11	1.65	0.95	0.50	218.37	1.00	218.37	4.000	No	No	2.00
579	38.00	352.70	1.65	0.96	0.50	218.94	1.00	218.94	4.000	No	No	2.00
580	38.07	354.50	1.66	1.00	0.51	219.28	1.00	219.28	4.000	No	No	2.00
581	38.13	358.34	1.67	1.03	0.51	220.96	1.00	220.96	4.000	No	No	2.00
582	38.20	359.83	1.68	1.06	0.51	221.22	1.00	221.22	4.000	No	No	2.00
583	38.26	365.66	1.67	1.06	0.51	224.98	1.00	224.98	4.000	No	No	2.00
584	38.32	371.80	1.66	1.05	0.51	229.08	1.00	229.08	4.000	No	No	2.00
585	38.39	379.28	1.65	1.04	0.50	234.07	1.00	234.07	4.000	No	No	2.00
586	38.45	382.93	1.65	1.04	0.50	236.28	1.00	236.28	4.000	No	No	2.00
587	38.52	385.86	1.65	1.04	0.50	237.91	1.00	237.91	4.000	No	No	2.00
588	38.59	389.20	1.65	1.04	0.50	239.94	1.00	239.94	4.000	No	No	2.00
589	38.65	390.63	1.65	1.03	0.50	240.77	1.00	240.77	4.000	No	No	2.00
590	38.72	392.56	1.64	1.02	0.50	242.11	1.00	242.11	4.000	No	No	2.00
591	38.78	394.62	1.64	1.01	0.50	243.16	1.00	243.16	4.000	No	No	2.00
592	38.85	398.17	1.64	1.02	0.50	245.15	1.00	245.15	4.000	No	No	2.00
593	38.91	403.38	1.63	1.02	0.50	248.14	1.00	248.14	4.000	No	No	2.00
594	38.98	407.21	1.63	1.02	0.50	250.28	1.00	250.28	4.000	No	No	2.00
595	39.05	409.39	1.63	1.02	0.50	251.40	1.00	251.40	4.000	No	No	2.00
596	39.12	411.39	1.63	1.03	0.50	252.39	1.00	252.39	4.000	No	No	2.00
597	39.17	414.38	1.63	1.03	0.50	254.03	1.00	254.03	4.000	No	No	2.00
598	39.24	424.14	1.61	0.99	0.50	259.80	1.00	259.80	4.000	No	No	2.00
599	39.31	436.17	1.58	0.93	0.50	266.98	1.00	266.98	4.000	No	No	2.00
600	39.38	452.09	1.56	0.89	0.50	276.52	1.00	276.52	4.000	No	No	2.00
601	39.44	466.74	1.54	0.86	0.50	285.30	1.00	285.30	4.000	No	No	2.00
602	39.50	475.69	1.52	0.84	0.50	290.53	1.00	290.53	4.000	No	No	2.00
603	39.57	479.83	1.51	0.81	0.50	292.82	1.00	292.82	4.000	No	No	2.00
604	39.64	476.09	1.51	0.80	0.50	290.25	1.00	290.25	4.000	No	No	2.00
605	39.70	470.36	1.38	0.52	0.50	286.49	1.00	286.49	4.000	No	No	2.00
606	39.76	460.13	1.21	0.27	0.50	280.01	1.00	280.01	4.000	No	No	2.00
607	39.84	450.81	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
608	39.90	441.81	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
609	39.96	436.63	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
610	40.03	428.37	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
611	40.10	422.98	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.07	2.00	0.00	0.00	0.06	0.00	0.13	2.00	0.00	0.00	0.06	0.00
0.20	2.00	0.00	0.00	0.07	0.00	0.27	2.00	0.00	0.00	0.07	0.00
0.33	2.00	0.00	0.00	0.06	0.00	0.40	2.00	0.00	0.00	0.06	0.00
0.47	2.00	0.00	0.00	0.07	0.00	0.53	2.00	0.00	0.00	0.06	0.00
0.59	2.00	0.00	0.00	0.06	0.00	0.66	2.00	0.00	0.00	0.06	0.00
0.73	2.00	0.00	0.00	0.07	0.00	0.79	2.00	0.00	0.00	0.06	0.00
0.85	2.00	0.00	0.00	0.06	0.00	0.93	2.00	0.00	0.00	0.07	0.00
0.99	2.00	0.00	0.00	0.06	0.00	1.05	2.00	0.00	0.00	0.06	0.00
1.12	2.00	0.00	0.00	0.06	0.00	1.19	2.00	0.00	0.00	0.07	0.00
1.25	2.00	0.00	0.00	0.06	0.00	1.32	2.00	0.00	0.00	0.07	0.00
1.38	2.00	0.00	0.00	0.06	0.00	1.45	2.00	0.00	0.00	0.06	0.00
1.51	2.00	0.00	0.00	0.06	0.00	1.58	2.00	0.00	0.00	0.07	0.00
1.64	2.00	0.00	0.00	0.06	0.00	1.71	2.00	0.00	0.00	0.07	0.00
1.77	2.00	0.00	0.00	0.07	0.00	1.84	2.00	0.00	0.00	0.07	0.00
1.91	2.00	0.00	0.00	0.06	0.00	1.97	2.00	0.00	0.00	0.06	0.00
2.04	2.00	0.00	0.00	0.07	0.00	2.11	2.00	0.00	0.00	0.07	0.00
2.17	2.00	0.00	0.00	0.07	0.00	2.23	2.00	0.00	0.00	0.06	0.00
2.30	2.00	0.00	0.00	0.07	0.00	2.37	2.00	0.00	0.00	0.06	0.00
2.44	2.00	0.00	0.00	0.07	0.00	2.50	2.00	0.00	0.00	0.06	0.00
2.57	2.00	0.00	0.00	0.07	0.00	2.63	2.00	0.00	0.00	0.06	0.00
2.69	2.00	0.00	0.00	0.06	0.00	2.76	2.00	0.00	0.00	0.07	0.00
2.83	2.00	0.00	0.00	0.07	0.00	2.89	2.00	0.00	0.00	0.06	0.00
2.96	2.00	0.00	0.00	0.06	0.00	3.03	2.00	0.00	0.00	0.07	0.00
3.09	2.00	0.00	0.00	0.06	0.00	3.16	2.00	0.00	0.00	0.07	0.00
3.22	2.00	0.00	0.00	0.06	0.00	3.28	2.00	0.00	0.00	0.06	0.00
3.35	2.00	0.00	0.00	0.07	0.00	3.41	2.00	0.00	0.00	0.06	0.00
3.48	2.00	0.00	0.00	0.07	0.00	3.54	2.00	0.00	0.00	0.06	0.00
3.61	2.00	0.00	0.00	0.07	0.00	3.68	2.00	0.00	0.00	0.07	0.00
3.75	2.00	0.00	0.00	0.06	0.00	3.81	2.00	0.00	0.00	0.06	0.00
3.88	2.00	0.00	0.00	0.07	0.00	3.94	2.00	0.00	0.00	0.06	0.00
4.01	2.00	0.00	0.00	0.07	0.00	4.07	2.00	0.00	0.00	0.06	0.00
4.14	2.00	0.00	0.00	0.07	0.00	4.20	2.00	0.00	0.00	0.06	0.00
4.27	2.00	0.00	0.00	0.07	0.00	4.33	2.00	0.00	0.00	0.06	0.00
4.40	2.00	0.00	0.00	0.07	0.00	4.47	2.00	0.00	0.00	0.07	0.00
4.53	2.00	0.00	0.00	0.06	0.00	4.59	2.00	0.00	0.00	0.06	0.00
4.66	2.00	0.00	0.00	0.07	0.00	4.72	2.00	0.00	0.00	0.06	0.00
4.80	2.00	0.00	0.00	0.07	0.00	4.86	2.00	0.00	0.00	0.06	0.00
4.93	2.00	0.00	0.00	0.07	0.00	4.99	2.00	0.00	0.00	0.06	0.00
5.06	2.00	0.00	0.00	0.07	0.00	5.12	2.00	0.00	0.00	0.06	0.00
5.19	2.00	0.00	0.00	0.07	0.00	5.25	2.00	0.00	0.00	0.06	0.00
5.32	2.00	0.00	0.00	0.07	0.00	5.38	2.00	0.00	0.00	0.06	0.00
5.46	2.00	0.00	0.00	0.07	0.00	5.52	2.00	0.00	0.00	0.06	0.00
5.59	2.00	0.00	0.00	0.07	0.00	5.65	2.00	0.00	0.00	0.06	0.00
5.72	2.00	0.00	0.00	0.07	0.00	5.78	2.00	0.00	0.00	0.07	0.00
5.85	2.00	0.00	0.00	0.07	0.00	5.92	2.00	0.00	0.00	0.07	0.00
5.99	2.00	0.00	0.00	0.06	0.00	6.05	2.00	0.00	0.00	0.06	0.00
6.12	2.00	0.00	0.00	0.07	0.00	6.19	2.00	0.00	0.00	0.07	0.00
6.24	2.00	0.00	0.00	0.05	0.00	6.31	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.38	2.00	0.00	0.00	0.07	0.00	6.45	2.00	0.00	0.00	0.07	0.00
6.50	2.00	0.00	0.00	0.05	0.00	6.57	2.00	0.00	0.00	0.07	0.00
6.65	2.00	0.00	0.00	0.07	0.00	6.70	2.00	0.00	0.00	0.05	0.00
6.77	2.00	0.00	0.00	0.07	0.00	6.84	2.00	0.00	0.00	0.07	0.00
6.91	2.00	0.00	0.00	0.07	0.00	6.96	2.00	0.00	0.00	0.05	0.00
7.03	2.00	0.00	0.00	0.07	0.00	7.10	2.00	0.00	0.00	0.07	0.00
7.18	2.00	0.00	0.00	0.08	0.00	7.22	2.00	0.00	0.00	0.05	0.00
7.29	2.00	0.00	0.00	0.07	0.00	7.36	2.00	0.00	0.00	0.07	0.00
7.43	2.00	0.00	0.00	0.07	0.00	7.50	2.00	0.00	0.00	0.07	0.00
7.55	2.00	0.00	0.00	0.05	0.00	7.63	2.00	0.00	0.00	0.07	0.00
7.70	2.00	0.00	0.00	0.07	0.00	7.76	2.00	0.00	0.00	0.07	0.00
7.81	2.00	0.00	0.00	0.05	0.00	7.89	2.00	0.00	0.00	0.07	0.00
7.96	2.00	0.00	0.00	0.07	0.00	8.01	2.00	0.00	0.00	0.05	0.00
8.08	2.00	0.00	0.00	0.07	0.00	8.15	2.00	0.00	0.00	0.07	0.00
8.21	2.00	0.00	0.00	0.06	0.00	8.28	2.00	0.00	0.00	0.07	0.00
8.35	2.00	0.00	0.00	0.07	0.00	8.40	2.00	0.00	0.00	0.05	0.00
8.47	2.00	0.00	0.00	0.07	0.00	8.54	2.00	0.00	0.00	0.07	0.00
8.62	2.00	0.00	0.00	0.07	0.00	8.66	2.00	0.00	0.00	0.05	0.00
8.74	2.00	0.00	0.00	0.07	0.00	8.80	2.00	0.00	0.00	0.06	0.00
8.87	2.00	0.00	0.00	0.06	0.00	8.92	2.00	0.00	0.00	0.06	0.00
9.00	2.00	0.00	0.00	0.08	0.00	9.06	2.00	0.00	0.00	0.06	0.00
9.13	2.00	0.00	0.00	0.07	0.00	9.20	2.00	0.00	0.00	0.06	0.00
9.25	2.00	0.00	0.00	0.06	0.00	9.32	2.00	0.00	0.00	0.07	0.00
9.39	2.00	0.00	0.00	0.07	0.00	9.45	2.00	0.00	0.00	0.06	0.00
9.53	2.00	0.00	0.00	0.08	0.00	9.59	2.00	0.00	0.00	0.06	0.00
9.66	2.00	0.00	0.00	0.07	0.00	9.73	2.00	0.00	0.00	0.07	0.00
9.78	2.00	0.00	0.00	0.05	0.00	9.85	2.00	0.00	0.00	0.07	0.00
9.91	2.00	0.00	0.00	0.06	0.00	9.99	2.00	0.00	0.00	0.08	0.00
10.05	2.00	0.00	0.00	0.07	0.00	10.12	2.00	0.00	0.00	0.07	0.00
10.18	2.00	0.00	0.00	0.06	0.00	10.24	2.00	0.00	0.00	0.06	0.00
10.30	2.00	0.00	0.00	0.06	0.00	10.37	2.00	0.00	0.00	0.07	0.00
10.44	2.00	0.00	0.00	0.07	0.00	10.50	2.00	0.00	0.00	0.06	0.00
10.56	2.00	0.00	0.00	0.06	0.00	10.64	2.00	0.00	0.00	0.08	0.00
10.70	2.00	0.00	0.00	0.06	0.00	10.78	2.00	0.00	0.00	0.08	0.00
10.83	2.00	0.00	0.00	0.05	0.00	10.90	2.00	0.00	0.00	0.07	0.00
10.97	2.00	0.00	0.00	0.07	0.00	11.04	2.00	0.00	0.00	0.07	0.00
11.11	2.00	0.00	0.00	0.07	0.00	11.17	2.00	0.00	0.00	0.07	0.00
11.22	2.00	0.00	0.00	0.05	0.00	11.29	2.00	0.00	0.00	0.07	0.00
11.36	2.00	0.00	0.00	0.06	0.00	11.42	2.00	0.00	0.00	0.06	0.00
11.49	2.00	0.00	0.00	0.07	0.00	11.57	2.00	0.00	0.00	0.07	0.00
11.64	2.00	0.00	0.00	0.07	0.00	11.69	2.00	0.00	0.00	0.05	0.00
11.76	2.00	0.00	0.00	0.07	0.00	11.83	2.00	0.00	0.00	0.07	0.00
11.88	2.00	0.00	0.00	0.05	0.00	11.95	2.00	0.00	0.00	0.07	0.00
12.03	2.00	0.00	0.00	0.08	0.00	12.08	2.00	0.00	0.00	0.05	0.00
12.15	2.00	0.00	0.00	0.07	0.00	12.22	2.00	0.00	0.00	0.07	0.00
12.29	2.00	0.00	0.00	0.07	0.00	12.34	2.00	0.00	0.00	0.05	0.00
12.41	2.00	0.00	0.00	0.07	0.00	12.48	2.00	0.00	0.00	0.07	0.00
12.55	2.00	0.00	0.00	0.07	0.00	12.61	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.68	2.00	0.00	0.00	0.07	0.00	12.75	2.00	0.00	0.00	0.08	0.00
12.80	2.00	0.00	0.00	0.05	0.00	12.88	2.00	0.00	0.00	0.07	0.00
12.95	2.00	0.00	0.00	0.08	0.00	13.00	2.00	0.00	0.00	0.05	0.00
13.07	2.00	0.00	0.00	0.08	0.00	13.12	2.00	0.00	0.00	0.05	0.00
13.20	2.00	0.00	0.00	0.07	0.00	13.27	2.00	0.00	0.00	0.07	0.00
13.34	2.00	0.00	0.00	0.07	0.00	13.39	2.00	0.00	0.00	0.05	0.00
13.46	2.00	0.00	0.00	0.07	0.00	13.54	2.00	0.00	0.00	0.07	0.00
13.59	2.00	0.00	0.00	0.05	0.00	13.66	2.00	0.00	0.00	0.08	0.00
13.72	2.00	0.00	0.00	0.06	0.00	13.78	2.00	0.00	0.00	0.06	0.00
13.86	2.00	0.00	0.00	0.08	0.00	13.92	2.00	0.00	0.00	0.07	0.00
13.99	2.00	0.00	0.00	0.07	0.00	14.05	2.00	0.00	0.00	0.05	0.00
14.12	2.00	0.00	0.00	0.07	0.00	14.19	2.00	0.00	0.00	0.07	0.00
14.26	2.00	0.00	0.00	0.07	0.00	14.31	2.00	0.00	0.00	0.05	0.00
14.38	2.00	0.00	0.00	0.07	0.00	14.45	2.00	0.00	0.00	0.07	0.00
14.52	2.00	0.00	0.00	0.07	0.00	14.57	2.00	0.00	0.00	0.05	0.00
14.64	2.00	0.00	0.00	0.07	0.00	14.72	2.00	0.00	0.00	0.07	0.00
14.76	2.00	0.00	0.00	0.05	0.00	14.84	2.00	0.00	0.00	0.08	0.00
14.91	2.00	0.00	0.00	0.07	0.00	14.96	2.00	0.00	0.00	0.05	0.00
15.03	2.00	0.00	0.00	0.07	0.00	15.10	2.00	0.00	0.00	0.07	0.00
15.17	2.00	0.00	0.00	0.07	0.00	15.24	2.00	0.00	0.00	0.07	0.00
15.29	2.00	0.00	0.00	0.05	0.00	15.36	2.00	0.00	0.00	0.07	0.00
15.44	2.00	0.00	0.00	0.07	0.00	15.51	2.00	0.00	0.00	0.07	0.00
15.56	2.00	0.00	0.00	0.05	0.00	15.63	2.00	0.00	0.00	0.07	0.00
15.70	2.00	0.00	0.00	0.07	0.00	15.75	2.00	0.00	0.00	0.05	0.00
15.82	2.00	0.00	0.00	0.07	0.00	15.89	2.00	0.00	0.00	0.07	0.00
15.96	2.00	0.00	0.00	0.07	0.00	16.01	2.00	0.00	0.00	0.05	0.00
16.09	2.00	0.00	0.00	0.07	0.00	16.16	2.00	0.00	0.00	0.07	0.00
16.21	2.00	0.00	0.00	0.05	0.00	16.28	2.00	0.00	0.00	0.07	0.00
16.35	2.00	0.00	0.00	0.07	0.00	16.42	2.00	0.00	0.00	0.07	0.00
16.48	2.00	0.00	0.00	0.05	0.00	16.55	2.00	0.00	0.00	0.07	0.00
16.62	2.00	0.00	0.00	0.07	0.00	16.69	2.00	0.00	0.00	0.07	0.00
16.73	2.00	0.00	0.00	0.05	0.00	16.81	2.00	0.00	0.00	0.07	0.00
16.88	2.00	0.00	0.00	0.07	0.00	16.93	2.00	0.00	0.00	0.05	0.00
17.00	2.00	0.00	0.00	0.07	0.00	17.07	2.00	0.00	0.00	0.06	0.00
17.14	2.00	0.00	0.00	0.08	0.00	17.21	2.00	0.00	0.00	0.07	0.00
17.27	2.00	0.00	0.00	0.07	0.00	17.34	2.00	0.00	0.00	0.06	0.00
17.40	2.00	0.00	0.00	0.06	0.00	17.46	2.00	0.00	0.00	0.06	0.00
17.52	2.00	0.00	0.00	0.06	0.00	17.60	2.00	0.00	0.00	0.07	0.00
17.66	2.00	0.00	0.00	0.07	0.00	17.73	2.00	0.00	0.00	0.07	0.00
17.80	2.00	0.00	0.00	0.07	0.00	17.85	2.00	0.00	0.00	0.05	0.00
17.91	2.00	0.00	0.00	0.07	0.00	17.98	2.00	0.00	0.00	0.07	0.00
18.06	2.00	0.00	0.00	0.07	0.00	18.11	2.00	0.00	0.00	0.06	0.00
18.18	2.00	0.00	0.00	0.07	0.00	18.25	2.00	0.00	0.00	0.07	0.00
18.31	2.00	0.00	0.00	0.06	0.00	18.38	2.00	0.00	0.00	0.07	0.00
18.44	2.00	0.00	0.00	0.06	0.00	18.51	2.00	0.00	0.00	0.07	0.00
18.58	2.00	0.00	0.00	0.07	0.00	18.64	2.00	0.00	0.00	0.05	0.00
18.70	2.00	0.00	0.00	0.07	0.00	18.77	2.00	0.00	0.00	0.07	0.00
18.83	2.00	0.00	0.00	0.06	0.00	18.91	2.00	0.00	0.00	0.08	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.97	2.00	0.00	0.00	0.06	0.00	19.03	2.00	0.00	0.00	0.06	0.00
19.10	2.00	0.00	0.00	0.07	0.00	19.17	2.00	0.00	0.00	0.07	0.00
19.24	2.00	0.00	0.00	0.07	0.00	19.30	2.00	0.00	0.00	0.07	0.00
19.37	2.00	0.00	0.00	0.07	0.00	19.43	2.00	0.00	0.00	0.05	0.00
19.50	2.00	0.00	0.00	0.07	0.00	19.56	2.00	0.00	0.00	0.06	0.00
19.62	2.00	0.00	0.00	0.07	0.00	19.69	2.00	0.00	0.00	0.06	0.00
19.75	2.00	0.00	0.00	0.06	0.00	19.82	2.00	0.00	0.00	0.07	0.00
19.89	2.00	0.00	0.00	0.06	0.00	19.95	2.00	0.00	0.00	0.07	0.00
20.02	2.00	0.00	0.00	0.06	0.00	20.08	2.00	0.00	0.00	0.06	0.00
20.15	2.00	0.00	0.00	0.07	0.00	20.22	2.00	0.00	0.00	0.07	0.00
20.28	2.00	0.00	0.00	0.06	0.00	20.34	2.00	0.00	0.00	0.07	0.00
20.42	2.00	0.00	0.00	0.07	0.00	20.48	2.00	0.00	0.00	0.06	0.00
20.55	2.00	0.00	0.00	0.07	0.00	20.61	2.00	0.00	0.00	0.06	0.00
20.67	2.00	0.00	0.00	0.07	0.00	20.74	2.00	0.00	0.00	0.07	0.00
20.81	2.00	0.00	0.00	0.07	0.00	20.87	2.00	0.00	0.00	0.06	0.00
20.93	2.00	0.00	0.00	0.06	0.00	21.01	2.00	0.00	0.00	0.08	0.00
21.07	2.00	0.00	0.00	0.06	0.00	21.13	2.00	0.00	0.00	0.06	0.00
21.20	2.00	0.00	0.00	0.07	0.00	21.27	2.00	0.00	0.00	0.07	0.00
21.33	2.00	0.00	0.00	0.06	0.00	21.39	2.00	0.00	0.00	0.06	0.00
21.46	2.00	0.00	0.00	0.07	0.00	21.53	2.00	0.00	0.00	0.07	0.00
21.59	2.00	0.00	0.00	0.06	0.00	21.66	2.00	0.00	0.00	0.06	0.00
21.73	2.00	0.00	0.00	0.07	0.00	21.79	2.00	0.00	0.00	0.06	0.00
21.85	2.00	0.00	0.00	0.07	0.00	21.92	2.00	0.00	0.00	0.06	0.00
21.99	2.00	0.00	0.00	0.07	0.00	22.05	2.00	0.00	0.00	0.06	0.00
22.12	2.00	0.00	0.00	0.07	0.00	22.18	2.00	0.00	0.00	0.07	0.00
22.25	2.00	0.00	0.00	0.07	0.00	22.31	2.00	0.00	0.00	0.06	0.00
22.38	2.00	0.00	0.00	0.07	0.00	22.45	2.00	0.00	0.00	0.07	0.00
22.52	2.00	0.00	0.00	0.06	0.00	22.59	2.00	0.00	0.00	0.07	0.00
22.64	2.00	0.00	0.00	0.06	0.00	22.70	2.00	0.00	0.00	0.06	0.00
22.77	2.00	0.00	0.00	0.07	0.00	22.84	2.00	0.00	0.00	0.07	0.00
22.90	2.00	0.00	0.00	0.07	0.00	22.98	2.00	0.00	0.00	0.07	0.00
23.05	2.00	0.00	0.00	0.07	0.00	23.10	2.00	0.00	0.00	0.05	0.00
23.16	2.00	0.00	0.00	0.07	0.00	23.23	2.00	0.00	0.00	0.07	0.00
23.30	2.00	0.00	0.00	0.07	0.00	23.37	2.00	0.00	0.00	0.07	0.00
23.43	2.00	0.00	0.00	0.06	0.00	23.49	2.00	0.00	0.00	0.06	0.00
23.56	2.00	0.00	0.00	0.07	0.00	23.63	2.00	0.00	0.00	0.07	0.00
23.70	2.00	0.00	0.00	0.06	0.00	23.76	2.00	0.00	0.00	0.06	0.00
23.82	2.00	0.00	0.00	0.06	0.00	23.89	2.00	0.00	0.00	0.07	0.00
23.95	2.00	0.00	0.00	0.06	0.00	24.02	2.00	0.00	0.00	0.07	0.00
24.08	2.00	0.00	0.00	0.06	0.00	24.15	2.00	0.00	0.00	0.07	0.00
24.22	2.00	0.00	0.00	0.07	0.00	24.28	2.00	0.00	0.00	0.06	0.00
24.35	2.00	0.00	0.00	0.07	0.00	24.41	2.00	0.00	0.00	0.06	0.00
24.48	2.00	0.00	0.00	0.07	0.00	24.55	2.00	0.00	0.00	0.07	0.00
24.61	2.00	0.00	0.00	0.05	0.00	24.67	2.00	0.00	0.00	0.07	0.00
24.74	2.00	0.00	0.00	0.07	0.00	24.81	2.00	0.00	0.00	0.07	0.00
24.88	2.00	0.00	0.00	0.07	0.00	24.94	2.00	0.00	0.00	0.06	0.00
25.01	2.00	0.00	0.00	0.07	0.00	25.07	2.00	0.00	0.00	0.07	0.00
25.13	2.00	0.00	0.00	0.06	0.00	25.20	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.27	2.00	0.00	0.00	0.07	0.00	25.33	2.00	0.00	0.00	0.06	0.00
25.40	2.00	0.00	0.00	0.07	0.00	25.46	2.00	0.00	0.00	0.06	0.00
25.53	2.00	0.00	0.00	0.07	0.00	25.60	2.00	0.00	0.00	0.07	0.00
25.66	2.00	0.00	0.00	0.07	0.00	25.73	2.00	0.00	0.00	0.07	0.00
25.79	2.00	0.00	0.00	0.06	0.00	25.86	2.00	0.00	0.00	0.07	0.00
25.93	2.00	0.00	0.00	0.07	0.00	25.99	2.00	0.00	0.00	0.06	0.00
26.05	2.00	0.00	0.00	0.07	0.00	26.12	2.00	0.00	0.00	0.06	0.00
26.19	2.00	0.00	0.00	0.07	0.00	26.25	2.00	0.00	0.00	0.06	0.00
26.32	2.00	0.00	0.00	0.07	0.00	26.39	2.00	0.00	0.00	0.06	0.00
26.45	2.00	0.00	0.00	0.07	0.00	26.52	2.00	0.00	0.00	0.07	0.00
26.59	2.00	0.00	0.00	0.07	0.00	26.65	2.00	0.00	0.00	0.06	0.00
26.71	2.00	0.00	0.00	0.07	0.00	26.78	2.00	0.00	0.00	0.07	0.00
26.84	2.00	0.00	0.00	0.06	0.00	26.91	2.00	0.00	0.00	0.07	0.00
26.97	2.00	0.00	0.00	0.06	0.00	27.04	2.00	0.00	0.00	0.07	0.00
27.10	2.00	0.00	0.00	0.06	0.00	27.17	2.00	0.00	0.00	0.07	0.00
27.23	2.00	0.00	0.00	0.06	0.00	27.30	2.00	0.00	0.00	0.07	0.00
27.37	2.00	0.00	0.00	0.07	0.00	27.43	2.00	0.00	0.00	0.07	0.00
27.50	2.00	0.00	0.00	0.07	0.00	27.56	2.00	0.00	0.00	0.06	0.00
27.63	2.00	0.00	0.00	0.07	0.00	27.70	2.00	0.00	0.00	0.07	0.00
27.76	2.00	0.00	0.00	0.07	0.00	27.83	2.00	0.00	0.00	0.07	0.00
27.89	2.00	0.00	0.00	0.07	0.00	27.96	2.00	0.00	0.00	0.07	0.00
28.02	2.00	0.00	0.00	0.07	0.00	28.09	2.00	0.00	0.00	0.06	0.00
28.16	2.00	0.00	0.00	0.07	0.00	28.22	2.00	0.00	0.00	0.06	0.00
28.28	2.00	0.00	0.00	0.06	0.00	28.35	2.00	0.00	0.00	0.07	0.00
28.42	2.00	0.00	0.00	0.07	0.00	28.48	2.00	0.00	0.00	0.06	0.00
28.55	2.00	0.00	0.00	0.07	0.00	28.62	2.00	0.00	0.00	0.07	0.00
28.68	2.00	0.00	0.00	0.06	0.00	28.75	2.00	0.00	0.00	0.07	0.00
28.81	2.00	0.00	0.00	0.06	0.00	28.88	2.00	0.00	0.00	0.07	0.00
28.94	2.00	0.00	0.00	0.07	0.00	29.01	2.00	0.00	0.00	0.07	0.00
29.07	2.00	0.00	0.00	0.06	0.00	29.14	2.00	0.00	0.00	0.07	0.00
29.21	2.00	0.00	0.00	0.07	0.00	29.27	2.00	0.00	0.00	0.07	0.00
29.33	2.00	0.00	0.00	0.06	0.00	29.41	2.00	0.00	0.00	0.07	0.00
29.47	2.00	0.00	0.00	0.06	0.00	29.53	2.00	0.00	0.00	0.06	0.00
29.60	2.00	0.00	0.00	0.07	0.00	29.66	2.00	0.00	0.00	0.06	0.00
29.73	2.00	0.00	0.00	0.07	0.00	29.79	2.00	0.00	0.00	0.06	0.00
29.86	2.00	0.00	0.00	0.06	0.00	29.92	2.00	0.00	0.00	0.07	0.00
29.99	2.00	0.00	0.00	0.07	0.00	30.05	2.00	0.00	0.00	0.06	0.00
30.12	2.00	0.00	0.00	0.07	0.00	30.18	2.00	0.00	0.00	0.06	0.00
30.25	2.00	0.00	0.00	0.07	0.00	30.32	2.00	0.00	0.00	0.07	0.00
30.38	2.00	0.00	0.00	0.07	0.00	30.45	2.00	0.00	0.00	0.07	0.00
30.52	2.00	0.00	0.00	0.07	0.00	30.58	2.00	0.00	0.00	0.06	0.00
30.65	2.00	0.00	0.00	0.07	0.00	30.72	2.00	0.00	0.00	0.07	0.00
30.78	2.00	0.00	0.00	0.06	0.00	30.84	2.00	0.00	0.00	0.06	0.00
30.91	2.00	0.00	0.00	0.07	0.00	30.97	2.00	0.00	0.00	0.07	0.00
31.05	2.00	0.00	0.00	0.07	0.00	31.11	2.00	0.00	0.00	0.07	0.00
31.17	2.00	0.00	0.00	0.06	0.00	31.24	2.00	0.00	0.00	0.07	0.00
31.30	2.00	0.00	0.00	0.06	0.00	31.37	2.00	0.00	0.00	0.07	0.00
31.44	2.00	0.00	0.00	0.07	0.00	31.50	2.00	0.00	0.00	0.07	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.57	2.00	0.00	0.00	0.06	0.00	31.63	2.00	0.00	0.00	0.06	0.00
31.70	2.00	0.00	0.00	0.07	0.00	31.76	2.00	0.00	0.00	0.07	0.00
31.83	2.00	0.00	0.00	0.07	0.00	31.89	2.00	0.00	0.00	0.06	0.00
31.97	2.00	0.00	0.00	0.08	0.00	32.03	2.00	0.00	0.00	0.06	0.00
32.09	2.00	0.00	0.00	0.06	0.00	32.16	2.00	0.00	0.00	0.06	0.00
32.22	2.00	0.00	0.00	0.06	0.00	32.28	2.00	0.00	0.00	0.06	0.00
32.36	2.00	0.00	0.00	0.08	0.00	32.42	2.00	0.00	0.00	0.06	0.00
32.49	2.00	0.00	0.00	0.07	0.00	32.55	2.00	0.00	0.00	0.06	0.00
32.61	2.00	0.00	0.00	0.07	0.00	32.69	2.00	0.00	0.00	0.08	0.00
32.76	2.00	0.00	0.00	0.07	0.00	32.83	2.00	0.00	0.00	0.07	0.00
32.88	2.00	0.00	0.00	0.05	0.00	32.95	2.00	0.00	0.00	0.07	0.00
33.02	2.00	0.00	0.00	0.07	0.00	33.07	2.00	0.00	0.00	0.05	0.00
33.15	2.00	0.00	0.00	0.07	0.00	33.22	2.00	0.00	0.00	0.07	0.00
33.29	2.00	0.00	0.00	0.07	0.00	33.34	2.00	0.00	0.00	0.05	0.00
33.41	2.00	0.00	0.00	0.07	0.00	33.48	2.00	0.00	0.00	0.07	0.00
33.55	2.00	0.00	0.00	0.07	0.00	33.60	2.00	0.00	0.00	0.05	0.00
33.67	2.00	0.00	0.00	0.07	0.00	33.74	2.00	0.00	0.00	0.07	0.00
33.81	2.00	0.00	0.00	0.07	0.00	33.86	2.00	0.00	0.00	0.05	0.00
33.93	2.00	0.00	0.00	0.07	0.00	33.99	2.00	0.00	0.00	0.06	0.00
34.07	2.00	0.00	0.00	0.08	0.00	34.12	2.00	0.00	0.00	0.05	0.00
34.20	2.00	0.00	0.00	0.08	0.00	34.26	2.00	0.00	0.00	0.06	0.00
34.33	2.00	0.00	0.00	0.08	0.00	34.39	2.00	0.00	0.00	0.06	0.00
34.46	2.00	0.00	0.00	0.06	0.00	34.52	2.00	0.00	0.00	0.06	0.00
34.58	2.00	0.00	0.00	0.06	0.00	34.66	2.00	0.00	0.00	0.08	0.00
34.72	2.00	0.00	0.00	0.07	0.00	34.78	2.00	0.00	0.00	0.06	0.00
34.85	2.00	0.00	0.00	0.07	0.00	34.91	2.00	0.00	0.00	0.07	0.00
34.98	2.00	0.00	0.00	0.06	0.00	35.05	2.00	0.00	0.00	0.07	0.00
35.11	2.00	0.00	0.00	0.06	0.00	35.18	2.00	0.00	0.00	0.07	0.00
35.24	2.00	0.00	0.00	0.06	0.00	35.30	2.00	0.00	0.00	0.06	0.00
35.38	2.00	0.00	0.00	0.07	0.00	35.43	2.00	0.00	0.00	0.06	0.00
35.51	2.00	0.00	0.00	0.07	0.00	35.56	2.00	0.00	0.00	0.06	0.00
35.63	2.00	0.00	0.00	0.07	0.00	35.70	2.00	0.00	0.00	0.07	0.00
35.76	2.00	0.00	0.00	0.06	0.00	35.84	2.00	0.00	0.00	0.07	0.00
35.90	2.00	0.00	0.00	0.07	0.00	35.96	2.00	0.00	0.00	0.06	0.00
36.03	2.00	0.00	0.00	0.07	0.00	36.09	2.00	0.00	0.00	0.06	0.00
36.16	2.00	0.00	0.00	0.06	0.00	36.23	2.00	0.00	0.00	0.08	0.00
36.29	2.00	0.00	0.00	0.06	0.00	36.36	2.00	0.00	0.00	0.07	0.00
36.43	2.00	0.00	0.00	0.06	0.00	36.49	2.00	0.00	0.00	0.06	0.00
36.55	2.00	0.00	0.00	0.07	0.00	36.62	2.00	0.00	0.00	0.07	0.00
36.69	2.00	0.00	0.00	0.07	0.00	36.75	2.00	0.00	0.00	0.06	0.00
36.82	2.00	0.00	0.00	0.07	0.00	36.88	2.00	0.00	0.00	0.06	0.00
36.95	2.00	0.00	0.00	0.07	0.00	37.01	2.00	0.00	0.00	0.06	0.00
37.08	2.00	0.00	0.00	0.07	0.00	37.14	2.00	0.00	0.00	0.06	0.00
37.21	2.00	0.00	0.00	0.06	0.00	37.28	2.00	0.00	0.00	0.07	0.00
37.34	2.00	0.00	0.00	0.06	0.00	37.41	2.00	0.00	0.00	0.07	0.00
37.48	2.00	0.00	0.00	0.07	0.00	37.54	2.00	0.00	0.00	0.06	0.00
37.60	2.00	0.00	0.00	0.06	0.00	37.67	2.00	0.00	0.00	0.07	0.00
37.74	2.00	0.00	0.00	0.07	0.00	37.80	2.00	0.00	0.00	0.06	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
37.86	2.00	0.00	0.00	0.07	0.00	37.93	2.00	0.00	0.00	0.07	0.00
38.00	2.00	0.00	0.00	0.07	0.00	38.07	2.00	0.00	0.00	0.07	0.00
38.13	2.00	0.00	0.00	0.07	0.00	38.20	2.00	0.00	0.00	0.06	0.00
38.26	2.00	0.00	0.00	0.06	0.00	38.32	2.00	0.00	0.00	0.06	0.00
38.39	2.00	0.00	0.00	0.06	0.00	38.45	2.00	0.00	0.00	0.06	0.00
38.52	2.00	0.00	0.00	0.07	0.00	38.59	2.00	0.00	0.00	0.07	0.00
38.65	2.00	0.00	0.00	0.06	0.00	38.72	2.00	0.00	0.00	0.07	0.00
38.78	2.00	0.00	0.00	0.06	0.00	38.85	2.00	0.00	0.00	0.07	0.00
38.91	2.00	0.00	0.00	0.07	0.00	38.98	2.00	0.00	0.00	0.07	0.00
39.05	2.00	0.00	0.00	0.07	0.00	39.12	2.00	0.00	0.00	0.07	0.00
39.17	2.00	0.00	0.00	0.06	0.00	39.24	2.00	0.00	0.00	0.07	0.00
39.31	2.00	0.00	0.00	0.06	0.00	39.38	2.00	0.00	0.00	0.07	0.00
39.44	2.00	0.00	0.00	0.06	0.00	39.50	2.00	0.00	0.00	0.07	0.00
39.57	2.00	0.00	0.00	0.06	0.00	39.64	2.00	0.00	0.00	0.07	0.00
39.70	2.00	0.00	0.00	0.06	0.00	39.76	2.00	0.00	0.00	0.06	0.00
39.84	2.00	0.00	0.00	0.07	0.00	39.90	2.00	0.00	0.00	0.06	0.00
39.96	2.00	0.00	0.00	0.06	0.00	40.03	2.00	0.00	0.00	0.07	0.00
40.10	2.00	0.00	0.00	0.07	0.00						

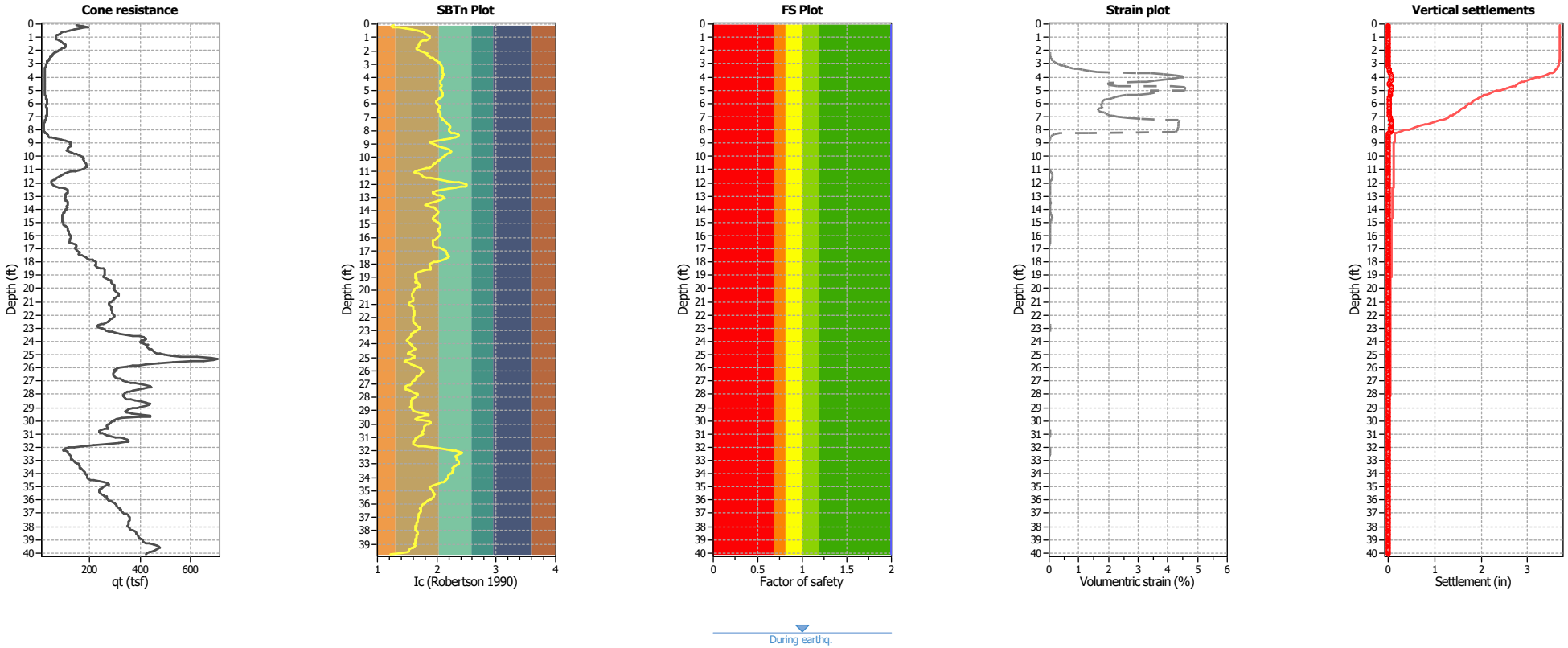
Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.07	1.27	236.45	1.00	236.45	38	661	0.57	0.000	0.00	21.03	0.00	0.000
0.13	1.24	281.21	1.00	281.21	45	757	0.57	0.001	0.00	21.03	0.00	0.000
0.20	1.26	312.76	1.00	312.76	51	863	0.57	0.001	0.00	21.03	0.00	0.000
0.27	1.37	291.22	1.00	291.22	49	921	0.57	0.001	0.00	21.03	0.00	0.000
0.33	1.48	258.01	1.00	258.01	45	942	0.57	0.001	0.00	21.03	0.00	0.000
0.40	1.59	225.65	1.00	225.65	41	943	0.57	0.001	0.00	21.03	0.00	0.000
0.47	1.68	196.05	1.00	196.05	36	923	0.57	0.002	0.00	21.03	0.00	0.000
0.53	1.75	172.26	1.08	186.55	35	884	0.56	0.002	0.00	21.03	0.00	0.000
0.59	1.78	157.08	1.13	176.87	34	836	0.56	0.002	0.00	21.03	0.00	0.000
0.66	1.79	145.05	1.14	166.08	32	787	0.56	0.003	0.00	21.03	0.00	0.000
0.73	1.81	134.94	1.17	157.38	31	750	0.56	0.003	0.00	21.03	0.00	0.000
0.79	1.84	125.66	1.19	149.55	29	721	0.56	0.004	0.00	21.03	0.00	0.000
0.85	1.87	117.05	1.21	141.91	28	696	0.56	0.005	0.00	21.03	0.00	0.000
0.93	1.88	111.16	1.22	136.08	27	674	0.56	0.005	0.00	21.03	0.00	0.000
0.99	1.88	108.17	1.23	132.59	26	658	0.56	0.006	0.00	21.03	0.00	0.000
1.05	1.87	108.11	1.22	131.60	26	648	0.56	0.007	0.00	21.03	0.01	0.000
1.12	1.85	110.84	1.20	133.20	26	647	0.56	0.007	0.01	21.03	0.01	0.000
1.19	1.82	118.07	1.17	138.33	27	661	0.56	0.007	0.01	21.03	0.01	0.000
1.25	1.77	129.73	1.11	144.53	28	683	0.56	0.007	0.01	21.03	0.01	0.000
1.32	1.73	141.79	1.05	149.31	28	712	0.56	0.007	0.00	21.03	0.01	0.000
1.38	1.72	151.85	1.02	155.27	29	748	0.56	0.007	0.00	21.03	0.01	0.000
1.45	1.71	159.51	1.01	161.39	30	781	0.56	0.007	0.00	21.03	0.00	0.000
1.51	1.71	165.02	1.00	165.25	31	803	0.56	0.007	0.00	21.03	0.00	0.000
1.58	1.70	168.66	1.00	168.66	31	811	0.56	0.008	0.00	21.03	0.00	0.000
1.64	1.69	170.71	1.00	170.71	32	816	0.56	0.008	0.00	21.03	0.01	0.000
1.71	1.69	167.59	1.00	167.59	31	798	0.56	0.009	0.01	21.03	0.01	0.000
1.77	1.66	161.03	1.00	161.03	30	742	0.56	0.010	0.01	21.03	0.01	0.000
1.84	1.65	151.01	1.00	151.01	28	684	0.56	0.012	0.01	21.03	0.01	0.000
1.91	1.65	141.84	1.00	141.84	26	644	0.56	0.014	0.01	21.03	0.01	0.000
1.97	1.70	132.32	1.00	132.32	25	640	0.56	0.015	0.01	21.03	0.01	0.000
2.04	1.74	122.70	1.07	131.15	25	623	0.56	0.017	0.01	21.03	0.01	0.000
2.11	1.79	109.02	1.15	124.89	24	592	0.56	0.020	0.02	21.03	0.02	0.000
2.17	1.82	100.50	1.17	117.54	23	561	0.56	0.023	0.02	21.03	0.02	0.000
2.23	1.83	93.08	1.19	110.36	22	531	0.56	0.028	0.03	21.03	0.03	0.000
2.30	1.82	91.32	1.18	107.36	21	514	0.56	0.032	0.03	21.03	0.03	0.001
2.37	1.85	85.91	1.20	102.88	20	499	0.56	0.037	0.04	21.03	0.04	0.001
2.44	1.87	81.35	1.22	99.19	20	489	0.56	0.041	0.04	21.03	0.05	0.001
2.50	1.90	76.83	1.24	95.14	19	479	0.56	0.046	0.05	21.03	0.05	0.001
2.57	1.92	72.62	1.25	91.00	18	465	0.56	0.053	0.06	21.03	0.06	0.001
2.63	1.95	68.16	1.27	86.55	18	451	0.56	0.062	0.07	21.03	0.08	0.001
2.69	1.97	64.00	1.29	82.38	17	437	0.56	0.072	0.09	21.03	0.10	0.001
2.76	2.00	59.99	1.31	78.40	16	423	0.56	0.086	0.11	21.03	0.12	0.002
2.83	2.02	56.47	1.33	74.86	16	409	0.56	0.103	0.14	21.03	0.15	0.003
2.89	2.04	53.36	1.34	71.68	15	395	0.56	0.124	0.17	21.03	0.19	0.003
2.96	2.05	50.65	1.36	68.79	15	382	0.56	0.151	0.22	21.03	0.24	0.004
3.03	2.06	48.24	1.37	66.17	14	369	0.56	0.186	0.28	21.03	0.31	0.005
3.09	2.07	46.23	1.38	63.95	14	358	0.56	0.226	0.36	21.03	0.39	0.006
3.16	2.08	44.67	1.39	62.14	13	349	0.56	0.273	0.44	21.03	0.49	0.008

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.22	2.09	43.37	1.40	60.64	13	341	0.56	0.322	0.54	21.03	0.59	0.009
3.28	2.09	42.31	1.40	59.37	13	334	0.56	0.377	0.64	21.03	0.71	0.011
3.35	2.09	41.35	1.41	58.29	13	328	0.56	0.437	0.76	21.03	0.84	0.014
3.41	2.10	40.60	1.41	57.35	12	323	0.56	0.500	0.89	21.03	0.97	0.014
3.48	2.09	40.04	1.41	56.48	12	318	0.56	0.578	1.05	21.03	1.15	0.020
3.54	2.09	39.33	1.41	55.49	12	313	0.56	0.671	1.24	21.03	1.36	0.020
3.61	2.10	38.58	1.41	54.53	12	307	0.56	0.784	1.48	21.03	1.62	0.027
3.68	2.11	37.47	1.00	37.47	8	302	0.56	0.923	2.72	21.03	2.97	0.050
3.75	2.11	36.87	1.00	36.87	8	298	0.56	1.043	3.13	21.03	3.41	0.050
3.81	2.11	36.51	1.00	36.51	8	295	0.56	1.161	3.52	21.03	3.84	0.056
3.88	2.10	36.60	1.00	36.60	8	294	0.56	1.273	3.86	21.03	4.20	0.072
3.94	2.10	36.70	1.00	36.70	8	293	0.56	1.361	4.13	21.03	4.48	0.066
4.01	2.09	37.19	1.00	37.19	8	294	0.56	1.395	4.18	21.03	4.53	0.077
4.07	2.08	37.79	1.00	37.79	8	296	0.56	1.378	4.06	21.03	4.40	0.063
4.14	2.08	38.53	1.00	38.53	8	300	0.56	1.342	3.87	21.03	4.19	0.071
4.20	2.08	39.23	1.00	39.23	8	304	0.56	1.273	3.60	21.03	3.89	0.056
4.27	2.07	40.28	1.00	40.28	9	309	0.56	1.197	3.29	21.03	3.55	0.061
4.33	2.06	41.17	1.00	41.17	9	314	0.56	1.133	3.04	21.03	3.28	0.047
4.40	2.06	41.87	1.00	41.87	9	318	0.56	1.085	2.86	21.03	3.08	0.052
4.47	2.06	42.11	1.37	57.77	12	322	0.56	1.052	1.88	21.03	2.02	0.034
4.53	2.07	42.21	1.38	58.15	12	325	0.56	1.039	1.84	21.03	1.98	0.029
4.59	2.07	42.05	1.38	58.05	12	325	0.56	1.085	1.92	21.03	2.06	0.031
4.66	2.07	41.69	1.38	57.50	12	322	0.56	1.208	2.16	21.03	2.32	0.038
4.72	2.06	41.24	1.00	41.24	9	315	0.56	1.440	3.86	21.03	4.13	0.060
4.80	2.06	40.78	1.00	40.78	9	310	0.56	1.675	4.56	21.03	4.59	0.078
4.86	2.06	40.58	1.00	40.58	9	308	0.56	1.826	5.00	21.03	4.59	0.068
4.93	2.07	40.53	1.00	40.53	9	311	0.56	1.790	4.89	21.03	4.58	0.078
4.99	2.07	40.37	1.00	40.37	9	313	0.56	1.762	4.82	21.03	4.58	0.067
5.06	2.08	40.31	1.39	56.18	12	315	0.56	1.748	3.20	21.03	3.41	0.058
5.12	2.09	39.90	1.41	56.08	12	316	0.56	1.803	3.30	21.03	3.51	0.052
5.19	2.09	40.00	1.41	56.26	12	317	0.56	1.835	3.34	21.03	3.55	0.058
5.25	2.10	40.25	1.41	56.81	12	320	0.56	1.771	3.18	21.03	3.37	0.051
5.32	2.10	41.04	1.41	57.96	13	327	0.56	1.607	2.82	21.03	2.99	0.047
5.38	2.09	42.04	1.41	59.26	13	334	0.56	1.444	2.47	21.03	2.61	0.039
5.46	2.09	43.23	1.40	60.44	13	340	0.56	1.345	2.25	21.03	2.38	0.042
5.52	2.06	44.93	1.37	61.65	13	344	0.56	1.283	2.12	21.03	2.24	0.034
5.59	2.04	46.77	1.35	62.97	13	348	0.56	1.239	2.02	21.03	2.13	0.035
5.65	2.02	48.62	1.32	64.40	14	351	0.56	1.199	1.92	21.03	2.02	0.031
5.72	2.01	50.12	1.31	65.73	14	356	0.56	1.153	1.81	21.03	1.91	0.030
5.78	2.00	51.16	1.30	66.72	14	359	0.56	1.125	1.75	21.03	1.83	0.029
5.85	1.99	51.81	1.30	67.41	14	362	0.56	1.108	1.70	21.03	1.79	0.028
5.92	2.00	51.80	1.30	67.54	14	363	0.56	1.121	1.72	21.03	1.80	0.032
5.99	2.01	51.25	1.31	67.33	14	365	0.56	1.125	1.72	21.03	1.80	0.027
6.05	2.03	50.34	1.33	67.02	14	367	0.56	1.114	1.69	21.03	1.77	0.026
6.12	2.05	49.53	1.35	66.87	14	370	0.56	1.102	1.67	21.03	1.74	0.028
6.19	2.05	49.23	1.36	66.85	14	371	0.56	1.119	1.69	21.03	1.76	0.030
6.24	2.05	49.62	1.35	67.11	14	372	0.56	1.134	1.71	21.03	1.78	0.021
6.31	2.04	50.61	1.34	67.78	14	373	0.56	1.147	1.71	21.03	1.78	0.031

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.38	2.03	51.66	1.33	68.75	14	377	0.56	1.118	1.65	21.03	1.71	0.030
6.45	2.03	52.16	1.33	69.38	15	380	0.56	1.096	1.60	21.03	1.66	0.029
6.50	2.03	52.06	1.34	69.53	15	382	0.56	1.086	1.58	21.03	1.63	0.020
6.57	2.04	51.35	1.35	69.13	15	382	0.56	1.125	1.64	21.03	1.69	0.028
6.65	2.05	50.69	1.35	68.68	15	381	0.56	1.181	1.73	21.03	1.78	0.031
6.70	2.05	50.29	1.36	68.40	15	380	0.56	1.222	1.79	21.03	1.85	0.022
6.77	2.06	50.18	1.36	68.32	15	380	0.56	1.267	1.86	21.03	1.92	0.033
6.84	2.06	50.23	1.36	68.35	15	380	0.56	1.307	1.92	21.03	1.97	0.034
6.91	2.06	50.12	1.36	68.26	15	380	0.56	1.354	1.99	21.03	2.04	0.034
6.96	2.06	49.62	1.37	67.90	14	378	0.56	1.411	2.08	21.03	2.13	0.026
7.03	2.08	48.46	1.38	67.10	14	376	0.56	1.521	2.26	21.03	2.32	0.039
7.10	2.09	46.85	1.41	65.87	14	371	0.56	1.712	2.58	21.03	2.64	0.046
7.18	2.11	45.19	1.43	64.48	14	364	0.56	1.990	3.06	21.03	3.12	0.057
7.22	2.12	43.18	1.45	62.62	14	354	0.56	2.436	3.85	21.03	3.93	0.044
7.29	2.14	40.87	1.49	60.74	13	344	0.56	3.067	4.97	21.03	4.38	0.072
7.36	2.16	38.76	1.52	59.06	13	335	0.56	3.881	6.45	21.03	4.38	0.074
7.43	2.18	37.00	1.56	57.74	13	327	0.56	4.805	8.13	21.03	4.37	0.074
7.50	2.19	35.59	1.59	56.62	13	319	0.56	5.869	10.11	21.03	4.36	0.075
7.55	2.20	34.34	1.62	55.78	13	314	0.56	6.919	12.04	21.03	4.36	0.051
7.63	2.21	33.43	1.65	55.23	13	309	0.56	7.939	13.91	21.03	4.35	0.075
7.70	2.22	32.92	1.66	54.65	12	306	0.56	8.989	15.93	21.03	4.35	0.073
7.76	2.22	32.61	1.66	54.09	12	303	0.56	10.077	18.09	21.03	4.34	0.073
7.81	2.21	32.66	1.64	53.73	12	301	0.56	10.725	19.45	21.03	4.34	0.051
7.89	2.21	32.91	1.63	53.58	12	301	0.56	11.151	20.36	21.03	4.33	0.075
7.96	2.20	33.30	1.62	53.94	12	303	0.56	10.833	19.66	21.03	4.33	0.076
8.01	2.20	34.20	1.62	55.55	13	312	0.56	8.774	15.35	21.03	4.32	0.053
8.08	2.22	35.65	1.66	59.22	13	331	0.56	5.713	9.19	21.03	4.32	0.075
8.15	2.25	37.45	1.76	65.80	15	363	0.56	3.036	4.23	21.03	4.25	0.069
8.21	2.30	40.89	1.92	78.47	18	421	0.56	1.189	1.31	21.03	1.31	0.020
8.28	2.35	45.85	2.12	97.42	23	503	0.56	0.454	0.38	21.03	0.38	0.006
8.35	2.37	51.60	2.20	113.58	28	578	0.55	0.242	0.16	21.03	0.16	0.003
8.40	2.35	56.95	2.14	121.85	29	627	0.55	0.175	0.11	21.03	0.11	0.001
8.47	2.32	62.00	2.02	125.31	30	659	0.55	0.147	0.09	21.03	0.09	0.002
8.54	2.30	68.40	1.94	132.46	31	708	0.55	0.116	0.07	21.03	0.07	0.001
8.62	2.23	82.82	1.70	140.59	32	783	0.55	0.085	0.05	21.03	0.05	0.001
8.66	2.12	105.88	1.45	153.53	34	881	0.55	0.061	0.03	21.03	0.03	0.000
8.74	2.00	132.76	1.31	173.73	36	984	0.55	0.047	0.02	21.03	0.02	0.000
8.80	1.91	158.26	1.24	196.85	40	1073	0.55	0.039	0.02	21.03	0.02	0.000
8.87	1.88	175.72	1.22	214.96	43	1160	0.55	0.034	0.01	21.03	0.01	0.000
8.92	1.90	184.47	1.24	228.61	46	1254	0.55	0.030	0.01	21.03	0.01	0.000
9.00	1.95	185.54	1.27	236.08	48	1336	0.55	0.027	0.01	21.03	0.01	0.000
9.06	1.99	185.76	1.30	241.66	50	1400	0.55	0.025	0.01	21.03	0.01	0.000
9.13	2.01	188.92	1.31	247.78	52	1450	0.55	0.024	0.01	21.03	0.01	0.000
9.20	2.03	190.07	1.33	253.46	53	1504	0.55	0.023	0.01	21.03	0.01	0.000
9.25	2.08	187.02	1.39	259.56	56	1564	0.55	0.021	0.01	21.03	0.01	0.000
9.32	2.15	179.70	1.50	268.97	59	1625	0.55	0.020	0.01	21.03	0.01	0.000
9.39	2.20	173.59	1.61	279.66	63	1668	0.55	0.020	0.01	21.03	0.00	0.000
9.45	2.22	171.25	1.66	285.08	65	1691	0.55	0.020	0.00	21.03	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.53	2.23	167.01	1.71	285.23	65	1687	0.55	0.020	0.00	21.03	0.00	0.000
9.59	2.24	166.96	1.72	286.47	66	1700	0.55	0.020	0.00	21.03	0.00	0.000
9.66	2.22	174.95	1.66	290.22	66	1754	0.55	0.019	0.00	21.03	0.00	0.000
9.73	2.18	191.04	1.56	297.21	66	1841	0.55	0.018	0.00	21.03	0.00	0.000
9.78	2.15	206.06	1.50	308.55	68	1935	0.55	0.017	0.00	21.03	0.00	0.000
9.85	2.14	216.24	1.48	320.04	70	2021	0.55	0.016	0.00	21.03	0.00	0.000
9.91	2.13	225.62	1.46	330.24	72	2099	0.55	0.015	0.00	21.03	0.00	0.000
9.99	2.10	236.09	1.42	336.23	73	2152	0.55	0.015	0.00	21.03	0.00	0.000
10.05	2.08	243.17	1.39	337.02	72	2162	0.55	0.015	0.00	21.03	0.00	0.000
10.12	2.05	245.76	1.36	333.63	71	2141	0.55	0.015	0.00	21.03	0.00	0.000
10.18	2.04	245.40	1.34	328.84	69	2110	0.55	0.016	0.00	21.03	0.00	0.000
10.24	2.03	240.70	1.33	321.33	68	2067	0.55	0.016	0.00	21.03	0.00	0.000
10.30	2.01	240.21	1.32	317.00	66	2036	0.55	0.017	0.00	21.03	0.00	0.000
10.37	2.00	240.12	1.30	313.21	65	2005	0.55	0.017	0.00	21.03	0.00	0.000
10.44	1.97	244.18	1.28	313.54	65	1990	0.55	0.018	0.00	21.03	0.00	0.000
10.50	1.95	245.48	1.27	312.50	64	1975	0.55	0.018	0.00	21.03	0.00	0.000
10.56	1.94	246.74	1.26	311.70	63	1962	0.55	0.019	0.00	21.03	0.00	0.000
10.64	1.92	247.41	1.25	310.00	63	1944	0.55	0.019	0.00	21.03	0.00	0.000
10.70	1.90	247.04	1.24	305.46	61	1895	0.55	0.020	0.01	21.03	0.00	0.000
10.78	1.87	244.57	1.22	297.93	59	1832	0.55	0.021	0.01	21.03	0.01	0.000
10.83	1.83	239.51	1.18	283.24	55	1714	0.55	0.023	0.01	21.03	0.01	0.000
10.90	1.77	229.16	1.12	255.72	49	1543	0.55	0.028	0.01	21.03	0.01	0.000
10.97	1.70	213.39	1.00	213.39	40	1336	0.55	0.037	0.02	21.03	0.02	0.000
11.04	1.64	195.04	1.00	195.04	36	1150	0.55	0.051	0.03	21.03	0.02	0.000
11.11	1.63	177.48	1.00	177.48	32	1030	0.55	0.067	0.04	21.03	0.04	0.001
11.17	1.66	155.42	1.00	155.42	29	938	0.55	0.087	0.06	21.03	0.05	0.001
11.22	1.70	138.53	1.00	138.53	26	875	0.55	0.108	0.08	21.03	0.07	0.001
11.29	1.74	124.81	1.07	133.26	25	829	0.55	0.129	0.10	21.03	0.09	0.002
11.36	1.75	120.00	1.08	129.45	25	806	0.55	0.144	0.11	21.03	0.11	0.002
11.42	1.77	113.80	1.12	127.11	24	788	0.55	0.158	0.12	21.03	0.12	0.002
11.49	1.82	106.60	1.17	124.68	24	778	0.55	0.167	0.13	21.03	0.12	0.002
11.57	1.89	97.96	1.23	120.66	24	783	0.55	0.166	0.13	21.03	0.12	0.002
11.64	1.98	89.93	1.29	116.22	24	797	0.55	0.158	0.13	21.03	0.12	0.002
11.69	2.08	82.88	1.39	115.43	25	825	0.55	0.141	0.11	21.03	0.10	0.001
11.76	2.18	77.47	1.56	121.11	27	864	0.55	0.123	0.09	21.03	0.08	0.001
11.83	2.28	72.53	1.84	133.40	31	908	0.55	0.106	0.06	21.03	0.06	0.001
11.88	2.38	67.44	2.27	153.41	37	953	0.55	0.093	0.04	21.03	0.04	0.000
11.95	2.44	65.76	2.62	172.11	43	1003	0.55	0.081	0.03	21.03	0.03	0.001
12.03	2.50	63.71	2.96	188.47	49	1038	0.55	0.075	0.03	21.03	0.02	0.000
12.08	2.49	65.62	2.94	192.89	50	1069	0.55	0.070	0.02	21.03	0.02	0.000
12.15	2.48	67.65	2.82	190.78	49	1085	0.55	0.068	0.02	21.03	0.02	0.000
12.22	2.40	74.75	2.39	178.73	44	1108	0.55	0.065	0.03	21.03	0.02	0.000
12.29	2.31	84.43	1.96	165.63	39	1130	0.55	0.063	0.03	21.03	0.03	0.000
12.34	2.19	98.26	1.60	157.18	35	1155	0.55	0.060	0.03	21.03	0.03	0.000
12.41	2.08	113.38	1.40	158.32	34	1180	0.55	0.058	0.03	21.03	0.03	0.000
12.48	1.99	126.20	1.30	164.45	34	1190	0.55	0.057	0.03	21.03	0.03	0.000
12.55	1.94	133.09	1.27	168.40	34	1187	0.55	0.058	0.03	21.03	0.03	0.000
12.61	1.93	135.02	1.26	169.54	34	1187	0.55	0.059	0.03	21.03	0.03	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.68	1.94	134.21	1.26	169.72	35	1203	0.55	0.057	0.03	21.03	0.03	0.000
12.75	1.97	132.11	1.29	169.79	35	1230	0.55	0.055	0.03	21.03	0.03	0.000
12.80	2.01	129.17	1.32	170.49	36	1267	0.55	0.052	0.03	21.03	0.02	0.000
12.88	2.06	126.39	1.37	173.03	37	1316	0.55	0.048	0.02	21.03	0.02	0.000
12.95	2.10	124.49	1.42	177.06	38	1363	0.55	0.045	0.02	21.03	0.02	0.000
13.00	2.12	124.02	1.45	179.99	39	1391	0.55	0.044	0.02	21.03	0.02	0.000
13.07	2.13	122.33	1.46	178.75	39	1387	0.55	0.044	0.02	21.03	0.02	0.000
13.12	2.11	121.78	1.43	174.00	38	1353	0.55	0.047	0.02	21.03	0.02	0.000
13.20	2.08	119.46	1.39	166.17	36	1291	0.55	0.052	0.03	21.03	0.02	0.000
13.27	2.02	119.86	1.33	159.27	33	1218	0.55	0.060	0.03	21.03	0.03	0.000
13.34	1.97	119.99	1.28	153.97	32	1147	0.55	0.070	0.04	21.03	0.04	0.001
13.39	1.89	123.14	1.23	151.91	30	1082	0.55	0.082	0.05	21.03	0.04	0.001
13.46	1.84	125.73	1.19	149.71	29	1037	0.55	0.093	0.06	21.03	0.05	0.001
13.54	1.81	127.85	1.16	148.24	29	1018	0.55	0.099	0.06	21.03	0.06	0.001
13.59	1.82	129.02	1.17	151.07	29	1043	0.55	0.093	0.06	21.03	0.05	0.001
13.66	1.86	126.50	1.21	153.24	30	1084	0.55	0.084	0.05	21.03	0.05	0.001
13.72	1.91	125.49	1.24	155.86	31	1136	0.55	0.075	0.04	21.03	0.04	0.001
13.78	1.95	124.45	1.27	157.70	32	1182	0.55	0.069	0.04	21.03	0.03	0.000
13.86	1.97	124.94	1.28	160.10	33	1220	0.55	0.064	0.04	21.03	0.03	0.001
13.92	1.99	122.84	1.30	159.79	33	1240	0.55	0.063	0.03	21.03	0.03	0.000
13.99	2.01	120.02	1.32	158.23	33	1247	0.55	0.062	0.03	21.03	0.03	0.001
14.05	2.02	117.59	1.33	156.31	33	1242	0.55	0.063	0.03	21.03	0.03	0.000
14.12	2.03	115.13	1.33	153.11	32	1221	0.55	0.066	0.04	21.03	0.03	0.001
14.19	2.02	112.08	1.32	148.23	31	1181	0.55	0.073	0.04	21.03	0.04	0.001
14.26	2.00	109.08	1.31	142.90	30	1134	0.55	0.081	0.05	21.03	0.04	0.001
14.31	1.99	106.08	1.30	137.47	28	1082	0.55	0.092	0.06	21.03	0.05	0.001
14.38	1.97	103.41	1.28	132.62	27	1036	0.55	0.106	0.07	21.03	0.06	0.001
14.45	1.95	100.79	1.27	127.94	26	990	0.55	0.122	0.09	21.03	0.08	0.001
14.52	1.94	98.90	1.26	124.72	25	960	0.55	0.135	0.10	21.03	0.09	0.002
14.57	1.93	97.90	1.26	123.29	25	949	0.55	0.141	0.11	21.03	0.09	0.001
14.64	1.94	97.69	1.26	123.19	25	953	0.55	0.141	0.11	21.03	0.09	0.002
14.72	1.94	97.96	1.27	124.03	25	967	0.55	0.136	0.10	21.03	0.09	0.002
14.76	1.96	98.89	1.28	126.35	26	999	0.55	0.124	0.09	21.03	0.08	0.001
14.84	1.99	99.77	1.30	129.58	27	1046	0.55	0.109	0.08	21.03	0.07	0.001
14.91	2.02	100.52	1.32	132.96	28	1094	0.55	0.097	0.06	21.03	0.06	0.001
14.96	2.04	101.04	1.34	135.81	29	1132	0.55	0.089	0.06	21.03	0.05	0.001
15.03	2.06	100.80	1.36	137.47	29	1158	0.55	0.084	0.05	21.03	0.05	0.001
15.10	2.07	101.16	1.38	139.33	30	1182	0.55	0.081	0.05	21.03	0.04	0.001
15.17	2.07	102.81	1.38	141.60	30	1205	0.55	0.077	0.05	21.03	0.04	0.001
15.24	2.06	105.87	1.36	144.47	31	1228	0.55	0.074	0.04	21.03	0.04	0.001
15.29	2.04	109.85	1.35	147.83	31	1251	0.55	0.072	0.04	21.03	0.04	0.000
15.36	2.03	113.38	1.33	150.88	32	1272	0.55	0.069	0.04	21.03	0.03	0.001
15.44	2.02	116.49	1.32	154.20	32	1299	0.55	0.067	0.04	21.03	0.03	0.001
15.51	2.02	118.41	1.33	157.16	33	1330	0.55	0.064	0.03	21.03	0.03	0.001
15.56	2.04	119.61	1.34	160.33	34	1369	0.55	0.060	0.03	21.03	0.03	0.000
15.63	2.05	120.04	1.36	162.85	35	1405	0.55	0.057	0.03	21.03	0.03	0.000
15.70	2.06	120.62	1.37	165.01	35	1433	0.55	0.055	0.03	21.03	0.02	0.000
15.75	2.06	121.73	1.37	166.39	35	1448	0.55	0.054	0.03	21.03	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.82	2.05	122.90	1.36	167.05	36	1454	0.55	0.054	0.03	21.03	0.02	0.000
15.89	2.04	124.69	1.35	167.73	35	1456	0.55	0.054	0.03	21.03	0.02	0.000
15.96	2.03	126.22	1.33	168.15	35	1455	0.55	0.055	0.03	21.03	0.02	0.000
16.01	2.01	128.11	1.32	168.89	35	1453	0.55	0.055	0.03	21.03	0.02	0.000
16.09	1.99	127.85	1.30	166.38	35	1419	0.55	0.059	0.03	21.03	0.03	0.000
16.16	1.96	126.20	1.28	161.35	33	1353	0.55	0.065	0.04	21.03	0.03	0.001
16.21	1.94	123.64	1.26	155.81	32	1285	0.55	0.074	0.04	21.03	0.04	0.000
16.28	1.92	121.71	1.25	152.54	31	1252	0.55	0.080	0.05	21.03	0.04	0.001
16.35	1.93	120.72	1.26	151.73	31	1253	0.55	0.080	0.05	21.03	0.04	0.001
16.42	1.93	120.18	1.26	151.26	31	1255	0.55	0.080	0.05	21.03	0.04	0.001
16.48	1.94	119.24	1.26	150.67	31	1259	0.55	0.080	0.05	21.03	0.04	0.000
16.55	1.94	123.73	1.26	155.95	32	1303	0.55	0.074	0.04	21.03	0.04	0.001
16.62	1.94	131.24	1.26	165.83	34	1394	0.54	0.064	0.03	21.03	0.03	0.000
16.69	1.95	140.31	1.27	178.12	36	1511	0.54	0.054	0.03	21.03	0.02	0.000
16.73	1.99	144.58	1.30	187.31	39	1631	0.54	0.047	0.02	21.03	0.02	0.000
16.81	2.04	143.90	1.34	193.04	41	1737	0.54	0.042	0.02	21.03	0.01	0.000
16.88	2.09	142.27	1.40	199.01	43	1830	0.54	0.039	0.02	21.03	0.01	0.000
16.93	2.12	140.90	1.46	205.39	45	1907	0.54	0.036	0.01	21.03	0.01	0.000
17.00	2.15	142.01	1.50	212.40	47	1979	0.54	0.034	0.01	21.03	0.01	0.000
17.07	2.16	144.71	1.53	220.69	49	2061	0.54	0.032	0.01	21.03	0.01	0.000
17.14	2.17	148.17	1.54	227.92	51	2134	0.54	0.031	0.01	21.03	0.01	0.000
17.21	2.17	151.98	1.54	233.62	52	2194	0.54	0.029	0.01	21.03	0.01	0.000
17.27	2.17	153.97	1.54	237.42	53	2235	0.54	0.029	0.01	21.03	0.01	0.000
17.34	2.18	153.65	1.57	241.47	54	2274	0.54	0.028	0.01	21.03	0.01	0.000
17.40	2.20	152.44	1.62	246.62	56	2318	0.54	0.028	0.01	21.03	0.01	0.000
17.46	2.21	153.91	1.64	252.11	57	2371	0.54	0.027	0.01	21.03	0.01	0.000
17.52	2.19	161.21	1.58	255.35	57	2422	0.54	0.026	0.01	21.03	0.01	0.000
17.60	2.15	169.06	1.51	255.35	56	2441	0.54	0.026	0.01	21.03	0.01	0.000
17.66	2.11	175.98	1.44	252.67	55	2416	0.54	0.026	0.01	21.03	0.01	0.000
17.73	2.07	181.32	1.37	248.87	53	2355	0.54	0.028	0.01	21.03	0.01	0.000
17.80	2.01	188.88	1.32	248.86	52	2300	0.54	0.029	0.01	21.03	0.01	0.000
17.85	1.96	198.28	1.28	252.92	52	2259	0.54	0.030	0.01	21.03	0.01	0.000
17.91	1.92	204.63	1.25	255.62	52	2222	0.54	0.031	0.01	21.03	0.01	0.000
17.98	1.89	209.99	1.23	257.90	51	2197	0.54	0.031	0.01	21.03	0.01	0.000
18.06	1.87	212.11	1.22	258.55	51	2188	0.54	0.032	0.01	21.03	0.01	0.000
18.11	1.87	211.51	1.22	257.93	51	2188	0.55	0.032	0.01	21.03	0.01	0.000
18.18	1.88	210.81	1.23	258.34	51	2210	0.55	0.031	0.01	21.03	0.01	0.000
18.25	1.90	206.38	1.24	255.55	51	2222	0.55	0.031	0.01	21.03	0.01	0.000
18.31	1.90	207.84	1.24	257.64	52	2248	0.55	0.031	0.01	21.03	0.01	0.000
18.38	1.89	211.24	1.23	259.74	52	2248	0.55	0.031	0.01	21.03	0.01	0.000
18.44	1.84	222.64	1.19	264.67	52	2217	0.55	0.032	0.01	21.03	0.01	0.000
18.51	1.77	233.36	1.11	259.97	50	2139	0.55	0.034	0.01	21.03	0.01	0.000
18.58	1.71	238.70	1.00	239.66	45	2028	0.55	0.037	0.01	21.03	0.01	0.000
18.64	1.67	240.02	1.00	240.02	44	1935	0.55	0.040	0.02	21.03	0.01	0.000
18.70	1.65	238.71	1.00	238.71	44	1887	0.55	0.043	0.02	21.03	0.01	0.000
18.77	1.64	238.69	1.00	238.69	44	1871	0.55	0.043	0.02	21.03	0.01	0.000
18.83	1.64	238.67	1.00	238.67	44	1868	0.55	0.044	0.02	21.03	0.01	0.000
18.91	1.64	237.28	1.00	237.28	43	1865	0.55	0.044	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.97	1.64	235.10	1.00	235.10	43	1852	0.55	0.045	0.02	21.03	0.01	0.000
19.03	1.64	231.92	1.00	231.92	42	1831	0.55	0.046	0.02	21.03	0.01	0.000
19.10	1.65	230.11	1.00	230.11	42	1850	0.55	0.045	0.02	21.03	0.01	0.000
19.17	1.66	231.83	1.00	231.83	43	1889	0.55	0.044	0.02	21.03	0.01	0.000
19.24	1.66	238.39	1.00	238.39	44	1938	0.55	0.042	0.02	21.03	0.01	0.000
19.30	1.64	247.33	1.00	247.33	45	1976	0.55	0.041	0.02	21.03	0.01	0.000
19.37	1.65	253.50	1.00	253.50	46	2038	0.55	0.039	0.01	21.03	0.01	0.000
19.43	1.67	257.10	1.00	257.10	47	2128	0.55	0.037	0.01	21.03	0.01	0.000
19.50	1.69	256.35	1.00	256.35	48	2198	0.55	0.035	0.01	21.03	0.01	0.000
19.56	1.71	256.53	1.00	257.65	48	2245	0.55	0.034	0.01	21.03	0.01	0.000
19.62	1.72	257.07	1.02	262.33	49	2275	0.55	0.033	0.01	21.03	0.01	0.000
19.69	1.71	260.90	1.00	262.01	49	2291	0.55	0.033	0.01	21.03	0.01	0.000
19.75	1.68	263.92	1.00	263.92	49	2252	0.55	0.034	0.01	21.03	0.01	0.000
19.82	1.65	265.88	1.00	265.88	49	2181	0.55	0.036	0.01	21.03	0.01	0.000
19.89	1.63	264.64	1.00	264.64	48	2099	0.55	0.039	0.01	21.03	0.01	0.000
19.95	1.61	263.46	1.00	263.46	48	2062	0.55	0.040	0.01	21.03	0.01	0.000
20.02	1.61	261.79	1.00	261.79	47	2043	0.55	0.041	0.01	21.03	0.01	0.000
20.08	1.61	261.35	1.00	261.35	47	2036	0.55	0.041	0.01	21.03	0.01	0.000
20.15	1.60	261.88	1.00	261.88	47	2031	0.56	0.042	0.01	21.03	0.01	0.000
20.22	1.59	264.95	1.00	264.95	48	2037	0.56	0.042	0.01	21.03	0.01	0.000
20.28	1.59	269.73	1.00	269.73	48	2064	0.56	0.041	0.01	21.03	0.01	0.000
20.34	1.59	274.67	1.00	274.67	49	2107	0.56	0.040	0.01	21.03	0.01	0.000
20.42	1.59	277.35	1.00	277.35	50	2137	0.56	0.039	0.01	21.03	0.01	0.000
20.48	1.59	276.71	1.00	276.71	50	2141	0.56	0.039	0.01	21.03	0.01	0.000
20.55	1.60	273.10	1.00	273.10	49	2129	0.56	0.039	0.01	21.03	0.01	0.000
20.61	1.61	267.23	1.00	267.23	48	2110	0.56	0.040	0.01	21.03	0.01	0.000
20.67	1.61	262.68	1.00	262.68	48	2084	0.56	0.041	0.01	21.03	0.01	0.000
20.74	1.60	259.78	1.00	259.78	47	2049	0.56	0.043	0.02	21.03	0.01	0.000
20.81	1.58	257.55	1.00	257.55	46	1985	0.56	0.045	0.02	21.03	0.01	0.000
20.87	1.55	254.88	1.00	254.88	45	1899	0.56	0.049	0.02	21.03	0.01	0.000
20.93	1.53	249.91	1.00	249.91	44	1817	0.56	0.054	0.02	21.03	0.02	0.000
21.01	1.53	245.02	1.00	245.02	43	1779	0.56	0.056	0.02	21.03	0.02	0.000
21.07	1.55	240.61	1.00	240.61	43	1795	0.56	0.055	0.02	21.03	0.02	0.000
21.13	1.57	238.92	1.00	238.92	43	1836	0.56	0.053	0.02	21.03	0.02	0.000
21.20	1.60	235.79	1.00	235.79	42	1869	0.56	0.052	0.02	21.03	0.02	0.000
21.27	1.60	238.53	1.00	238.53	43	1901	0.56	0.051	0.02	21.03	0.01	0.000
21.33	1.60	242.16	1.00	242.16	44	1927	0.56	0.049	0.02	21.03	0.01	0.000
21.39	1.59	246.44	1.00	246.44	44	1957	0.56	0.048	0.02	21.03	0.01	0.000
21.46	1.61	244.12	1.00	244.12	44	1971	0.56	0.048	0.02	21.03	0.01	0.000
21.53	1.62	241.43	1.00	241.43	44	1981	0.56	0.048	0.02	21.03	0.01	0.000
21.59	1.62	241.29	1.00	241.29	44	1994	0.56	0.047	0.02	21.03	0.01	0.000
21.66	1.62	243.75	1.00	243.75	44	2010	0.56	0.047	0.02	21.03	0.01	0.000
21.73	1.62	244.16	1.00	244.16	44	2025	0.56	0.046	0.02	21.03	0.01	0.000
21.79	1.62	244.31	1.00	244.31	44	2035	0.56	0.046	0.02	21.03	0.01	0.000
21.85	1.62	244.82	1.00	244.82	44	2037	0.56	0.046	0.02	21.03	0.01	0.000
21.92	1.61	247.82	1.00	247.82	45	2034	0.56	0.047	0.02	21.03	0.01	0.000
21.99	1.60	250.18	1.00	250.18	45	2027	0.56	0.047	0.02	21.03	0.01	0.000
22.05	1.60	249.95	1.00	249.95	45	2022	0.56	0.048	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
22.12	1.60	247.80	1.00	247.80	45	2019	0.56	0.048	0.02	21.03	0.01	0.000
22.18	1.60	244.73	1.00	244.73	44	2007	0.56	0.049	0.02	21.03	0.01	0.000
22.25	1.61	241.18	1.00	241.18	44	1988	0.56	0.050	0.02	21.03	0.01	0.000
22.31	1.61	238.04	1.00	238.04	43	1968	0.56	0.051	0.02	21.03	0.01	0.000
22.38	1.61	234.93	1.00	234.93	43	1956	0.56	0.052	0.02	21.03	0.02	0.000
22.45	1.62	231.38	1.00	231.38	42	1948	0.56	0.052	0.02	21.03	0.02	0.000
22.52	1.64	225.54	1.00	225.54	41	1941	0.56	0.053	0.02	21.03	0.02	0.000
22.59	1.66	218.25	1.00	218.25	40	1939	0.57	0.053	0.02	21.03	0.02	0.000
22.64	1.68	211.14	1.00	211.14	39	1936	0.57	0.053	0.02	21.03	0.02	0.000
22.70	1.70	201.32	1.00	201.32	38	1895	0.57	0.056	0.03	21.03	0.02	0.000
22.77	1.71	193.06	1.01	194.82	36	1846	0.57	0.059	0.03	21.03	0.02	0.000
22.84	1.71	188.12	1.00	188.70	35	1795	0.57	0.062	0.03	21.03	0.02	0.000
22.90	1.69	191.95	1.00	191.95	36	1787	0.57	0.063	0.03	21.03	0.02	0.000
22.98	1.66	200.70	1.00	200.70	37	1791	0.57	0.063	0.03	21.03	0.02	0.000
23.05	1.64	206.23	1.00	206.23	38	1799	0.57	0.063	0.03	21.03	0.02	0.000
23.10	1.62	211.41	1.00	211.41	38	1807	0.57	0.063	0.03	21.03	0.02	0.000
23.16	1.60	216.44	1.00	216.44	39	1809	0.57	0.063	0.03	21.03	0.02	0.000
23.23	1.57	225.82	1.00	225.82	40	1827	0.57	0.062	0.03	21.03	0.02	0.000
23.30	1.56	235.65	1.00	235.65	42	1878	0.57	0.059	0.02	21.03	0.02	0.000
23.37	1.56	246.80	1.00	246.80	44	1965	0.57	0.054	0.02	21.03	0.01	0.000
23.43	1.56	258.95	1.00	258.95	46	2063	0.57	0.050	0.02	21.03	0.01	0.000
23.49	1.54	278.34	1.00	278.34	49	2172	0.57	0.046	0.02	21.03	0.01	0.000
23.56	1.52	299.00	1.00	299.00	53	2286	0.57	0.042	0.01	21.03	0.01	0.000
23.63	1.51	319.50	1.00	319.50	56	2401	0.57	0.039	0.01	21.03	0.01	0.000
23.70	1.50	333.32	1.00	333.32	58	2486	0.57	0.037	0.01	21.03	0.01	0.000
23.76	1.50	338.33	1.00	338.33	59	2525	0.57	0.036	0.01	21.03	0.01	0.000
23.82	1.51	337.95	1.00	337.95	59	2557	0.57	0.036	0.01	21.03	0.01	0.000
23.89	1.53	330.83	1.00	330.83	58	2567	0.57	0.036	0.01	21.03	0.01	0.000
23.95	1.54	324.49	1.00	324.49	57	2571	0.57	0.036	0.01	21.03	0.01	0.000
24.02	1.57	319.77	1.00	319.77	57	2609	0.57	0.035	0.01	21.03	0.01	0.000
24.08	1.58	321.25	1.00	321.25	58	2670	0.57	0.034	0.01	21.03	0.01	0.000
24.15	1.59	331.69	1.00	331.69	60	2789	0.57	0.032	0.01	21.03	0.01	0.000
24.22	1.60	338.04	1.00	338.04	61	2888	0.57	0.031	0.01	21.03	0.01	0.000
24.28	1.61	341.58	1.00	341.58	62	2981	0.57	0.029	0.01	21.03	0.01	0.000
24.35	1.63	337.53	1.00	337.53	62	3014	0.57	0.029	0.01	21.03	0.01	0.000
24.41	1.62	337.77	1.00	337.77	61	2993	0.57	0.029	0.01	21.03	0.01	0.000
24.48	1.60	341.38	1.00	341.38	62	2926	0.57	0.030	0.01	21.03	0.01	0.000
24.55	1.56	345.49	1.00	345.49	62	2836	0.57	0.032	0.01	21.03	0.01	0.000
24.61	1.53	350.73	1.00	350.73	62	2767	0.57	0.033	0.01	21.03	0.01	0.000
24.67	1.51	353.04	1.00	353.04	62	2738	0.57	0.034	0.01	21.03	0.01	0.000
24.74	1.52	356.68	1.00	356.68	63	2794	0.57	0.033	0.01	21.03	0.01	0.000
24.81	1.56	359.63	1.00	359.63	64	2959	0.57	0.030	0.01	21.03	0.01	0.000
24.88	1.61	365.04	1.00	365.04	66	3222	0.57	0.027	0.01	21.03	0.00	0.000
24.94	1.63	375.68	1.00	375.68	68	3385	0.57	0.025	0.01	21.03	0.00	0.000
25.01	1.62	389.01	1.00	389.01	71	3486	0.57	0.024	0.01	21.03	0.00	0.000
25.07	1.59	408.10	1.00	408.10	73	3531	0.57	0.024	0.01	21.03	0.00	0.000
25.13	1.56	437.86	1.00	437.86	78	3636	0.57	0.023	0.00	21.03	0.00	0.000
25.20	1.50	486.73	1.00	486.73	85	3735	0.57	0.023	0.00	21.03	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
25.27	1.46	528.54	1.00	528.54	91	3857	0.57	0.022	0.00	21.03	0.00	0.000
25.33	1.46	548.02	1.00	548.02	94	4022	0.57	0.021	0.00	21.03	0.00	0.000
25.40	1.50	535.02	1.00	535.02	93	4149	0.57	0.020	0.00	21.03	0.00	0.000
25.46	1.54	503.47	1.00	503.47	89	4124	0.57	0.020	0.00	21.03	0.00	0.000
25.53	1.57	464.99	1.00	464.99	83	3963	0.57	0.021	0.00	21.03	0.00	0.000
25.60	1.62	409.58	1.00	409.58	74	3707	0.57	0.023	0.00	21.03	0.00	0.000
25.66	1.66	363.51	1.00	363.51	67	3481	0.57	0.025	0.01	21.03	0.00	0.000
25.73	1.71	321.27	1.01	323.00	60	3288	0.58	0.027	0.01	21.03	0.00	0.000
25.79	1.72	300.37	1.03	310.87	58	3139	0.58	0.029	0.01	21.03	0.01	0.000
25.86	1.74	280.50	1.06	297.20	56	2988	0.58	0.032	0.01	21.03	0.01	0.000
25.93	1.74	264.00	1.07	282.95	54	2844	0.58	0.034	0.01	21.03	0.01	0.000
25.99	1.78	238.47	1.12	267.82	51	2694	0.58	0.037	0.01	21.03	0.01	0.000
26.05	1.77	229.70	1.12	257.20	49	2590	0.58	0.039	0.01	21.03	0.01	0.000
26.12	1.77	223.39	1.11	248.96	48	2510	0.58	0.042	0.01	21.03	0.01	0.000
26.19	1.74	231.29	1.06	245.46	46	2486	0.58	0.042	0.02	21.03	0.01	0.000
26.25	1.73	226.78	1.05	237.17	45	2412	0.58	0.045	0.02	21.03	0.01	0.000
26.32	1.71	223.32	1.01	226.09	42	2326	0.58	0.048	0.02	21.03	0.01	0.000
26.39	1.68	221.96	1.00	221.96	41	2226	0.58	0.051	0.02	21.03	0.01	0.000
26.45	1.67	221.17	1.00	221.17	41	2171	0.58	0.054	0.02	21.03	0.01	0.000
26.52	1.66	220.95	1.00	220.95	41	2136	0.58	0.056	0.02	21.03	0.02	0.000
26.59	1.65	221.25	1.00	221.25	41	2117	0.58	0.057	0.02	21.03	0.02	0.000
26.65	1.63	224.07	1.00	224.07	41	2106	0.58	0.058	0.02	21.03	0.02	0.000
26.71	1.62	229.41	1.00	229.41	42	2110	0.58	0.058	0.02	21.03	0.02	0.000
26.78	1.60	235.68	1.00	235.68	43	2133	0.58	0.057	0.02	21.03	0.01	0.000
26.84	1.59	241.22	1.00	241.22	43	2160	0.58	0.056	0.02	21.03	0.01	0.000
26.91	1.58	247.46	1.00	247.46	44	2194	0.58	0.054	0.02	21.03	0.01	0.000
26.97	1.57	250.86	1.00	250.86	45	2201	0.58	0.054	0.02	21.03	0.01	0.000
27.04	1.55	260.16	1.00	260.16	46	2206	0.58	0.054	0.02	21.03	0.01	0.000
27.10	1.52	270.21	1.00	270.21	47	2207	0.58	0.054	0.02	21.03	0.01	0.000
27.17	1.48	285.22	1.00	285.22	50	2239	0.58	0.053	0.02	21.03	0.01	0.000
27.23	1.47	300.45	1.00	300.45	52	2322	0.58	0.050	0.02	21.03	0.01	0.000
27.30	1.47	315.97	1.00	315.97	55	2450	0.58	0.046	0.01	21.03	0.01	0.000
27.37	1.48	328.15	1.00	328.15	57	2591	0.58	0.042	0.01	21.03	0.01	0.000
27.43	1.51	330.36	1.00	330.36	58	2694	0.58	0.040	0.01	21.03	0.01	0.000
27.50	1.54	322.77	1.00	322.77	57	2750	0.58	0.038	0.01	21.03	0.01	0.000
27.56	1.58	308.12	1.00	308.12	55	2768	0.58	0.038	0.01	21.03	0.01	0.000
27.63	1.63	290.77	1.00	290.77	53	2762	0.58	0.038	0.01	21.03	0.01	0.000
27.70	1.66	275.14	1.00	275.14	51	2734	0.58	0.039	0.01	21.03	0.01	0.000
27.76	1.67	263.59	1.00	263.59	49	2683	0.58	0.040	0.01	21.03	0.01	0.000
27.83	1.67	256.41	1.00	256.41	47	2611	0.58	0.042	0.01	21.03	0.01	0.000
27.89	1.66	251.80	1.00	251.80	46	2526	0.58	0.045	0.02	21.03	0.01	0.000
27.96	1.64	248.57	1.00	248.57	45	2422	0.58	0.048	0.02	21.03	0.01	0.000
28.02	1.61	246.41	1.00	246.41	45	2315	0.58	0.052	0.02	21.03	0.01	0.000
28.09	1.59	244.85	1.00	244.85	44	2239	0.58	0.055	0.02	21.03	0.01	0.000
28.16	1.58	244.88	1.00	244.88	44	2210	0.58	0.057	0.02	21.03	0.01	0.000
28.22	1.58	245.40	1.00	245.40	44	2211	0.58	0.057	0.02	21.03	0.01	0.000
28.28	1.57	247.84	1.00	247.84	44	2231	0.58	0.056	0.02	21.03	0.01	0.000
28.35	1.57	253.40	1.00	253.40	45	2277	0.58	0.054	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
28.42	1.57	263.12	1.00	263.12	47	2354	0.58	0.051	0.02	21.03	0.01	0.000
28.48	1.56	277.70	1.00	277.70	49	2474	0.58	0.047	0.02	21.03	0.01	0.000
28.55	1.56	293.32	1.00	293.32	52	2617	0.58	0.043	0.01	21.03	0.01	0.000
28.62	1.56	307.09	1.00	307.09	55	2731	0.58	0.041	0.01	21.03	0.01	0.000
28.68	1.56	315.19	1.00	315.19	56	2811	0.58	0.039	0.01	21.03	0.01	0.000
28.75	1.56	320.18	1.00	320.18	57	2849	0.58	0.038	0.01	21.03	0.01	0.000
28.81	1.58	314.35	1.00	314.35	56	2868	0.58	0.038	0.01	21.03	0.01	0.000
28.88	1.59	305.14	1.00	305.14	55	2837	0.58	0.039	0.01	21.03	0.01	0.000
28.94	1.60	290.86	1.00	290.86	53	2748	0.58	0.041	0.01	21.03	0.01	0.000
29.01	1.60	279.69	1.00	279.69	50	2641	0.58	0.044	0.01	21.03	0.01	0.000
29.07	1.63	266.94	1.00	266.94	49	2604	0.58	0.045	0.02	21.03	0.01	0.000
29.14	1.69	253.41	1.00	253.41	47	2720	0.58	0.042	0.01	21.03	0.01	0.000
29.21	1.78	245.19	1.13	276.76	53	2984	0.58	0.036	0.01	21.03	0.01	0.000
29.27	1.86	236.85	1.21	286.29	57	3237	0.58	0.032	0.01	21.03	0.01	0.000
29.33	1.86	237.97	1.21	287.84	57	3262	0.58	0.032	0.01	21.03	0.01	0.000
29.41	1.81	243.93	1.16	283.83	55	3110	0.58	0.035	0.01	21.03	0.01	0.000
29.47	1.73	258.59	1.05	272.10	51	2952	0.58	0.037	0.01	21.03	0.01	0.000
29.53	1.67	284.74	1.00	284.74	53	2985	0.58	0.037	0.01	21.03	0.01	0.000
29.60	1.64	314.81	1.00	314.81	58	3159	0.58	0.034	0.01	21.03	0.01	0.000
29.66	1.66	311.11	1.00	311.11	57	3232	0.58	0.033	0.01	21.03	0.01	0.000
29.73	1.74	277.22	1.07	296.57	56	3225	0.58	0.033	0.01	21.03	0.01	0.000
29.79	1.86	225.00	1.21	272.43	54	3121	0.58	0.035	0.01	21.03	0.01	0.000
29.86	1.90	208.42	1.23	257.37	52	3040	0.58	0.036	0.01	21.03	0.01	0.000
29.92	1.89	201.77	1.23	248.18	50	2916	0.58	0.039	0.01	21.03	0.01	0.000
29.99	1.85	202.28	1.20	243.03	48	2770	0.58	0.042	0.01	21.03	0.01	0.000
30.05	1.83	197.98	1.18	233.61	46	2619	0.58	0.046	0.02	21.03	0.01	0.000
30.12	1.81	195.71	1.16	227.14	44	2522	0.58	0.049	0.02	21.03	0.01	0.000
30.18	1.78	194.51	1.13	220.68	42	2430	0.58	0.053	0.02	21.03	0.01	0.000
30.25	1.78	190.49	1.13	214.46	41	2360	0.58	0.055	0.02	21.03	0.01	0.000
30.32	1.78	185.76	1.13	209.88	40	2314	0.58	0.057	0.02	21.03	0.01	0.000
30.38	1.79	182.51	1.14	207.83	40	2300	0.58	0.058	0.03	21.03	0.01	0.000
30.45	1.78	183.22	1.13	206.40	40	2280	0.58	0.059	0.03	21.03	0.01	0.000
30.52	1.76	185.46	1.10	204.10	39	2250	0.58	0.061	0.03	21.03	0.02	0.000
30.58	1.74	186.56	1.07	200.19	38	2212	0.58	0.063	0.03	21.03	0.02	0.000
30.65	1.76	177.23	1.09	194.04	37	2144	0.58	0.067	0.03	21.03	0.02	0.000
30.72	1.76	168.46	1.11	186.28	36	2062	0.58	0.072	0.04	21.03	0.02	0.000
30.78	1.76	161.46	1.10	178.06	34	1973	0.58	0.079	0.04	21.03	0.02	0.000
30.84	1.72	164.73	1.04	170.77	32	1907	0.58	0.085	0.05	21.03	0.03	0.000
30.91	1.69	168.28	1.00	168.28	31	1868	0.58	0.089	0.05	21.03	0.03	0.000
30.97	1.67	172.49	1.00	172.49	32	1862	0.58	0.090	0.05	21.03	0.03	0.000
31.05	1.66	178.07	1.00	178.07	33	1891	0.58	0.088	0.05	21.03	0.03	0.000
31.11	1.65	186.35	1.00	186.35	34	1945	0.58	0.083	0.04	21.03	0.02	0.000
31.17	1.64	197.34	1.00	197.34	36	2026	0.58	0.076	0.04	21.03	0.02	0.000
31.24	1.63	209.45	1.00	209.45	38	2124	0.58	0.070	0.03	21.03	0.02	0.000
31.30	1.61	222.94	1.00	222.94	40	2230	0.58	0.064	0.03	21.03	0.02	0.000
31.37	1.61	232.95	1.00	232.95	42	2314	0.58	0.060	0.02	21.03	0.01	0.000
31.44	1.60	241.10	1.00	241.10	44	2380	0.58	0.057	0.02	21.03	0.01	0.000
31.50	1.61	244.16	1.00	244.16	44	2436	0.58	0.055	0.02	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
31.57	1.63	243.07	1.00	243.07	44	2502	0.58	0.053	0.02	21.03	0.01	0.000
31.63	1.69	232.46	1.00	232.46	43	2608	0.58	0.049	0.02	21.03	0.01	0.000
31.70	1.79	209.23	1.14	239.26	46	2716	0.58	0.046	0.02	21.03	0.01	0.000
31.76	1.92	174.97	1.25	219.10	44	2753	0.58	0.045	0.02	21.03	0.01	0.000
31.83	2.06	138.04	1.37	188.48	40	2652	0.58	0.048	0.02	21.03	0.01	0.000
31.89	2.18	105.92	1.56	165.68	37	2426	0.58	0.056	0.03	21.03	0.01	0.000
31.97	2.26	85.62	1.78	152.18	35	2203	0.58	0.067	0.03	21.03	0.02	0.000
32.03	2.32	71.20	2.02	143.88	34	2022	0.58	0.079	0.04	21.03	0.02	0.000
32.09	2.38	62.22	2.27	141.05	34	1916	0.58	0.089	0.05	21.03	0.02	0.000
32.16	2.42	56.03	2.49	139.29	35	1837	0.58	0.098	0.05	21.03	0.03	0.000
32.22	2.40	57.35	2.36	135.59	33	1822	0.58	0.100	0.05	21.03	0.03	0.000
32.28	2.35	61.62	2.15	132.21	32	1836	0.58	0.098	0.06	21.03	0.03	0.000
32.36	2.31	66.67	1.98	131.84	31	1878	0.58	0.094	0.05	21.03	0.03	0.001
32.42	2.31	68.35	1.98	135.42	32	1931	0.58	0.089	0.05	21.03	0.03	0.000
32.49	2.32	69.99	2.02	141.08	34	2005	0.58	0.082	0.04	21.03	0.02	0.000
32.55	2.33	71.70	2.04	145.95	35	2071	0.58	0.077	0.04	21.03	0.02	0.000
32.61	2.33	72.89	2.05	149.33	36	2118	0.58	0.074	0.04	21.03	0.02	0.000
32.69	2.34	73.36	2.09	153.18	37	2165	0.58	0.071	0.03	21.03	0.02	0.000
32.76	2.36	73.11	2.17	158.38	38	2217	0.58	0.068	0.03	21.03	0.02	0.000
32.83	2.37	73.22	2.23	163.54	40	2271	0.58	0.065	0.03	21.03	0.01	0.000
32.88	2.37	74.53	2.24	167.05	41	2320	0.58	0.063	0.03	21.03	0.01	0.000
32.95	2.36	76.44	2.20	167.94	41	2351	0.58	0.062	0.03	21.03	0.01	0.000
33.02	2.35	78.46	2.14	167.63	40	2371	0.58	0.061	0.03	21.03	0.01	0.000
33.07	2.33	81.05	2.06	166.75	40	2388	0.58	0.060	0.03	21.03	0.01	0.000
33.15	2.31	84.66	1.96	166.03	39	2413	0.58	0.059	0.03	21.03	0.01	0.000
33.22	2.29	88.89	1.87	166.41	39	2450	0.58	0.058	0.03	21.03	0.01	0.000
33.29	2.27	91.79	1.83	167.63	39	2485	0.58	0.056	0.03	21.03	0.01	0.000
33.34	2.27	93.03	1.82	169.49	39	2517	0.58	0.055	0.02	21.03	0.01	0.000
33.41	2.28	93.18	1.83	170.97	40	2539	0.58	0.055	0.02	21.03	0.01	0.000
33.48	2.28	93.69	1.84	172.04	40	2558	0.58	0.054	0.02	21.03	0.01	0.000
33.55	2.27	95.04	1.81	172.35	40	2574	0.58	0.054	0.02	21.03	0.01	0.000
33.60	2.25	97.37	1.77	172.06	40	2584	0.58	0.053	0.02	21.03	0.01	0.000
33.67	2.24	99.73	1.72	171.18	39	2587	0.58	0.053	0.02	21.03	0.01	0.000
33.74	2.22	102.30	1.66	170.20	39	2586	0.58	0.054	0.02	21.03	0.01	0.000
33.81	2.21	103.96	1.63	169.53	38	2583	0.58	0.054	0.02	21.03	0.01	0.000
33.86	2.20	105.64	1.61	169.87	38	2593	0.58	0.054	0.02	21.03	0.01	0.000
33.93	2.20	106.46	1.60	170.74	38	2610	0.58	0.053	0.02	21.03	0.01	0.000
33.99	2.19	108.36	1.59	172.40	39	2640	0.58	0.052	0.02	21.03	0.01	0.000
34.07	2.19	109.65	1.58	173.34	39	2658	0.58	0.052	0.02	21.03	0.01	0.000
34.12	2.17	111.93	1.55	173.15	39	2656	0.58	0.052	0.02	21.03	0.01	0.000
34.20	2.16	112.40	1.52	170.75	38	2620	0.58	0.053	0.02	21.03	0.01	0.000
34.26	2.14	112.86	1.48	167.03	37	2555	0.58	0.056	0.03	21.03	0.01	0.000
34.33	2.12	112.98	1.44	163.22	36	2485	0.58	0.058	0.03	21.03	0.01	0.000
34.39	2.08	115.97	1.40	161.84	35	2431	0.58	0.061	0.03	21.03	0.02	0.000
34.46	2.04	121.88	1.35	164.39	35	2414	0.58	0.062	0.03	21.03	0.02	0.000
34.52	2.00	131.53	1.30	171.53	36	2429	0.58	0.061	0.03	21.03	0.01	0.000
34.58	1.94	145.71	1.26	184.01	37	2475	0.58	0.059	0.03	21.03	0.01	0.000
34.66	1.89	160.27	1.23	197.37	39	2541	0.58	0.057	0.03	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
34.72	1.87	170.01	1.22	206.80	41	2614	0.58	0.054	0.02	21.03	0.01	0.000
34.78	1.88	171.58	1.22	209.63	42	2671	0.58	0.052	0.02	21.03	0.01	0.000
34.85	1.89	168.28	1.23	207.41	41	2684	0.58	0.052	0.02	21.03	0.01	0.000
34.91	1.91	162.67	1.24	202.19	41	2658	0.58	0.053	0.02	21.03	0.01	0.000
34.98	1.92	157.33	1.25	196.88	40	2623	0.58	0.054	0.02	21.03	0.01	0.000
35.05	1.93	152.95	1.26	192.31	39	2588	0.58	0.056	0.02	21.03	0.01	0.000
35.11	1.94	149.55	1.26	188.86	38	2565	0.58	0.057	0.03	21.03	0.01	0.000
35.18	1.95	146.90	1.27	186.21	38	2550	0.58	0.057	0.03	21.03	0.01	0.000
35.24	1.96	144.82	1.27	184.42	38	2549	0.58	0.057	0.03	21.03	0.01	0.000
35.30	1.96	143.82	1.28	183.75	38	2557	0.58	0.057	0.03	21.03	0.01	0.000
35.38	1.96	144.16	1.28	183.94	38	2557	0.58	0.057	0.03	21.03	0.01	0.000
35.43	1.95	145.43	1.27	184.78	38	2552	0.58	0.058	0.03	21.03	0.01	0.000
35.51	1.94	147.68	1.26	186.15	38	2538	0.58	0.058	0.03	21.03	0.01	0.000
35.56	1.92	150.39	1.25	187.80	38	2519	0.58	0.059	0.03	21.03	0.01	0.000
35.63	1.90	154.78	1.23	191.05	38	2512	0.58	0.060	0.03	21.03	0.01	0.000
35.70	1.87	159.57	1.22	194.23	39	2500	0.58	0.060	0.03	21.03	0.01	0.000
35.76	1.85	163.34	1.20	195.66	38	2468	0.58	0.062	0.03	21.03	0.01	0.000
35.84	1.82	165.30	1.18	194.60	38	2415	0.58	0.064	0.03	21.03	0.01	0.000
35.90	1.80	167.04	1.16	193.21	37	2371	0.58	0.066	0.03	21.03	0.01	0.000
35.96	1.79	169.78	1.14	192.72	37	2347	0.58	0.068	0.03	21.03	0.01	0.000
36.03	1.77	173.08	1.11	192.85	37	2340	0.58	0.068	0.03	21.03	0.01	0.000
36.09	1.76	176.93	1.09	193.37	37	2344	0.58	0.068	0.03	21.03	0.01	0.000
36.16	1.74	181.51	1.07	194.67	37	2363	0.58	0.067	0.03	21.03	0.01	0.000
36.23	1.73	185.78	1.05	195.69	37	2383	0.58	0.066	0.03	21.03	0.01	0.000
36.29	1.72	190.09	1.04	197.17	37	2410	0.58	0.065	0.03	21.03	0.01	0.000
36.36	1.72	193.05	1.03	199.32	37	2442	0.58	0.064	0.03	21.03	0.01	0.000
36.43	1.73	191.26	1.06	202.31	38	2470	0.58	0.063	0.03	21.03	0.01	0.000
36.49	1.74	192.23	1.06	204.00	39	2491	0.58	0.062	0.03	21.03	0.01	0.000
36.55	1.73	193.31	1.06	204.22	39	2498	0.58	0.062	0.03	21.03	0.01	0.000
36.62	1.71	199.02	1.02	202.77	38	2502	0.58	0.062	0.03	21.03	0.01	0.000
36.69	1.71	201.12	1.00	201.18	38	2499	0.58	0.062	0.03	21.03	0.01	0.000
36.75	1.70	202.37	1.00	202.37	38	2498	0.58	0.062	0.03	21.03	0.01	0.000
36.82	1.70	202.92	1.00	202.92	38	2500	0.58	0.062	0.03	21.03	0.01	0.000
36.88	1.69	204.61	1.00	204.61	38	2505	0.58	0.062	0.03	21.03	0.01	0.000
36.95	1.69	207.60	1.00	207.60	39	2514	0.58	0.062	0.03	21.03	0.01	0.000
37.01	1.68	212.41	1.00	212.41	39	2533	0.58	0.061	0.03	21.03	0.01	0.000
37.08	1.67	217.15	1.00	217.15	40	2562	0.58	0.060	0.03	21.03	0.01	0.000
37.14	1.67	220.71	1.00	220.71	41	2606	0.58	0.058	0.02	21.03	0.01	0.000
37.21	1.67	222.56	1.00	222.56	41	2653	0.58	0.057	0.02	21.03	0.01	0.000
37.28	1.68	223.06	1.00	223.06	41	2672	0.58	0.056	0.02	21.03	0.01	0.000
37.34	1.67	223.45	1.00	223.45	41	2660	0.58	0.056	0.02	21.03	0.01	0.000
37.41	1.67	223.06	1.00	223.06	41	2635	0.58	0.057	0.02	21.03	0.01	0.000
37.48	1.66	223.01	1.00	223.01	41	2619	0.58	0.058	0.02	21.03	0.01	0.000
37.54	1.66	222.69	1.00	222.69	41	2602	0.58	0.059	0.02	21.03	0.01	0.000
37.60	1.65	221.88	1.00	221.88	41	2576	0.58	0.060	0.03	21.03	0.01	0.000
37.67	1.65	221.68	1.00	221.68	41	2549	0.58	0.061	0.03	21.03	0.01	0.000
37.74	1.64	221.21	1.00	221.21	40	2534	0.58	0.062	0.03	21.03	0.01	0.000
37.80	1.64	220.34	1.00	220.34	40	2525	0.58	0.062	0.03	21.03	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
37.86	1.64	219.69	1.00	219.69	40	2523	0.58	0.063	0.03	21.03	0.01	0.000
37.93	1.65	218.37	1.00	218.37	40	2526	0.58	0.063	0.03	21.03	0.01	0.000
38.00	1.65	218.94	1.00	218.94	40	2551	0.58	0.062	0.03	21.03	0.01	0.000
38.07	1.66	219.28	1.00	219.28	40	2599	0.58	0.060	0.03	21.03	0.01	0.000
38.13	1.67	220.96	1.00	220.96	41	2657	0.58	0.058	0.02	21.03	0.01	0.000
38.20	1.68	221.22	1.00	221.22	41	2697	0.58	0.056	0.02	21.03	0.01	0.000
38.26	1.67	224.98	1.00	224.98	42	2720	0.58	0.056	0.02	21.03	0.01	0.000
38.32	1.66	229.08	1.00	229.08	42	2734	0.58	0.055	0.02	21.03	0.01	0.000
38.39	1.65	234.07	1.00	234.07	43	2756	0.58	0.055	0.02	21.03	0.01	0.000
38.45	1.65	236.28	1.00	236.28	43	2773	0.58	0.054	0.02	21.03	0.01	0.000
38.52	1.65	237.91	1.00	237.91	44	2792	0.58	0.054	0.02	21.03	0.01	0.000
38.59	1.65	239.94	1.00	239.94	44	2804	0.58	0.053	0.02	21.03	0.01	0.000
38.65	1.65	240.77	1.00	240.77	44	2807	0.58	0.053	0.02	21.03	0.01	0.000
38.72	1.64	242.11	1.00	242.11	44	2797	0.58	0.054	0.02	21.03	0.01	0.000
38.78	1.64	243.16	1.00	243.16	44	2803	0.58	0.054	0.02	21.03	0.01	0.000
38.85	1.64	245.15	1.00	245.15	45	2825	0.58	0.053	0.02	21.03	0.01	0.000
38.91	1.63	248.14	1.00	248.14	45	2856	0.58	0.052	0.02	21.03	0.01	0.000
38.98	1.63	250.28	1.00	250.28	46	2869	0.58	0.052	0.02	21.03	0.01	0.000
39.05	1.63	251.40	1.00	251.40	46	2885	0.58	0.051	0.02	21.03	0.01	0.000
39.12	1.63	252.39	1.00	252.39	46	2906	0.58	0.051	0.02	21.03	0.01	0.000
39.17	1.63	254.03	1.00	254.03	46	2912	0.57	0.051	0.02	21.03	0.01	0.000
39.24	1.61	259.80	1.00	259.80	47	2910	0.57	0.051	0.02	21.03	0.01	0.000
39.31	1.58	266.98	1.00	266.98	48	2896	0.57	0.051	0.02	21.03	0.01	0.000
39.38	1.56	276.52	1.00	276.52	49	2902	0.57	0.051	0.02	21.03	0.01	0.000
39.44	1.54	285.30	1.00	285.30	50	2925	0.57	0.051	0.02	21.03	0.01	0.000
39.50	1.52	290.53	1.00	290.53	51	2934	0.57	0.051	0.02	21.03	0.01	0.000
39.57	1.51	292.82	1.00	292.82	51	2914	0.57	0.051	0.02	21.03	0.01	0.000
39.64	1.51	290.25	1.00	290.25	51	2872	0.57	0.052	0.02	21.03	0.01	0.000
39.70	1.38	286.49	1.00	286.49	48	2423	0.57	0.070	0.02	21.03	0.01	0.000
39.76	1.21	280.01	1.00	280.01	45	1909	0.57	0.113	0.04	21.03	0.02	0.000
39.84	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
39.90	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
39.96	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.03	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000
40.10	-1.00	-1.00	1.00	-1.00	0	0	0.57	0.000	0.00	0.00	0.00	0.000

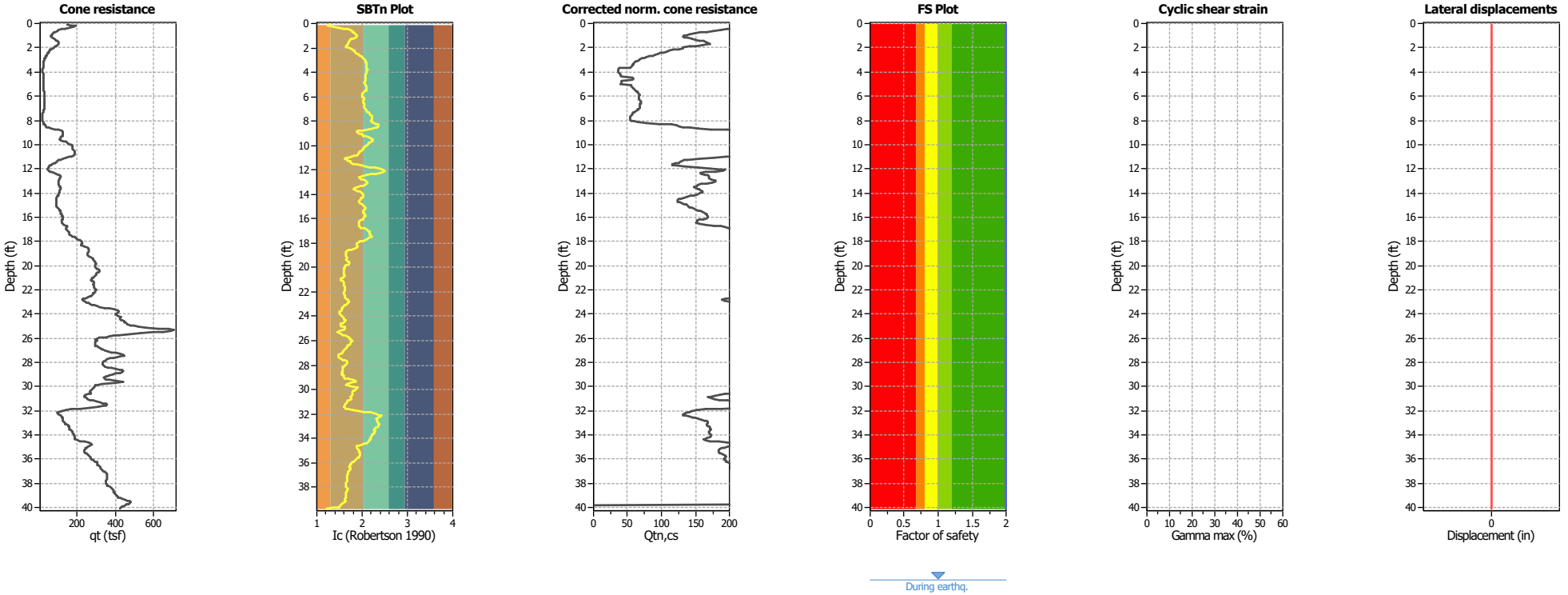
Total estimated settlement: 3.69

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

Estimation of post-earthquake lateral Displacements

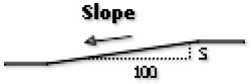
Geometric parameters: Gently sloping ground without free face (Slope 1.00 %)



Abbreviations

q_t: Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c: Soil Behaviour Type Index
$Q_{tn,cs}$: Equivalent clean sand normalized CPT total cone resistance
F.S.: Factor of safety
γ_{max}: Maximum cyclic shear strain
LDI: Lateral displacement index

Surface condition



:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.07	147.18	236.45	1.00	236.45	1.27	0.92	0.92
0.13	175.04	281.21	1.00	281.21	1.24	0.96	0.96
0.20	194.68	312.76	1.00	312.76	1.26	0.99	0.99
0.27	181.27	291.22	1.00	291.22	1.37	0.97	0.97
0.33	160.61	258.01	1.00	258.01	1.48	0.94	0.94
0.40	140.47	225.65	1.00	225.65	1.59	0.91	0.91
0.47	122.05	196.05	1.00	196.05	1.68	0.88	0.88
0.53	107.25	172.26	1.08	186.55	1.75	0.87	0.87
0.59	97.80	157.08	1.13	176.87	1.78	0.86	0.86
0.66	90.32	145.05	1.14	166.08	1.79	0.85	0.85
0.73	84.03	134.94	1.17	157.38	1.81	0.84	0.84
0.79	78.26	125.66	1.19	149.55	1.84	0.83	0.83
0.85	72.90	117.05	1.21	141.91	1.87	0.82	0.82
0.93	69.24	111.16	1.22	136.08	1.88	0.81	0.81
0.99	67.39	108.17	1.23	132.59	1.88	0.80	0.80
1.05	67.35	108.11	1.22	131.60	1.87	0.80	0.80
1.12	69.06	110.84	1.20	133.20	1.85	0.80	0.80
1.19	73.56	118.07	1.17	138.33	1.82	0.81	0.81
1.25	80.82	129.73	1.11	144.53	1.77	0.82	0.82
1.32	88.33	141.79	1.05	149.31	1.73	0.83	0.83
1.38	94.60	151.85	1.02	155.27	1.72	0.83	0.83
1.45	99.37	159.51	1.01	161.39	1.71	0.84	0.84
1.51	102.80	165.02	1.00	165.25	1.71	0.85	0.85
1.58	105.07	168.66	1.00	168.66	1.70	0.85	0.85
1.64	106.35	170.71	1.00	170.71	1.69	0.85	0.85
1.71	104.42	167.59	1.00	167.59	1.69	0.85	0.85
1.77	100.33	161.03	1.00	161.03	1.66	0.84	0.84
1.84	94.10	151.01	1.00	151.01	1.65	0.83	0.83
1.91	88.40	141.84	1.00	141.84	1.65	0.82	0.82
1.97	82.48	132.32	1.00	132.32	1.70	0.80	0.80
2.04	76.49	122.70	1.07	131.15	1.74	0.80	0.80
2.11	67.98	109.02	1.15	124.89	1.79	0.79	0.79
2.17	62.68	100.50	1.17	117.54	1.82	0.78	0.78
2.23	58.07	93.08	1.19	110.36	1.83	0.77	0.77
2.30	56.98	91.32	1.18	107.36	1.82	0.76	0.76
2.37	53.61	85.91	1.20	102.88	1.85	0.75	0.75
2.44	50.78	81.35	1.22	99.19	1.87	0.75	0.75
2.50	47.97	76.83	1.24	95.14	1.90	0.74	0.74
2.57	45.35	72.62	1.25	91.00	1.92	0.73	0.73
2.63	42.58	68.16	1.27	86.55	1.95	0.72	0.72
2.69	39.99	64.00	1.29	82.38	1.97	0.71	0.71
2.76	37.50	59.99	1.31	78.40	2.00	0.51	0.70
2.83	35.31	56.47	1.33	74.86	2.02	0.38	0.70
2.89	33.38	53.36	1.34	71.68	2.04	0.29	0.69
2.96	31.70	50.65	1.36	68.79	2.05	0.23	0.68
3.03	30.20	48.24	1.37	66.17	2.06	0.19	0.67
3.09	28.96	46.23	1.38	63.95	2.07	0.16	0.67
3.16	27.99	44.67	1.39	62.14	2.08	0.13	0.66

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.22	27.18	43.37	1.40	60.64	2.09	0.12	0.66
3.28	26.52	42.31	1.40	59.37	2.09	0.11	0.65
3.35	25.93	41.35	1.41	58.29	2.09	0.10	0.65
3.41	25.46	40.60	1.41	57.35	2.10	0.09	0.65
3.48	25.12	40.04	1.41	56.48	2.09	0.09	0.65
3.54	24.68	39.33	1.41	55.49	2.09	0.08	0.64
3.61	24.22	38.58	1.41	54.53	2.10	0.07	0.64
3.68	23.53	37.47	1.00	37.47	2.11	0.02	0.62
3.75	23.16	36.87	1.00	36.87	2.11	0.02	0.62
3.81	22.94	36.51	1.00	36.51	2.11	0.02	0.62
3.88	23.00	36.60	1.00	36.60	2.10	0.02	0.62
3.94	23.06	36.70	1.00	36.70	2.10	0.02	0.62
4.01	23.38	37.19	1.00	37.19	2.09	0.02	0.62
4.07	23.75	37.79	1.00	37.79	2.08	0.02	0.62
4.14	24.22	38.53	1.00	38.53	2.08	0.03	0.62
4.20	24.65	39.23	1.00	39.23	2.08	0.03	0.62
4.27	25.31	40.28	1.00	40.28	2.07	0.03	0.62
4.33	25.87	41.17	1.00	41.17	2.06	0.03	0.62
4.40	26.31	41.87	1.00	41.87	2.06	0.03	0.62
4.47	26.46	42.11	1.37	57.77	2.06	0.09	0.65
4.53	26.53	42.21	1.38	58.15	2.07	0.10	0.65
4.59	26.43	42.05	1.38	58.05	2.07	0.10	0.65
4.66	26.21	41.69	1.38	57.50	2.07	0.09	0.65
4.72	25.93	41.24	1.00	41.24	2.06	0.03	0.62
4.80	25.65	40.78	1.00	40.78	2.06	0.03	0.62
4.86	25.53	40.58	1.00	40.58	2.06	0.03	0.62
4.93	25.50	40.53	1.00	40.53	2.07	0.03	0.62
4.99	25.40	40.37	1.00	40.37	2.07	0.03	0.62
5.06	25.37	40.31	1.39	56.18	2.08	0.08	0.65
5.12	25.12	39.90	1.41	56.08	2.09	0.08	0.64
5.19	25.18	40.00	1.41	56.26	2.09	0.08	0.65
5.25	25.34	40.25	1.41	56.81	2.10	0.09	0.65
5.32	25.84	41.04	1.41	57.96	2.10	0.10	0.65
5.38	26.46	42.04	1.41	59.26	2.09	0.11	0.65
5.46	27.21	43.23	1.40	60.44	2.09	0.12	0.66
5.52	28.27	44.93	1.37	61.65	2.06	0.13	0.66
5.59	29.42	46.77	1.35	62.97	2.04	0.14	0.66
5.65	30.57	48.62	1.32	64.40	2.02	0.16	0.67
5.72	31.51	50.12	1.31	65.73	2.01	0.18	0.67
5.78	32.16	51.16	1.30	66.72	2.00	0.19	0.67
5.85	32.57	51.81	1.30	67.41	1.99	0.21	0.68
5.92	32.57	51.80	1.30	67.54	2.00	0.21	0.68
5.99	32.23	51.25	1.31	67.33	2.01	0.20	0.68
6.05	31.67	50.34	1.33	67.02	2.03	0.20	0.68
6.12	31.17	49.53	1.35	66.87	2.05	0.20	0.68
6.19	30.98	49.23	1.36	66.85	2.05	0.20	0.68
6.24	31.23	49.62	1.35	67.11	2.05	0.20	0.68
6.31	31.85	50.61	1.34	67.78	2.04	0.21	0.68

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.38	32.51	51.66	1.33	68.75	2.03	0.23	0.68
6.45	32.82	52.16	1.33	69.38	2.03	0.24	0.68
6.50	32.76	52.06	1.34	69.53	2.03	0.25	0.68
6.57	32.32	51.35	1.35	69.13	2.04	0.24	0.68
6.65	31.92	50.69	1.35	68.68	2.05	0.23	0.68
6.70	31.67	50.29	1.36	68.40	2.05	0.22	0.68
6.77	31.60	50.18	1.36	68.32	2.06	0.22	0.68
6.84	31.64	50.23	1.36	68.35	2.06	0.22	0.68
6.91	31.57	50.12	1.36	68.26	2.06	0.22	0.68
6.96	31.26	49.62	1.37	67.90	2.06	0.21	0.68
7.03	30.55	48.46	1.38	67.10	2.08	0.20	0.68
7.10	29.55	46.85	1.41	65.87	2.09	0.18	0.67
7.18	28.52	45.19	1.43	64.48	2.11	0.16	0.67
7.22	27.27	43.18	1.45	62.62	2.12	0.14	0.66
7.29	25.84	40.87	1.49	60.74	2.14	0.12	0.66
7.36	24.53	38.76	1.52	59.06	2.16	0.11	0.65
7.43	23.44	37.00	1.56	57.74	2.18	0.09	0.65
7.50	22.56	35.59	1.59	56.62	2.19	0.09	0.65
7.55	21.79	34.34	1.62	55.78	2.20	0.08	0.64
7.63	21.23	33.43	1.65	55.23	2.21	0.08	0.64
7.70	20.91	32.92	1.66	54.65	2.22	0.07	0.64
7.76	20.72	32.61	1.66	54.09	2.22	0.07	0.64
7.81	20.76	32.66	1.64	53.73	2.21	0.07	0.64
7.89	20.91	32.91	1.63	53.58	2.21	0.07	0.64
7.96	21.16	33.30	1.62	53.94	2.20	0.07	0.64
8.01	21.72	34.20	1.62	55.55	2.20	0.08	0.64
8.08	22.63	35.65	1.66	59.22	2.22	0.11	0.65
8.15	23.75	37.45	1.76	65.80	2.25	0.18	0.67
8.21	25.90	40.89	1.92	78.47	2.30	0.51	0.70
8.28	28.99	45.85	2.12	97.42	2.35	0.74	0.74
8.35	32.57	51.60	2.20	113.58	2.37	0.77	0.77
8.40	35.90	56.95	2.14	121.85	2.35	0.79	0.79
8.47	39.05	62.00	2.02	125.31	2.32	0.79	0.79
8.54	43.04	68.40	1.94	132.46	2.30	0.80	0.80
8.62	52.02	82.82	1.70	140.59	2.23	0.81	0.81
8.66	67.29	105.88	1.45	153.53	2.12	0.83	0.83
8.74	87.18	132.76	1.31	173.73	2.00	0.86	0.86
8.80	106.60	158.26	1.24	196.85	1.91	0.88	0.88
8.87	119.72	175.72	1.22	214.96	1.88	0.90	0.90
8.92	125.55	184.47	1.24	228.61	1.90	0.92	0.92
9.00	125.61	185.54	1.27	236.08	1.95	0.92	0.92
9.06	125.27	185.76	1.30	241.66	1.99	0.93	0.93
9.13	127.70	188.92	1.31	247.78	2.01	0.93	0.93
9.20	128.45	190.07	1.33	253.46	2.03	0.94	0.94
9.25	125.67	187.02	1.39	259.56	2.08	0.94	0.94
9.32	119.66	179.70	1.50	268.97	2.15	0.95	0.95
9.39	115.02	173.59	1.61	279.66	2.20	0.96	0.96
9.45	113.55	171.25	1.66	285.08	2.22	0.97	0.97

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.53	111.14	167.01	1.71	285.23	2.23	0.97	0.97
9.59	111.58	166.96	1.72	286.47	2.24	0.97	0.97
9.66	118.09	174.95	1.66	290.22	2.22	0.97	0.97
9.73	130.74	191.04	1.56	297.21	2.18	0.98	0.98
9.78	142.39	206.06	1.50	308.55	2.15	0.98	0.98
9.85	150.46	216.24	1.48	320.04	2.14	0.99	0.99
9.91	158.06	225.62	1.46	330.24	2.13	1.00	1.00
9.99	167.15	236.09	1.42	336.23	2.10	1.00	1.00
10.05	173.91	243.17	1.39	337.02	2.08	1.01	1.01
10.12	177.45	245.76	1.36	333.63	2.05	1.00	1.00
10.18	178.57	245.40	1.34	328.84	2.04	1.00	1.00
10.24	176.05	240.70	1.33	321.33	2.03	0.99	0.99
10.30	177.03	240.21	1.32	317.00	2.01	0.99	0.99
10.37	178.35	240.12	1.30	313.21	2.00	0.99	0.99
10.44	183.07	244.18	1.28	313.54	1.97	0.99	0.99
10.50	185.32	245.48	1.27	312.50	1.95	0.99	0.99
10.56	187.50	246.74	1.26	311.70	1.94	0.99	0.99
10.64	189.47	247.41	1.25	310.00	1.92	0.99	0.99
10.70	190.65	247.04	1.24	305.46	1.90	0.98	0.98
10.78	190.56	244.57	1.22	297.93	1.87	0.98	0.98
10.83	188.47	239.51	1.18	283.24	1.83	0.96	0.96
10.90	182.77	229.16	1.12	255.72	1.77	0.94	0.94
10.97	172.77	213.39	1.00	213.39	1.70	0.90	0.90
11.04	159.93	195.04	1.00	195.04	1.64	0.88	0.88
11.11	146.18	177.48	1.00	177.48	1.63	0.86	0.86
11.17	128.10	155.42	1.00	155.42	1.66	0.83	0.83
11.22	113.89	138.53	1.00	138.53	1.70	0.81	0.81
11.29	102.39	124.81	1.07	133.26	1.74	0.80	0.80
11.36	98.68	120.00	1.08	129.45	1.75	0.80	0.80
11.42	93.57	113.80	1.12	127.11	1.77	0.79	0.79
11.49	87.46	106.60	1.17	124.68	1.82	0.79	0.79
11.57	79.86	97.96	1.23	120.66	1.89	0.78	0.78
11.64	72.75	89.93	1.29	116.22	1.98	0.78	0.78
11.69	66.36	82.88	1.39	115.43	2.08	0.78	0.78
11.76	61.53	77.47	1.56	121.11	2.18	0.78	0.78
11.83	57.16	72.53	1.84	133.40	2.28	0.80	0.80
11.88	52.65	67.44	2.27	153.41	2.38	0.83	0.83
11.95	51.18	65.76	2.62	172.11	2.44	0.86	0.86
12.03	49.53	63.71	2.96	188.47	2.50	0.87	0.87
12.08	51.18	65.62	2.94	192.89	2.49	0.88	0.88
12.15	53.11	67.65	2.82	190.78	2.48	0.88	0.88
12.22	59.41	74.75	2.39	178.73	2.40	0.86	0.86
12.29	68.11	84.43	1.96	165.63	2.31	0.85	0.85
12.34	80.48	98.26	1.60	157.18	2.19	0.84	0.84
12.41	94.35	113.38	1.40	158.32	2.08	0.84	0.84
12.48	106.44	126.20	1.30	164.45	1.99	0.85	0.85
12.55	113.30	133.09	1.27	168.40	1.94	0.85	0.85
12.61	115.42	135.02	1.26	169.54	1.93	0.85	0.85

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.68	114.98	134.21	1.26	169.72	1.94	0.85	0.85
12.75	113.27	132.11	1.29	169.79	1.97	0.85	0.85
12.80	110.55	129.17	1.32	170.49	2.01	0.85	0.85
12.88	108.06	126.39	1.37	173.03	2.06	0.86	0.86
12.95	106.44	124.49	1.42	177.06	2.10	0.86	0.86
13.00	106.13	124.02	1.45	179.99	2.12	0.86	0.86
13.07	105.07	122.33	1.46	178.75	2.13	0.86	0.86
13.12	105.08	121.78	1.43	174.00	2.11	0.86	0.86
13.20	103.77	119.46	1.39	166.17	2.08	0.85	0.85
13.27	105.05	119.86	1.33	159.27	2.02	0.84	0.84
13.34	106.10	119.99	1.28	153.97	1.97	0.83	0.83
13.39	109.87	123.14	1.23	151.91	1.89	0.83	0.83
13.46	113.11	125.73	1.19	149.71	1.84	0.83	0.83
13.54	115.70	127.85	1.16	148.24	1.81	0.82	0.82
13.59	116.88	129.02	1.17	151.07	1.82	0.83	0.83
13.66	114.55	126.50	1.21	153.24	1.86	0.83	0.83
13.72	113.52	125.49	1.24	155.86	1.91	0.83	0.83
13.78	112.52	124.45	1.27	157.70	1.95	0.84	0.84
13.86	113.18	124.94	1.28	160.10	1.97	0.84	0.84
13.92	111.40	122.84	1.30	159.79	1.99	0.84	0.84
13.99	109.06	120.02	1.32	158.23	2.01	0.84	0.84
14.05	107.03	117.59	1.33	156.31	2.02	0.84	0.84
14.12	105.16	115.13	1.33	153.11	2.03	0.83	0.83
14.19	102.79	112.08	1.32	148.23	2.02	0.82	0.82
14.26	100.49	109.08	1.31	142.90	2.00	0.82	0.82
14.31	98.09	106.08	1.30	137.47	1.99	0.81	0.81
14.38	96.06	103.41	1.28	132.62	1.97	0.80	0.80
14.45	94.07	100.79	1.27	127.94	1.95	0.80	0.80
14.52	92.67	98.90	1.26	124.72	1.94	0.79	0.79
14.57	91.95	97.90	1.26	123.29	1.93	0.79	0.79
14.64	92.01	97.69	1.26	123.19	1.94	0.79	0.79
14.72	92.51	97.96	1.27	124.03	1.94	0.79	0.79
14.76	93.48	98.89	1.28	126.35	1.96	0.79	0.79
14.84	94.44	99.77	1.30	129.58	1.99	0.80	0.80
14.91	95.28	100.52	1.32	132.96	2.02	0.80	0.80
14.96	95.87	101.04	1.34	135.81	2.04	0.81	0.81
15.03	95.84	100.80	1.36	137.47	2.06	0.81	0.81
15.10	96.43	101.16	1.38	139.33	2.07	0.81	0.81
15.17	98.30	102.81	1.38	141.60	2.07	0.82	0.82
15.24	101.58	105.87	1.36	144.47	2.06	0.82	0.82
15.29	105.69	109.85	1.35	147.83	2.04	0.82	0.82
15.36	109.47	113.38	1.33	150.88	2.03	0.83	0.83
15.44	112.83	116.49	1.32	154.20	2.02	0.83	0.83
15.51	115.02	118.41	1.33	157.16	2.02	0.84	0.84
15.56	116.36	119.61	1.34	160.33	2.04	0.84	0.84
15.63	117.07	120.04	1.36	162.85	2.05	0.84	0.84
15.70	117.94	120.62	1.37	165.01	2.06	0.85	0.85
15.75	119.28	121.73	1.37	166.39	2.06	0.85	0.85

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.82	120.84	122.90	1.36	167.05	2.05	0.85	0.85
15.89	123.02	124.69	1.35	167.73	2.04	0.85	0.85
15.96	124.95	126.22	1.33	168.15	2.03	0.85	0.85
16.01	127.14	128.11	1.32	168.89	2.01	0.85	0.85
16.09	127.35	127.85	1.30	166.38	1.99	0.85	0.85
16.16	126.20	126.20	1.28	161.35	1.96	0.84	0.84
16.21	124.02	123.64	1.26	155.81	1.94	0.83	0.83
16.28	122.48	121.71	1.25	152.54	1.92	0.83	0.83
16.35	121.81	120.72	1.26	151.73	1.93	0.83	0.83
16.42	121.59	120.18	1.26	151.26	1.93	0.83	0.83
16.48	120.86	119.24	1.26	150.67	1.94	0.83	0.83
16.55	125.74	123.73	1.26	155.95	1.94	0.83	0.83
16.62	133.65	131.24	1.26	165.83	1.94	0.85	0.85
16.69	143.19	140.31	1.27	178.12	1.95	0.86	0.86
16.73	147.68	144.58	1.30	187.31	1.99	0.87	0.87
16.81	147.27	143.90	1.34	193.04	2.04	0.88	0.88
16.88	145.93	142.27	1.40	199.01	2.09	0.89	0.89
16.93	144.74	140.90	1.46	205.39	2.12	0.89	0.89
17.00	146.27	142.01	1.50	212.40	2.15	0.90	0.90
17.07	149.41	144.71	1.53	220.69	2.16	0.91	0.91
17.14	153.47	148.17	1.54	227.92	2.17	0.92	0.92
17.21	157.84	151.98	1.54	233.62	2.17	0.92	0.92
17.27	160.36	153.97	1.54	237.42	2.17	0.92	0.92
17.34	160.42	153.65	1.57	241.47	2.18	0.93	0.93
17.40	159.58	152.44	1.62	246.62	2.20	0.93	0.93
17.46	161.54	153.91	1.64	252.11	2.21	0.94	0.94
17.52	169.64	161.21	1.58	255.35	2.19	0.94	0.94
17.60	178.46	169.06	1.51	255.35	2.15	0.94	0.94
17.66	186.28	175.98	1.44	252.67	2.11	0.94	0.94
17.73	192.45	181.32	1.37	248.87	2.07	0.93	0.93
17.80	200.99	188.88	1.32	248.86	2.01	0.93	0.93
17.85	211.31	198.28	1.28	252.92	1.96	0.94	0.94
17.91	218.57	204.63	1.25	255.62	1.92	0.94	0.94
17.98	224.81	209.99	1.23	257.90	1.89	0.94	0.94
18.06	227.65	212.11	1.22	258.55	1.87	0.94	0.94
18.11	227.46	211.51	1.22	257.93	1.87	0.94	0.94
18.18	227.29	210.81	1.23	258.34	1.88	0.94	0.94
18.25	223.15	206.38	1.24	255.55	1.90	0.94	0.94
18.31	225.17	207.84	1.24	257.64	1.90	0.94	0.94
18.38	229.39	211.24	1.23	259.74	1.89	0.94	0.94
18.44	242.05	222.64	1.19	264.67	1.84	0.95	0.95
18.51	254.05	233.36	1.11	259.97	1.77	0.94	0.94
18.58	260.19	238.70	1.00	239.66	1.71	0.93	0.93
18.64	261.88	240.02	1.00	240.02	1.67	0.93	0.93
18.70	260.91	238.71	1.00	238.71	1.65	0.93	0.93
18.77	261.38	238.69	1.00	238.69	1.64	0.93	0.93
18.83	261.81	238.67	1.00	238.67	1.64	0.93	0.93
18.91	260.88	237.28	1.00	237.28	1.64	0.92	0.92

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.97	258.95	235.10	1.00	235.10	1.64	0.92	0.92
19.03	255.92	231.92	1.00	231.92	1.64	0.92	0.92
19.10	254.49	230.11	1.00	230.11	1.65	0.92	0.92
19.17	256.95	231.83	1.00	231.83	1.66	0.92	0.92
19.24	264.68	238.39	1.00	238.39	1.66	0.93	0.93
19.30	275.00	247.33	1.00	247.33	1.64	0.93	0.93
19.37	282.40	253.50	1.00	253.50	1.65	0.94	0.94
19.43	287.02	257.10	1.00	257.10	1.67	0.94	0.94
19.50	286.98	256.35	1.00	256.35	1.69	0.94	0.94
19.56	287.84	256.53	1.00	257.65	1.71	0.94	0.94
19.62	289.09	257.07	1.02	262.33	1.72	0.95	0.95
19.69	293.86	260.90	1.00	262.01	1.71	0.95	0.95
19.75	297.57	263.92	1.00	263.92	1.68	0.95	0.95
19.82	300.06	265.88	1.00	265.88	1.65	0.95	0.95
19.89	299.06	264.64	1.00	264.64	1.63	0.95	0.95
19.95	298.27	263.46	1.00	263.46	1.61	0.95	0.95
20.02	296.91	261.79	1.00	261.79	1.61	0.95	0.95
20.08	296.94	261.35	1.00	261.35	1.61	0.95	0.95
20.15	298.08	261.88	1.00	261.88	1.60	0.95	0.95
20.22	302.12	264.95	1.00	264.95	1.59	0.95	0.95
20.28	308.07	269.73	1.00	269.73	1.59	0.95	0.95
20.34	314.24	274.67	1.00	274.67	1.59	0.96	0.96
20.42	317.92	277.35	1.00	277.35	1.59	0.96	0.96
20.48	317.70	276.71	1.00	276.71	1.59	0.96	0.96
20.55	314.14	273.10	1.00	273.10	1.60	0.96	0.96
20.61	307.91	267.23	1.00	267.23	1.61	0.95	0.95
20.67	303.24	262.68	1.00	262.68	1.61	0.95	0.95
20.74	300.43	259.78	1.00	259.78	1.60	0.94	0.94
20.81	298.41	257.55	1.00	257.55	1.58	0.94	0.94
20.87	295.82	254.88	1.00	254.88	1.55	0.94	0.94
20.93	290.52	249.91	1.00	249.91	1.53	0.94	0.94
21.01	285.41	245.02	1.00	245.02	1.53	0.93	0.93
21.07	280.73	240.61	1.00	240.61	1.55	0.93	0.93
21.13	279.21	238.92	1.00	238.92	1.57	0.93	0.93
21.20	276.03	235.79	1.00	235.79	1.60	0.92	0.92
21.27	279.74	238.53	1.00	238.53	1.60	0.93	0.93
21.33	284.41	242.16	1.00	242.16	1.60	0.93	0.93
21.39	289.90	246.44	1.00	246.44	1.59	0.93	0.93
21.46	287.71	244.12	1.00	244.12	1.61	0.93	0.93
21.53	285.03	241.43	1.00	241.43	1.62	0.93	0.93
21.59	285.31	241.29	1.00	241.29	1.62	0.93	0.93
21.66	288.65	243.75	1.00	243.75	1.62	0.93	0.93
21.73	289.68	244.16	1.00	244.16	1.62	0.93	0.93
21.79	290.27	244.31	1.00	244.31	1.62	0.93	0.93
21.85	291.36	244.82	1.00	244.82	1.62	0.93	0.93
21.92	295.38	247.82	1.00	247.82	1.61	0.93	0.93
21.99	298.72	250.18	1.00	250.18	1.60	0.94	0.94
22.05	298.90	249.95	1.00	249.95	1.60	0.94	0.94

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.12	296.81	247.80	1.00	247.80	1.60	0.93	0.93
22.18	293.64	244.73	1.00	244.73	1.60	0.93	0.93
22.25	289.87	241.18	1.00	241.18	1.61	0.93	0.93
22.31	286.53	238.04	1.00	238.04	1.61	0.92	0.92
22.38	283.29	234.93	1.00	234.93	1.61	0.92	0.92
22.45	279.52	231.38	1.00	231.38	1.62	0.92	0.92
22.52	272.91	225.54	1.00	225.54	1.64	0.91	0.91
22.59	264.96	218.25	1.00	218.25	1.66	0.91	0.91
22.64	257.20	211.14	1.00	211.14	1.68	0.90	0.90
22.70	246.01	201.32	1.00	201.32	1.70	0.89	0.89
22.77	236.57	193.06	1.01	194.82	1.71	0.88	0.88
22.84	230.87	188.12	1.00	188.70	1.71	0.87	0.87
22.90	235.54	191.95	1.00	191.95	1.69	0.88	0.88
22.98	245.98	200.70	1.00	200.70	1.66	0.89	0.89
23.05	252.81	206.23	1.00	206.23	1.64	0.89	0.89
23.10	259.42	211.41	1.00	211.41	1.62	0.90	0.90
23.16	265.96	216.44	1.00	216.44	1.60	0.90	0.90
23.23	277.87	225.82	1.00	225.82	1.57	0.91	0.91
23.30	290.37	235.65	1.00	235.65	1.56	0.92	0.92
23.37	304.52	246.80	1.00	246.80	1.56	0.93	0.93
23.43	319.91	258.95	1.00	258.95	1.56	0.94	0.94
23.49	344.23	278.34	1.00	278.34	1.54	0.96	0.96
23.56	370.28	299.00	1.00	299.00	1.52	0.98	0.98
23.63	396.21	319.50	1.00	319.50	1.51	0.99	0.99
23.70	413.92	333.32	1.00	333.32	1.50	1.00	1.00
23.76	420.74	338.33	1.00	338.33	1.50	1.01	1.01
23.82	420.90	337.95	1.00	337.95	1.51	1.01	1.01
23.89	412.70	330.83	1.00	330.83	1.53	1.00	1.00
23.95	405.40	324.49	1.00	324.49	1.54	1.00	1.00
24.02	400.17	319.77	1.00	319.77	1.57	0.99	0.99
24.08	402.57	321.25	1.00	321.25	1.58	0.99	0.99
24.15	416.25	331.69	1.00	331.69	1.59	1.00	1.00
24.22	424.88	338.04	1.00	338.04	1.60	1.01	1.01
24.28	429.95	341.58	1.00	341.58	1.61	1.01	1.01
24.35	425.51	337.53	1.00	337.53	1.63	1.01	1.01
24.41	426.41	337.77	1.00	337.77	1.62	1.01	1.01
24.48	431.66	341.38	1.00	341.38	1.60	1.01	1.01
24.55	437.54	345.49	1.00	345.49	1.56	1.01	1.01
24.61	444.71	350.73	1.00	350.73	1.53	1.02	1.02
24.67	448.29	353.04	1.00	353.04	1.51	1.02	1.02
24.74	453.56	356.68	1.00	356.68	1.52	1.02	1.02
24.81	458.02	359.63	1.00	359.63	1.56	1.02	1.02
24.88	465.59	365.04	1.00	365.04	1.61	1.03	1.03
24.94	479.80	375.68	1.00	375.68	1.63	1.03	1.03
25.01	497.54	389.01	1.00	389.01	1.62	1.04	1.04
25.07	522.66	408.10	1.00	408.10	1.59	1.05	1.05
25.13	561.40	437.86	1.00	437.86	1.56	1.07	1.07
25.20	624.83	486.73	1.00	486.73	1.50	1.10	1.10

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.27	679.38	528.54	1.00	528.54	1.46	1.12	1.12
25.33	705.34	548.02	1.00	548.02	1.46	1.13	1.13
25.40	689.63	535.02	1.00	535.02	1.50	1.12	1.12
25.46	649.98	503.47	1.00	503.47	1.54	1.11	1.11
25.53	601.33	464.99	1.00	464.99	1.57	1.09	1.09
25.60	530.64	409.58	1.00	409.58	1.62	1.05	1.05
25.66	473.07	363.51	1.00	363.51	1.66	1.02	1.02
25.73	421.27	321.27	1.01	323.00	1.71	1.00	1.00
25.79	395.19	300.37	1.03	310.87	1.72	0.99	0.99
25.86	370.31	280.50	1.06	297.20	1.74	0.98	0.98
25.93	349.43	264.00	1.07	282.95	1.74	0.96	0.96
25.99	317.55	238.47	1.12	267.82	1.78	0.95	0.95
26.05	306.29	229.70	1.12	257.20	1.77	0.94	0.94
26.12	298.22	223.39	1.11	248.96	1.77	0.93	0.93
26.19	307.94	231.29	1.06	245.46	1.74	0.93	0.93
26.25	302.02	226.78	1.05	237.17	1.73	0.92	0.92
26.32	297.28	223.32	1.01	226.09	1.71	0.91	0.91
26.39	294.82	221.96	1.00	221.96	1.68	0.91	0.91
26.45	293.58	221.17	1.00	221.17	1.67	0.91	0.91
26.52	293.23	220.95	1.00	220.95	1.66	0.91	0.91
26.59	293.70	221.25	1.00	221.25	1.65	0.91	0.91
26.65	297.50	224.07	1.00	224.07	1.63	0.91	0.91
26.71	304.95	229.41	1.00	229.41	1.62	0.92	0.92
26.78	313.65	235.68	1.00	235.68	1.60	0.92	0.92
26.84	321.38	241.22	1.00	241.22	1.59	0.93	0.93
26.91	330.10	247.46	1.00	247.46	1.58	0.93	0.93
26.97	335.03	250.86	1.00	250.86	1.57	0.94	0.94
27.04	347.87	260.16	1.00	260.16	1.55	0.94	0.94
27.10	361.68	270.21	1.00	270.21	1.52	0.95	0.95
27.17	382.21	285.22	1.00	285.22	1.48	0.97	0.97
27.23	403.00	300.45	1.00	300.45	1.47	0.98	0.98
27.30	424.32	315.97	1.00	315.97	1.47	0.99	0.99
27.37	441.19	328.15	1.00	328.15	1.48	1.00	1.00
27.43	444.74	330.36	1.00	330.36	1.51	1.00	1.00
27.50	435.14	322.77	1.00	322.77	1.54	1.00	1.00
27.56	415.97	308.12	1.00	308.12	1.58	0.98	0.98
27.63	393.19	290.77	1.00	290.77	1.63	0.97	0.97
27.70	373.64	275.14	1.00	275.14	1.66	0.96	0.96
27.76	359.34	263.59	1.00	263.59	1.67	0.95	0.95
27.83	350.02	256.41	1.00	256.41	1.67	0.94	0.94
27.89	343.63	251.80	1.00	251.80	1.66	0.94	0.94
27.96	338.61	248.57	1.00	248.57	1.64	0.93	0.93
28.02	336.05	246.41	1.00	246.41	1.61	0.93	0.93
28.09	334.34	244.85	1.00	244.85	1.59	0.93	0.93
28.16	334.84	244.88	1.00	244.88	1.58	0.93	0.93
28.22	335.93	245.40	1.00	245.40	1.58	0.93	0.93
28.28	339.64	247.84	1.00	247.84	1.57	0.93	0.93
28.35	347.68	253.40	1.00	253.40	1.57	0.94	0.94

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.42	361.42	263.12	1.00	263.12	1.57	0.95	0.95
28.48	381.77	277.70	1.00	277.70	1.56	0.96	0.96
28.55	403.69	293.32	1.00	293.32	1.56	0.97	0.97
28.62	423.10	307.09	1.00	307.09	1.56	0.98	0.98
28.68	434.73	315.19	1.00	315.19	1.56	0.99	0.99
28.75	442.18	320.18	1.00	320.18	1.56	0.99	0.99
28.81	434.70	314.35	1.00	314.35	1.58	0.99	0.99
28.88	422.54	305.14	1.00	305.14	1.59	0.98	0.98
28.94	403.34	290.86	1.00	290.86	1.60	0.97	0.97
29.01	388.41	279.69	1.00	279.69	1.60	0.96	0.96
29.07	371.21	266.94	1.00	266.94	1.63	0.95	0.95
29.14	355.97	253.41	1.00	253.41	1.69	0.94	0.94
29.21	349.83	245.19	1.13	276.76	1.78	0.96	0.96
29.27	342.88	236.85	1.21	286.29	1.86	0.97	0.97
29.33	345.00	237.97	1.21	287.84	1.86	0.97	0.97
29.41	351.17	243.93	1.16	283.83	1.81	0.96	0.96
29.47	367.88	258.59	1.05	272.10	1.73	0.96	0.96
29.53	401.38	284.74	1.00	284.74	1.67	0.97	0.97
29.60	441.84	314.81	1.00	314.81	1.64	0.99	0.99
29.66	438.88	311.11	1.00	311.11	1.66	0.99	0.99
29.73	396.95	277.22	1.07	296.57	1.74	0.98	0.98
29.79	329.57	225.00	1.21	272.43	1.86	0.96	0.96
29.86	307.60	208.42	1.23	257.37	1.90	0.94	0.94
29.92	297.90	201.77	1.23	248.18	1.89	0.93	0.93
29.99	297.12	202.28	1.20	243.03	1.85	0.93	0.93
30.05	289.99	197.98	1.18	233.61	1.83	0.92	0.92
30.12	286.12	195.71	1.16	227.14	1.81	0.91	0.91
30.18	283.63	194.51	1.13	220.68	1.78	0.91	0.91
30.25	277.83	190.49	1.13	214.46	1.78	0.90	0.90
30.32	271.47	185.76	1.13	209.88	1.78	0.90	0.90
30.38	267.42	182.51	1.14	207.83	1.79	0.90	0.90
30.45	268.35	183.22	1.13	206.40	1.78	0.89	0.89
30.52	271.07	185.46	1.10	204.10	1.76	0.89	0.89
30.58	272.19	186.56	1.07	200.19	1.74	0.89	0.89
30.65	259.60	177.23	1.09	194.04	1.76	0.88	0.88
30.72	247.48	168.46	1.11	186.28	1.76	0.87	0.87
30.78	237.47	161.46	1.10	178.06	1.76	0.86	0.86
30.84	240.87	164.73	1.04	170.77	1.72	0.85	0.85
30.91	244.98	168.28	1.00	168.28	1.69	0.85	0.85
30.97	250.44	172.49	1.00	172.49	1.67	0.86	0.86
31.05	258.23	178.07	1.00	178.07	1.66	0.86	0.86
31.11	269.82	186.35	1.00	186.35	1.65	0.87	0.87
31.17	285.44	197.34	1.00	197.34	1.64	0.88	0.88
31.24	303.20	209.45	1.00	209.45	1.63	0.90	0.90
31.30	322.93	222.94	1.00	222.94	1.61	0.91	0.91
31.37	337.74	232.95	1.00	232.95	1.61	0.92	0.92
31.44	349.89	241.10	1.00	241.10	1.60	0.93	0.93
31.50	354.69	244.16	1.00	244.16	1.61	0.93	0.93

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.57	353.51	243.07	1.00	243.07	1.63	0.93	0.93
31.63	341.88	232.46	1.00	232.46	1.69	0.92	0.92
31.70	314.08	209.23	1.14	239.26	1.79	0.93	0.93
31.76	269.88	174.97	1.25	219.10	1.92	0.91	0.91
31.83	219.17	138.04	1.37	188.48	2.06	0.87	0.87
31.89	172.70	105.92	1.56	165.68	2.18	0.85	0.85
31.97	142.34	85.62	1.78	152.18	2.26	0.83	0.83
32.03	120.37	71.20	2.02	143.88	2.32	0.82	0.82
32.09	106.69	62.22	2.27	141.05	2.38	0.81	0.81
32.16	97.19	56.03	2.49	139.29	2.42	0.81	0.81
32.22	99.15	57.35	2.36	135.59	2.40	0.81	0.81
32.28	105.63	61.62	2.15	132.21	2.35	0.80	0.80
32.36	113.47	66.67	1.98	131.84	2.31	0.80	0.80
32.42	116.45	68.35	1.98	135.42	2.31	0.81	0.81
32.49	119.59	69.99	2.02	141.08	2.32	0.81	0.81
32.55	122.73	71.70	2.04	145.95	2.33	0.82	0.82
32.61	124.99	72.89	2.05	149.33	2.33	0.83	0.83
32.69	126.24	73.36	2.09	153.18	2.34	0.83	0.83
32.76	126.43	73.11	2.17	158.38	2.36	0.84	0.84
32.83	127.18	73.22	2.23	163.54	2.37	0.84	0.84
32.88	129.62	74.53	2.24	167.05	2.37	0.85	0.85
32.95	132.87	76.44	2.20	167.94	2.36	0.85	0.85
33.02	136.20	78.46	2.14	167.63	2.35	0.85	0.85
33.07	140.28	81.05	2.06	166.75	2.33	0.85	0.85
33.15	145.99	84.66	1.96	166.03	2.31	0.85	0.85
33.22	152.69	88.89	1.87	166.41	2.29	0.85	0.85
33.29	157.43	91.79	1.83	167.63	2.27	0.85	0.85
33.34	159.66	93.03	1.82	169.49	2.27	0.85	0.85
33.41	160.29	93.18	1.83	170.97	2.28	0.85	0.85
33.48	161.42	93.69	1.84	172.04	2.28	0.86	0.86
33.55	163.75	95.04	1.81	172.35	2.27	0.86	0.86
33.60	167.40	97.37	1.77	172.06	2.25	0.86	0.86
33.67	171.11	99.73	1.72	171.18	2.24	0.85	0.85
33.74	175.06	102.30	1.66	170.20	2.22	0.85	0.85
33.81	177.68	103.96	1.63	169.53	2.21	0.85	0.85
33.86	180.36	105.64	1.61	169.87	2.20	0.85	0.85
33.93	181.95	106.46	1.60	170.74	2.20	0.85	0.85
33.99	185.19	108.36	1.59	172.40	2.19	0.86	0.86
34.07	187.50	109.65	1.58	173.34	2.19	0.86	0.86
34.12	190.96	111.93	1.55	173.15	2.17	0.86	0.86
34.20	191.52	112.40	1.52	170.75	2.16	0.85	0.85
34.26	191.70	112.86	1.48	167.03	2.14	0.85	0.85
34.33	191.36	112.98	1.44	163.22	2.12	0.84	0.84
34.39	195.23	115.97	1.40	161.84	2.08	0.84	0.84
34.46	203.61	121.88	1.35	164.39	2.04	0.85	0.85
34.52	217.58	131.53	1.30	171.53	2.00	0.85	0.85
34.58	238.15	145.71	1.26	184.01	1.94	0.87	0.87
34.66	259.44	160.27	1.23	197.37	1.89	0.88	0.88

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.72	274.12	170.01	1.22	206.80	1.87	0.89	0.89
34.78	277.36	171.58	1.22	209.63	1.88	0.90	0.90
34.85	273.31	168.28	1.23	207.41	1.89	0.89	0.89
34.91	265.48	162.67	1.24	202.19	1.91	0.89	0.89
34.98	257.85	157.33	1.25	196.88	1.92	0.88	0.88
35.05	251.55	152.95	1.26	192.31	1.93	0.88	0.88
35.11	246.72	149.55	1.26	188.86	1.94	0.87	0.87
35.18	243.08	146.90	1.27	186.21	1.95	0.87	0.87
35.24	240.40	144.82	1.27	184.42	1.96	0.87	0.87
35.30	239.34	143.82	1.28	183.75	1.96	0.87	0.87
35.38	240.09	144.16	1.28	183.94	1.96	0.87	0.87
35.43	242.02	145.43	1.27	184.78	1.95	0.87	0.87
35.51	245.22	147.68	1.26	186.15	1.94	0.87	0.87
35.56	248.93	150.39	1.25	187.80	1.92	0.87	0.87
35.63	255.20	154.78	1.23	191.05	1.90	0.88	0.88
35.70	261.90	159.57	1.22	194.23	1.87	0.88	0.88
35.76	266.80	163.34	1.20	195.66	1.85	0.88	0.88
35.84	268.88	165.30	1.18	194.60	1.82	0.88	0.88
35.90	270.75	167.04	1.16	193.21	1.80	0.88	0.88
35.96	274.28	169.78	1.14	192.72	1.79	0.88	0.88
36.03	278.89	173.08	1.11	192.85	1.77	0.88	0.88
36.09	284.41	176.93	1.09	193.37	1.76	0.88	0.88
36.16	291.17	181.51	1.07	194.67	1.74	0.88	0.88
36.23	297.59	185.78	1.05	195.69	1.73	0.88	0.88
36.29	304.13	190.09	1.04	197.17	1.72	0.88	0.88
36.36	309.00	193.05	1.03	199.32	1.72	0.89	0.89
36.43	307.38	191.26	1.06	202.31	1.73	0.89	0.89
36.49	309.34	192.23	1.06	204.00	1.74	0.89	0.89
36.55	311.21	193.31	1.06	204.22	1.73	0.89	0.89
36.62	319.25	199.02	1.02	202.77	1.71	0.89	0.89
36.69	322.28	201.12	1.00	201.18	1.71	0.89	0.89
36.75	324.18	202.37	1.00	202.37	1.70	0.89	0.89
36.82	325.24	202.92	1.00	202.92	1.70	0.89	0.89
36.88	327.86	204.61	1.00	204.61	1.69	0.89	0.89
36.95	332.35	207.60	1.00	207.60	1.69	0.89	0.89
37.01	339.42	212.41	1.00	212.41	1.68	0.90	0.90
37.08	346.68	217.15	1.00	217.15	1.67	0.90	0.90
37.14	352.63	220.71	1.00	220.71	1.67	0.91	0.91
37.21	356.37	222.56	1.00	222.56	1.67	0.91	0.91
37.28	357.78	223.06	1.00	223.06	1.68	0.91	0.91
37.34	358.31	223.45	1.00	223.45	1.67	0.91	0.91
37.41	357.56	223.06	1.00	223.06	1.67	0.91	0.91
37.48	357.44	223.01	1.00	223.01	1.66	0.91	0.91
37.54	356.91	222.69	1.00	222.69	1.66	0.91	0.91
37.60	355.50	221.88	1.00	221.88	1.65	0.91	0.91
37.67	354.94	221.68	1.00	221.68	1.65	0.91	0.91
37.74	354.26	221.21	1.00	221.21	1.64	0.91	0.91
37.80	353.16	220.34	1.00	220.34	1.64	0.91	0.91

:: Strength loss calculation (Robertson (2009) :: (continued)

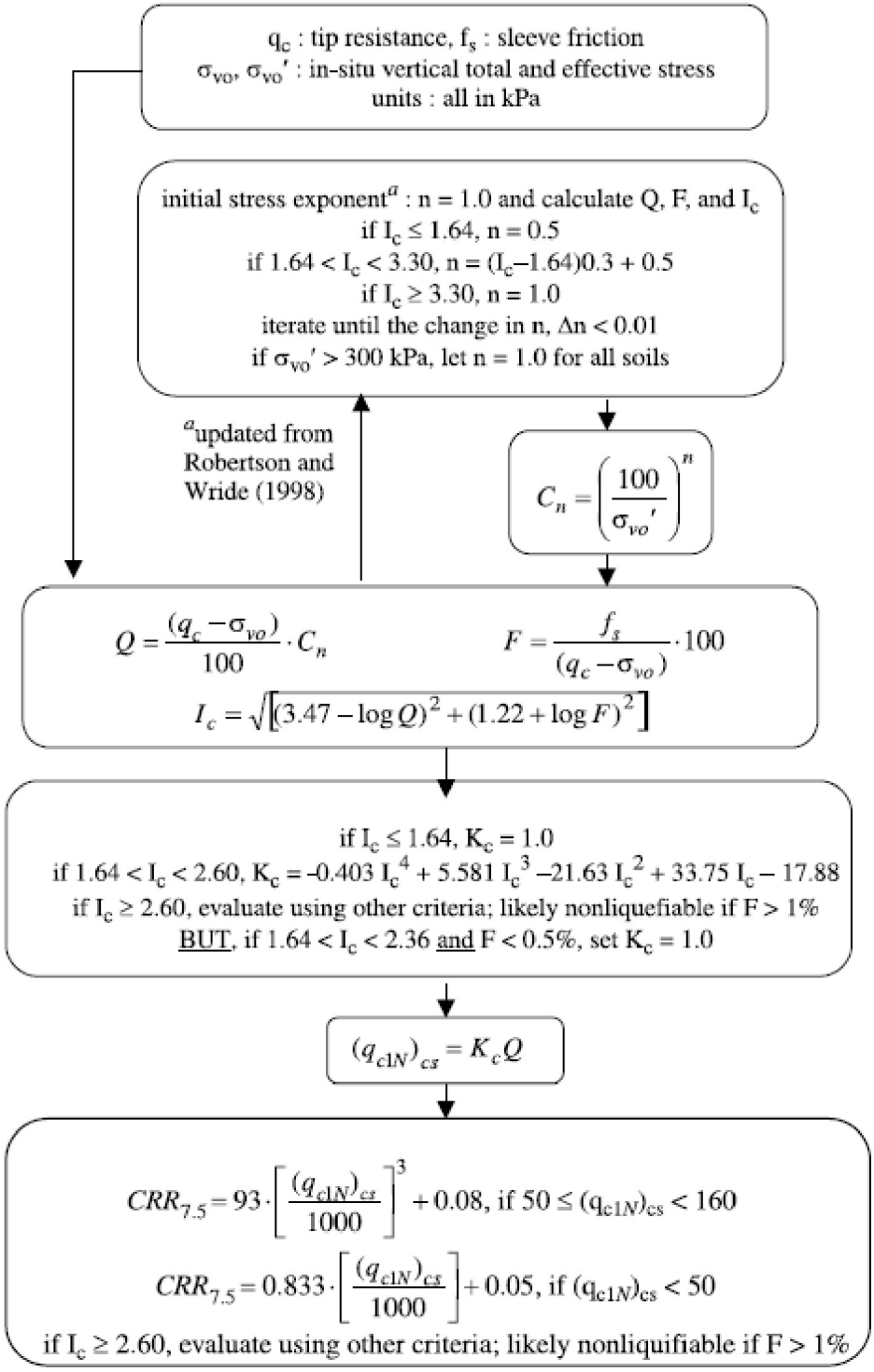
Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
37.86	352.51	219.69	1.00	219.69	1.64	0.91	0.91
37.93	351.11	218.37	1.00	218.37	1.65	0.91	0.91
38.00	352.70	218.94	1.00	218.94	1.65	0.91	0.91
38.07	354.50	219.28	1.00	219.28	1.66	0.91	0.91
38.13	358.34	220.96	1.00	220.96	1.67	0.91	0.91
38.20	359.83	221.22	1.00	221.22	1.68	0.91	0.91
38.26	365.66	224.98	1.00	224.98	1.67	0.91	0.91
38.32	371.80	229.08	1.00	229.08	1.66	0.92	0.92
38.39	379.28	234.07	1.00	234.07	1.65	0.92	0.92
38.45	382.93	236.28	1.00	236.28	1.65	0.92	0.92
38.52	385.86	237.91	1.00	237.91	1.65	0.92	0.92
38.59	389.20	239.94	1.00	239.94	1.65	0.93	0.93
38.65	390.63	240.77	1.00	240.77	1.65	0.93	0.93
38.72	392.56	242.11	1.00	242.11	1.64	0.93	0.93
38.78	394.62	243.16	1.00	243.16	1.64	0.93	0.93
38.85	398.17	245.15	1.00	245.15	1.64	0.93	0.93
38.91	403.38	248.14	1.00	248.14	1.63	0.93	0.93
38.98	407.21	250.28	1.00	250.28	1.63	0.94	0.94
39.05	409.39	251.40	1.00	251.40	1.63	0.94	0.94
39.12	411.39	252.39	1.00	252.39	1.63	0.94	0.94
39.17	414.38	254.03	1.00	254.03	1.63	0.94	0.94
39.24	424.14	259.80	1.00	259.80	1.61	0.94	0.94
39.31	436.17	266.98	1.00	266.98	1.58	0.95	0.95
39.38	452.09	276.52	1.00	276.52	1.56	0.96	0.96
39.44	466.74	285.30	1.00	285.30	1.54	0.97	0.97
39.50	475.69	290.53	1.00	290.53	1.52	0.97	0.97
39.57	479.83	292.82	1.00	292.82	1.51	0.97	0.97
39.64	476.09	290.25	1.00	290.25	1.51	0.97	0.97
39.70	470.36	286.49	1.00	286.49	1.38	0.97	0.97
39.76	460.13	280.01	1.00	280.01	1.21	0.96	0.96
39.84	450.81	-1.00	1.00	-1.00	-1.00	0.00	0.00
39.90	441.81	-1.00	1.00	-1.00	-1.00	0.00	0.00
39.96	436.63	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.03	428.37	-1.00	1.00	-1.00	-1.00	0.00	0.00
40.10	422.98	-1.00	1.00	-1.00	-1.00	0.00	0.00

Abbreviations

q_t: Total cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Adjusted and corrected cone resistance due to fines
I_c: Soil behavior type index
$S_{u(liq)}/\sigma'_v$: Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$: Calculated peak undrained strength ratio

Procedure for the evaluation of soil liquefaction resistance, NCEER (1998)

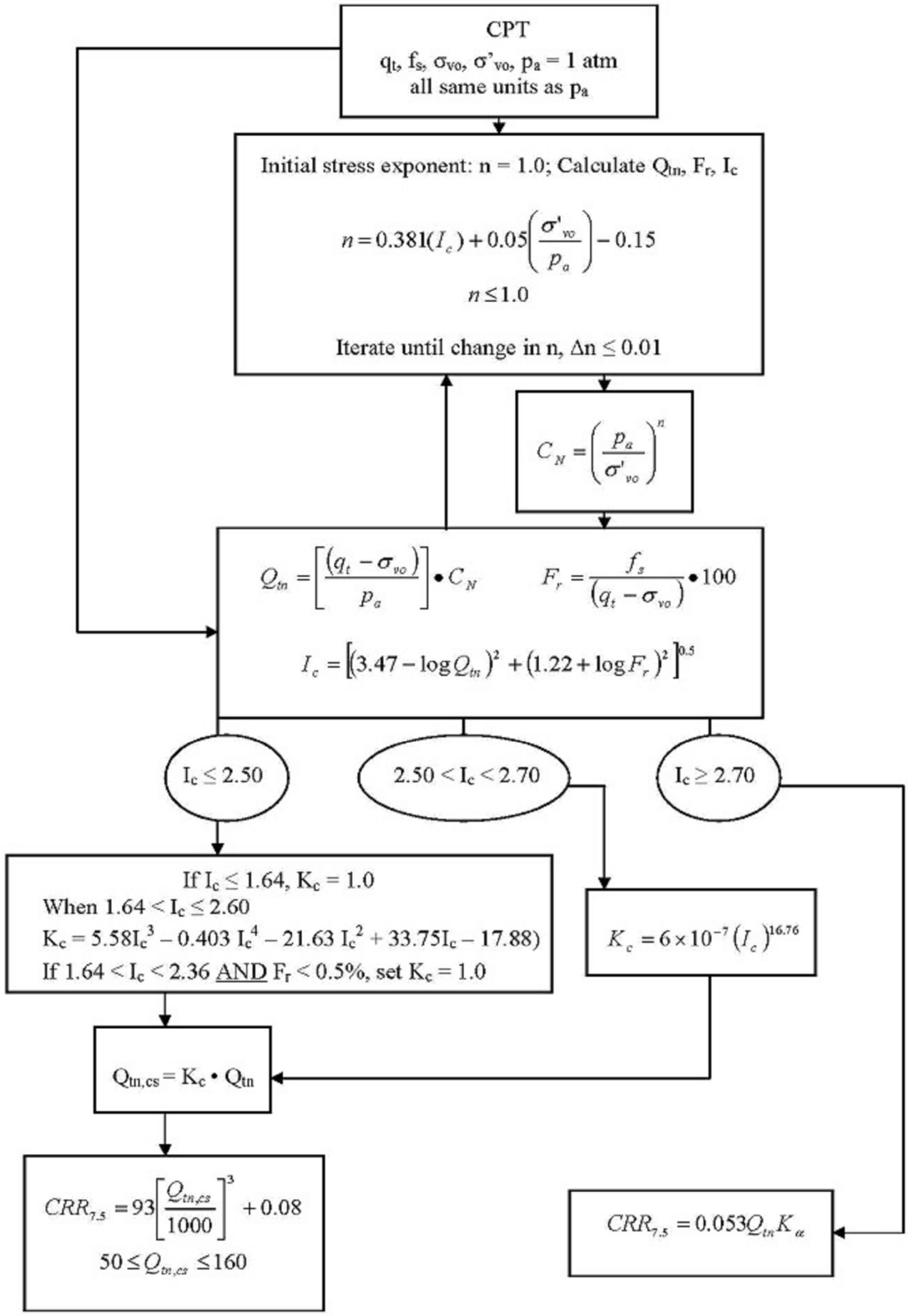
Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. The procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart[1]:



[1] "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

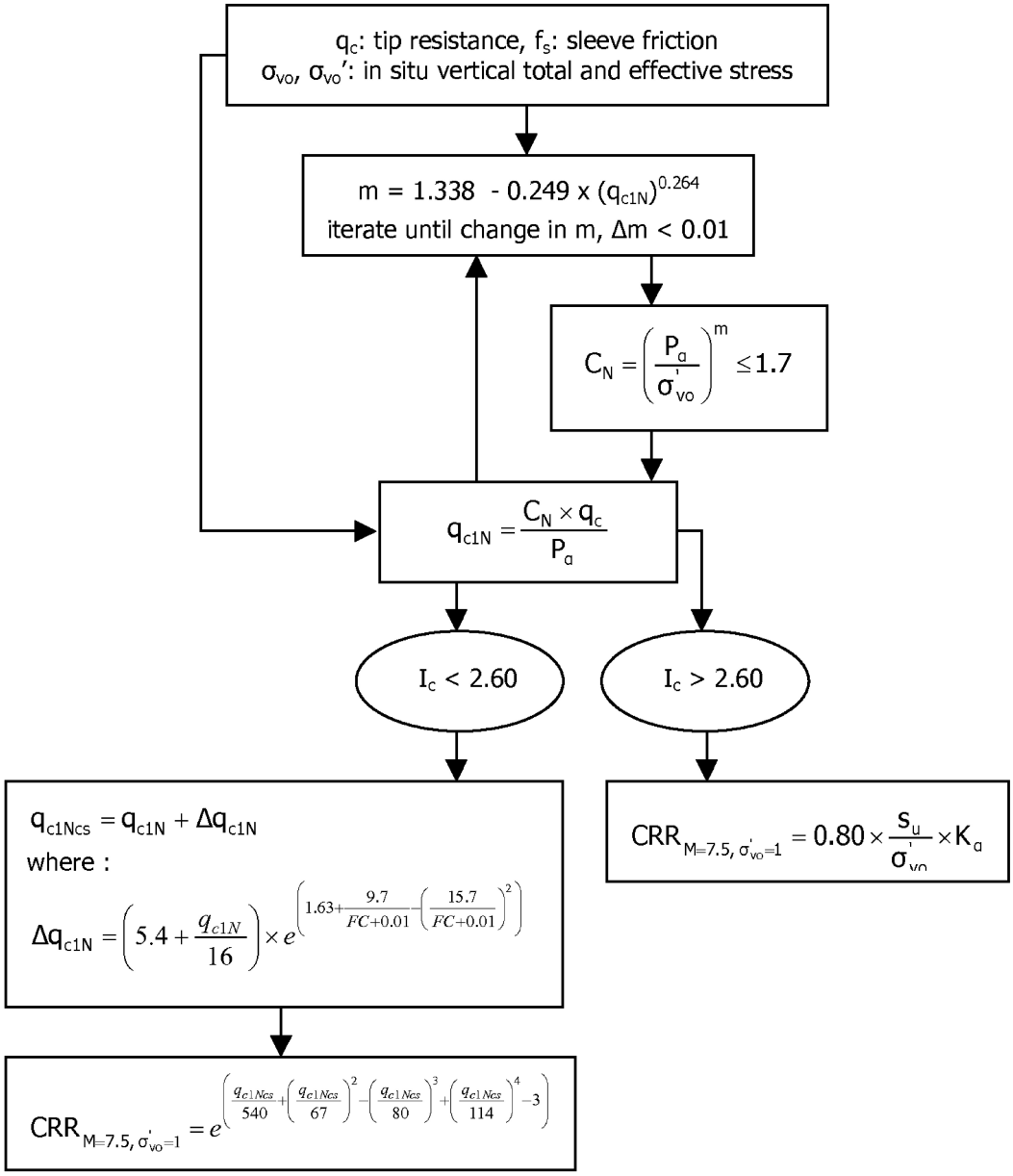
Procedure for the evaluation of soil liquefaction resistance (all soils), Robertson (2010)

Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. This procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart[1]:

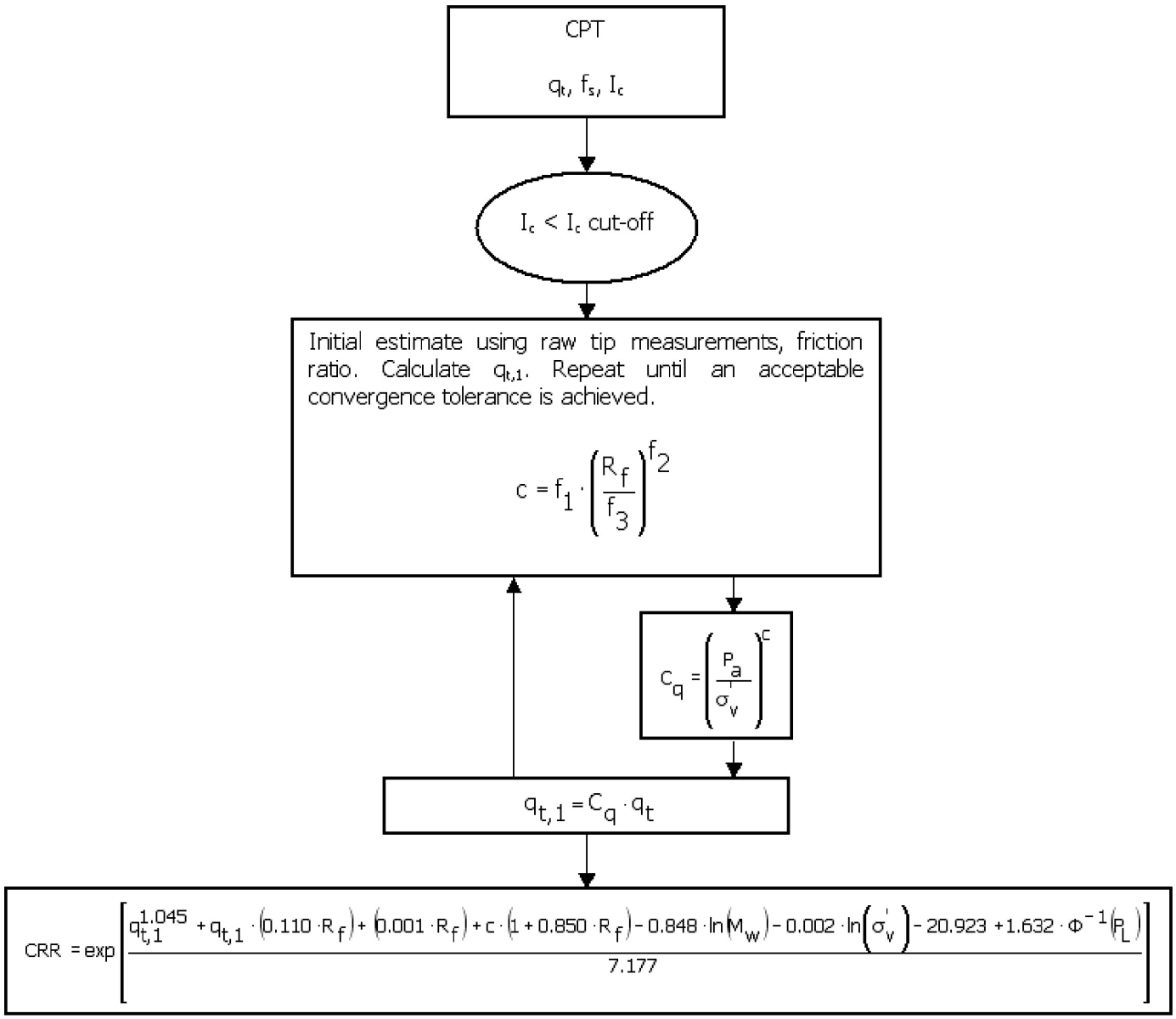


[1] P.K. Robertson, 2009. "Performance based earthquake design using the CPT", Keynote Lecture, International Conference on Performance-based Design in Earthquake Geotechnical Engineering – from case history to practice, IS-Tokyo, June 2009

Procedure for the evaluation of soil liquefaction resistance, Idriss & Boulanger (2008)



Procedure for the evaluation of soil liquefaction resistance (sandy soils), Moss et al. (2006)



Procedure for the evaluation of soil liquefaction resistance, Boulanger & Idriss(2014)

$$FS_{liq} = \frac{CRR_{M=7.5,\sigma'_v=1atm}}{CSR_{M=7.5,\sigma'_v=1atm}}$$

$$CSR_{M=7.5,\sigma'_v=1atm} = 0.65 \frac{\sigma_v}{\sigma'_v} \frac{a_{max}}{g} r_d \frac{1}{MSF} \frac{1}{K_\sigma}$$

$$r_d = \exp\left[\alpha(z) + \beta(z) \cdot M\right]$$

$$\alpha(z) = -1.012 - 1.126 \sin\left(\frac{z}{11.73} + 5.133\right)$$

$$\beta(z) = 0.106 + 0.118 \sin\left(\frac{z}{11.28} + 5.142\right)$$

$$K_\sigma = 1 - C_\sigma \ln\left(\frac{\sigma'_v}{P_a}\right) \le 1.1$$

$$C_\sigma = \frac{1}{37.3 - 8.27\left(q_{c1Ncs}\right)^{0.264}} \le 0.3$$

$$MSF = 1 + \left(MSF_{max} - 1\right)\left(8.64 \exp\left(\frac{-M}{4}\right) - 1.325\right)$$

$$MSF_{max} = 1.09 + \left(\frac{q_{c1Ncs}}{180}\right)^3 \le 2.2$$

σ'_v *and* σ_v *at start of earthquake shaking*

$$CRR_{M=7.5,\sigma'_v=1atm} = \exp\left(\frac{q_{c1Ncs}}{113} + \left(\frac{q_{c1Ncs}}{1000}\right)^2 - \left(\frac{q_{c1Ncs}}{140}\right)^3 + \left(\frac{q_{c1Ncs}}{137}\right)^4 - 2.80\right)$$

$$q_{c1Ncs} = q_{c1N} + \Delta q_{c1N}$$

$$\Delta q_{c1N} = \left(11.9 + \frac{q_{c1N}}{14.6}\right) \exp\left(1.63 - \frac{9.7}{FC+2} - \left(\frac{15.7}{FC+2}\right)^2\right)$$

$$q_{c1N} = C_{Ne} \frac{q_c}{P_a}$$

$$C_{Ne} = \left(\frac{P_a}{\sigma'_v}\right)^m \le 1.7$$

$$m = 1.338 - 0.249\left(q_{c1Ncs}\right)^{0.264} \quad with \quad 0.264 \le m \le 0.782$$

$$FC = 80\left(I_C + C_{FC}\right) - 137 \quad with \quad 0\% \le FC \le 100\%$$

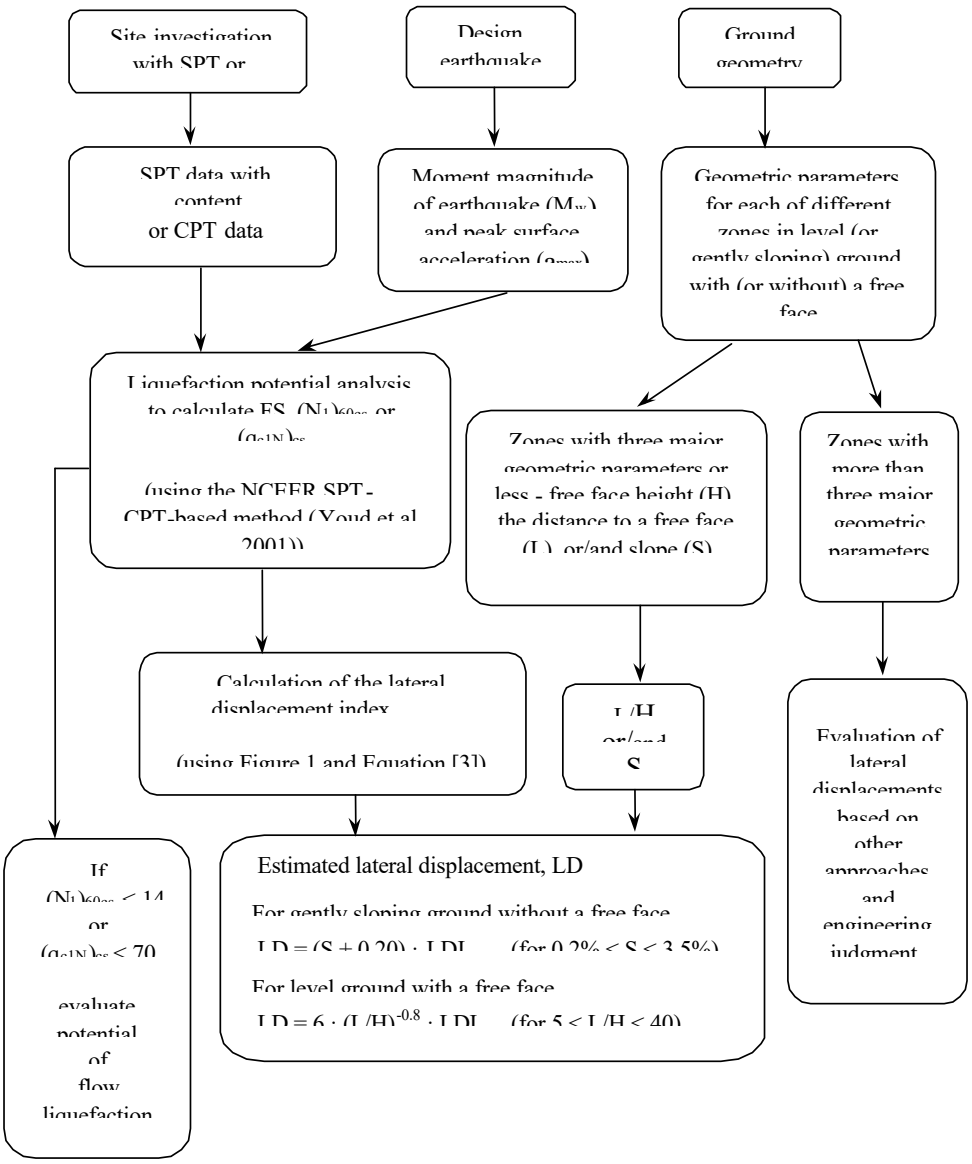
$$I_c = \left[\left(3.47 - \log\left(Q\right)\right)^2 + \left(1.22 + \log\left(F\right)\right)^2\right]^{0.5}$$

$$Q = \left(\frac{q_c - \sigma_{vc}}{P_a}\right)\left(\frac{P_a}{\sigma'_{vc}}\right)^n \; with \; 0.5 \le n \le 1.0 \; per \; Robertson \; \& \; Wride \; (1998)$$

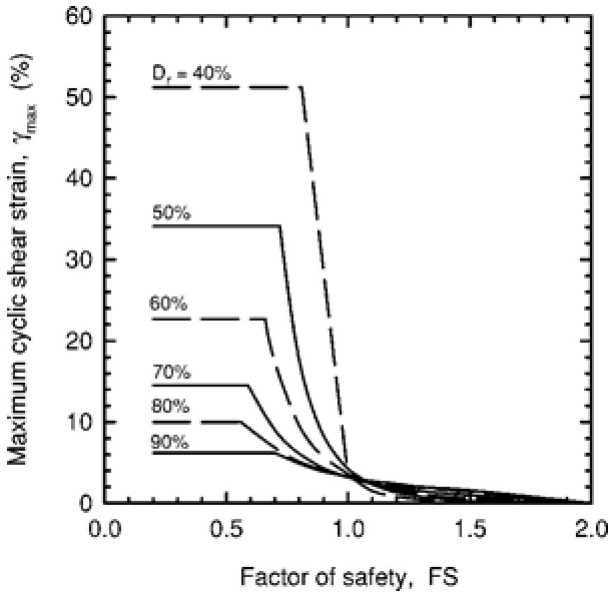
$$F = \left(\frac{f_s}{q_c - \sigma_{vc}}\right) \cdot 100\%$$

σ'_v *at time of CPT sounding*

Procedure for the evaluation of liquefaction-induced lateral spreading displacements



[1] Flow chart illustrating major steps in estimating liquefaction-induced lateral spreading displacements using the proposed approach



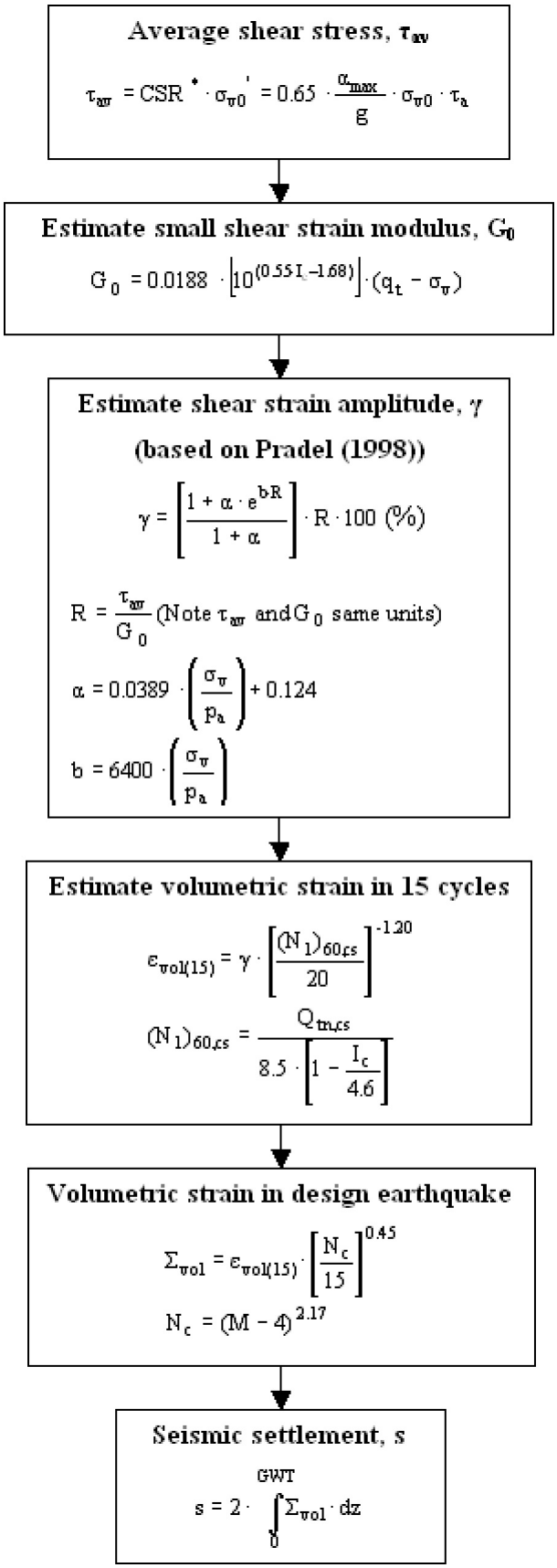
[1] Figure 1

$$LDI = \int_0^{z_{max}} \gamma_{max} dz$$

[1] Equation [3]

[1] "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

Procedure for the estimation of seismic induced settlements in dry sands



Robertson, P.K. and Lisheng, S., 2010, "Estimation of seismic compression in dry soils using the CPT" FIFTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS, Symposium in honor of professor I. M. Idriss, San Diego, CA

Liquefaction Potential Index (LPI) calculation procedure

Calculation of the Liquefaction Potential Index (LPI) is used to interpret the liquefaction assessment calculations in terms of severity over depth. The calculation procedure is based on the methology developed by Iwasaki (1982) and is adopted by AFPS.

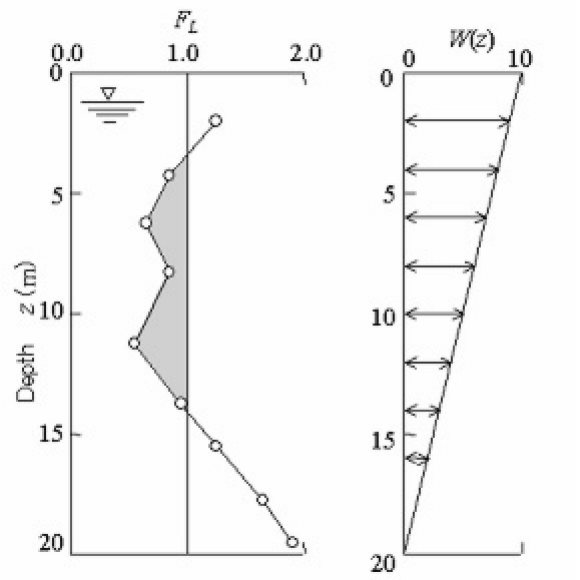
To estimate the severity of liquefaction extent at a given site, LPI is calculated based on the following equation:

$$\mathbf{LPI} = \int_0^{20} (10 - 0{,}5z) \times F_L \times dz$$

where:
F_L = 1 - F.S. when F.S. less than 1
F_L = 0 when F.S. greater than 1
z depth of measurment in meters

Values of LPI range between zero (0) when no test point is characterized as liquefiable and 100 when all points are characterized as susceptible to liquefaction. Iwasaki proposed four (4) discrete categories based on the numeric value of LPI:

- LPI = 0 : Liquefaction risk is very low
- 0 < LPI <= 5 : Liquefaction risk is low
- 5 < LPI <= 15 : Liquefaction risk is high
- LPI > 15 : Liquefaction risk is very high



Graphical presentation of the LPI calculation procedure

Shear-Induced Building Settlement (Ds) calculation procedure

The shear-induced building settlement (Ds) due to liquefaction below the building can be estimated using the relationship developed by Bray and Macedo (2017):

$$Ln(Ds) = c1 + c2 * LBS + 0.58 * Ln\left(Tanh\left(\frac{HL}{6}\right)\right) + 4.59 * Ln(Q) - 0.42 * Ln(Q)^2 - 0.02 * B + 0.84 * Ln(CAVdp) + 0.41 * Ln(Sa1) + \varepsilon$$

where Ds is in the units of mm, c1= -8.35 and c2= 0.072 for LBS ≤ 16, and c1= -7.48 and c2= 0.014 otherwise. Q is the building contact pressure in units of kPa, HL is the cumulative thickness of the liquefiable layers in the units of m, B is the building width in the units of m, CAVdp is a standardized version of the cumulative absolute velocity in the units of g-s, Sa1 is 5%-damped pseudo-acceleration response spectral value at a period of 1 s in the units of g, and ε is a normal random variable with zero mean and 0.50 standard deviation in Ln units. The liquefaction-induced building settlement index (LBS) is:

$$LBS = \sum W * \frac{\varepsilon_{shear}}{z} dz$$

where z (m) is the depth measured from the ground surface > 0, W is a foundation-weighting factor wherein W = 0.0 for z less than Df, which is the embedment depth of the foundation, and W = 1.0 otherwise. The shear strain parameter (ε_shear) is the liquefaction-induced free-field shear strain (in %) estimated using Zhang et al. (2004). It is calculated based on the estimated Dr of the liquefied soil layer and the calculated safety factor against liquefaction triggering (FSL).

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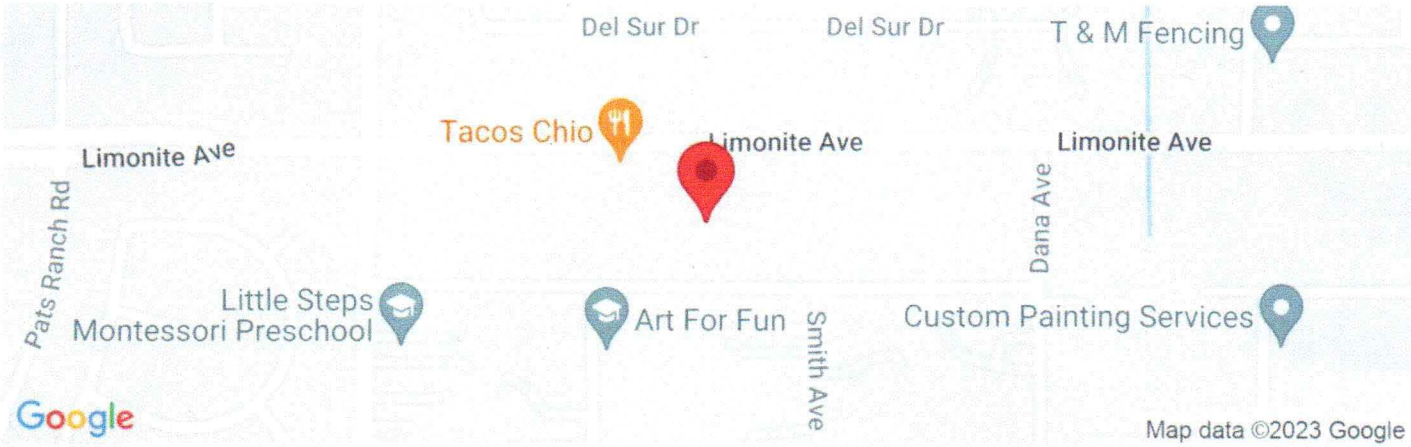
APPENDIX C

SEISMIC DESIGN PARAMETERS

USGS web services were down for some period of time and as a result this tool wasn't operational, resulting in *timeout* error.
USGS web services are now operational so this tool should work as expected.

21-392

Latitude, Longitude: 33.974639, -117.537384



Date	10/2/2023, 10:32:55 AM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.601	MCE_R ground motion. (for 0.2 second period)
S_1	0.578	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.601	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.067	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.66	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.726	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.601	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.698	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.723	Factored deterministic acceleration value. (0.2 second)
S1RT	0.578	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.629	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.702	Factored deterministic acceleration value. (Peak Ground Acceleration)

Type	Value	Description
PGA_{UH}	0.66	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.943	Mapped value of the risk coefficient at short periods
C_{R1}	0.919	Mapped value of the risk coefficient at a period of 1 s
C_V	1.42	Vertical coefficient

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APPENDIX D

LABORATORY TEST PROCEDURES

LABORATORY DATA SUMMARY

LABORATORY TEST PROCEDURES

Soil Classification

Soil materials encountered within the property were classified and described in accordance with the Unified Soil Classification System and in general accordance with the current version of Test Method ASTM D 2488. The assigned group symbol is presented on Plate D-1.

Laboratory Maximum Dry Unit Weight and Optimum Moisture Content

The maximum dry unit weight and optimum moisture content of the on-site soils were determined for a selected bulk sample in accordance with current version of Method A of ASTM D 1557. The results of these tests are presented on Plate D-1.

Expansion Index

An expansion index test was performed on a selected bulk sample of the on-site soils in accordance with the current version of Test Method ASTM D 4829. The test result is presented on Plate D-1.

Corrosivity Screening

Chemical and electrical analyses were performed on a selected bulk sample of onsite soils to determine soluble sulfate content, chloride content, pH (acidity) and minimum electrical resistivity. These tests were performed in accordance with the current versions of California Test Method Nos. CTM 417, CTM 422 and CTM 643, respectively. The results of these tests are presented on Plate D-1.

LABORATORY DATA SUMMARY*											
Boring Number	**Sample Depth (ft.)**	**Soil Description**	**Max. Dry Density [1] (pcf)**	**Optimum Moisture[1] (%)**	**Expansion Index[2]**	**CBC Soil Classification[3]**	**Sand Equivalent[4]**	**Sulfate Content[5] (%)**	**Chloride Content[6] (ppm)**	**pH[7]**	**Minimum Resistivity[7] (Ohm-cm)**
TP-4	0-5	Silty Sand	123.0	10.8	0	SM	------	0.039	330	8.62	1900
TP-10	0-5	Silty Sand with clay	130.5	9.0	28	SM/SC	-------	0.126	412.5	8.03	720
B-4(A)	0-5	Silty Sand	125.5	12.0	0	SM	-------	0.063	------	----	-------
B-11(A)	0-5	Clayey Sand	124.5	11.0	36	SC	-------	0.069	------	----	-------

Note: (A) LGC, 2005

Test Procedures:

[1] Per ASTM Test Method D 1557

[2] Per ASTM Test Method D 4829

[3] Per ASTM Test Method D 4829 Table 1, Per CBC 2010

[4] Per ASTM Test Method D2419

[5] Per Caltrans Test Method 417

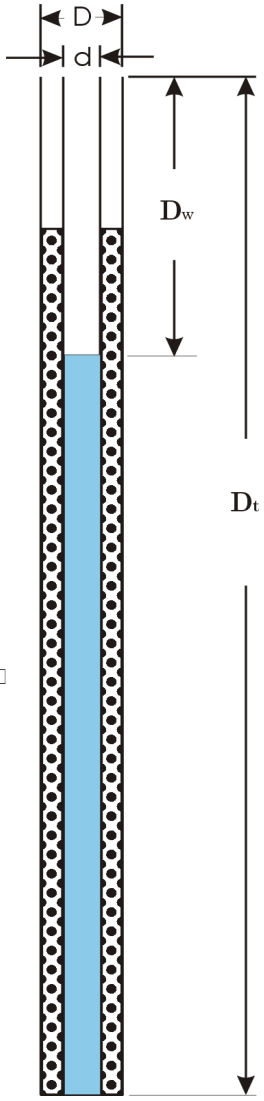
[6] Per Caltrans Test Method 422

[7] Per Caltrans Test Method 643

[8] Per ASTM Test Method D 1140

APPENDIX E

INFILTRATION TEST RESULTS



Test Number: P-1

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D□□□ e□er □□□□□□e, d (□□):	3
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□re- □□□□ de□□□ (□□):	5

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10	1 □.00	□9 □42	53.0	□.1 □	130.0
10	14.75	□8 □□7	41.0	□.24	8 □.3
10	1 □.00	□8 □42	41.0	□.24	8 □.1
10	14.92	□8 □□3	40.9	□.24	8 □.7
10	14.83	□8 □□5	41.0	□.24	8 □.0

Percolation Rate: **0.24** **min/in**

82 **gal/day/ft²**

82

Infiltration Rate: **11.3** **in/hr***
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PERCOLATION TEST SUMMARY

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PETRA GEOSCIENCES INC.

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Figure 2

Test Number: P-2

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D□□□ e□er □□□□ □□e□d (□□)□	□
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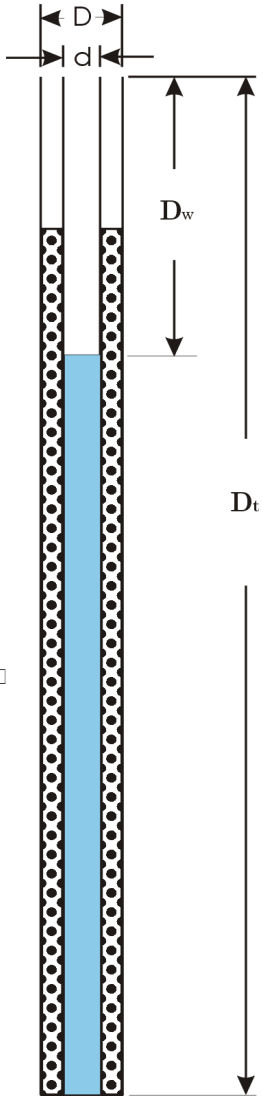
□□	□□□□□□	□□□□□□	□□□□□	□□□□□	□□□□□
□□	□□□4□	□□□4□	□□□□□	□□□□□	□□□□□
□□	□□□□□□	□□□□□□	□□□□□	□□□□□	□□□□□



□□

Percolation Rate: **0.28** **min/in**

31 **gal/day/ft²**

Infiltration Rate: **4.3** **in/hr***
(□□r□□e□Me□□□d)

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r □ D □□

□□ □ D□□D□

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ΔH = ΔD = H□ □□□

□□v□ □ (□□ □ □□) □□□

□R□□ □u□ □er□D□e□ □ □□□□□lude □ □□□□□r □□□□□e□y

Re□ere□□e□ R□□□□ □D□De□□□□ □□□d□□□□ □r L□D□M□□d□□ed □e□□e□ □er□□□□□

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PERCOLATION TEST SUMMARY

D□v□r□□□ed □□□□□□ □□ □□ev□lle M□r□e□□□d V□ll□□e□
Juru□□ V□lley□□ □l□□□r□□

PETRA GEOSCIENCES INC.

D□□□□Ju□e □□□□

J□□ □□□□□□□□

Figure 3

Test Number: P-3

□□□ll□□ □er□□l□□□□ □e□□Me□□□d

□□□□l De□□□ □□□□ □r□□□□D□(□□)□ □□
D□□□ e□er □□□□ □le□D (□□)□ □
D□□□ e□er □□□□ □□e□d (□□)□ □
□□□□□ □rre□□□□□ (□ V□d□)□ 4□
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□□□e □□erv□l (□ □□)	De□□□ □□ □ □□er □ur□□e D□ (□□)		□ □□□□e □□ □e□d (□□)	□er□□ R□e (□ □□□□□)	□er□□R□e (□□l□d□y □□□□□)
	□□□Re□d□□□	□□d Re□d□□□			
□□	□□□□□□	□□□□□□	□□□	□□□4	□□□□□
□□	□□□□□□	□□□□□□	□□□	□□□4	□□□□□
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□□	□□□□□□	□□□□□□	□4	□□□□	□□□
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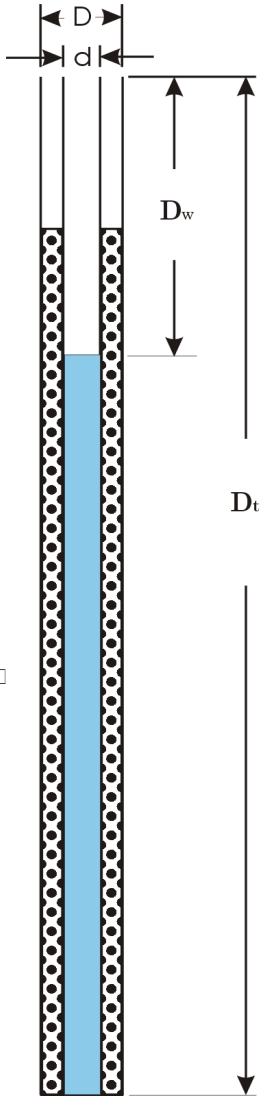

□□

Percolation Rate: **1.19** **min/in**
8.9 **gal/day/ft²**

Infiltration Rate: **1.2** **in/hr***
(□□r□□e□Me□□□d)

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r □ D □□
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□□□ D□□D□
∆H = ∆D = H□ □□□
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□R□□ □u□ □er□D□e□ □ □□□□□lude □ □□□□□r □□□□□e□y

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□□□□□ M□□□ □□M□□□L□ V□L□□□□ □□LM D□□□R□ □□R□□□ □□□ D□□□

PERCOLATION TEST SUMMARY

D□v□r□□□ed □□□□□□ □□ □□ev□lle M□r□e□□□d V□ll□□e□
Juru□□ V□lley□□ □l□□□r□□

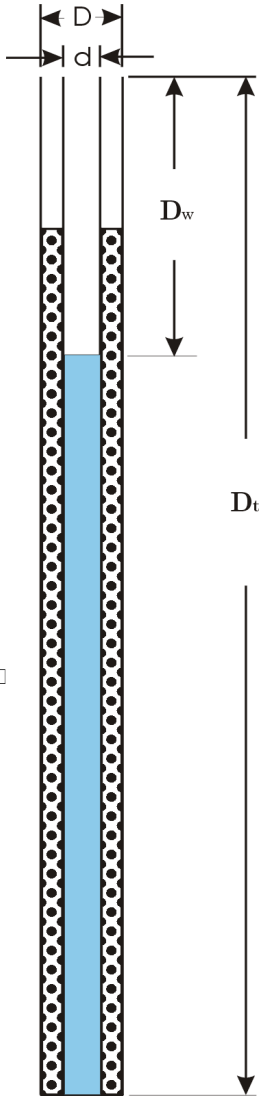
PETRA GEOSCIENCES INC.

D□□□□Ju□e □□□□

J□□ □□□□□□□

Figure 4

Re□re□□e□ R□□□□ □D□De□□□ □□□d□□□□ □r L□D□M□□d□ed □e□□e□ □er□□□□



Test Number: P-4

□□□ll□□ □er□□l□□□□□ □e□□Me□□□d

T□tal De□□□ of Bo ri □g, D□ (□□) □	□9
D□□□ e□er □□□□ □le□D (□□) □	□
D□□□ e□er □□□□□□e, d (□□):	3
A□g. Co rrect on (% V□d□) □	40
□re- □□□□ de□□□ (□□):	5

□□□e □□□erv□ (□ □□)	De□□□ to □ □□er □ur□□□e D□ (□□)		□ □□□□□e □□ □e□d (in)	□er□□ R□e (m □n □n)	□er□. R□□ (□□l□d □y □□^2)
	1st Re□d□□□	2□d Re□d□□□			
10	1 □.20	□1 □□0	8 □4	□.1 □	8.0
10	1 □.00	□1 □□0	8 □4	□.1 □	7.8
10	1 □.10	□1 □□0	7 □2	□.3 □	6.7
10	1 □.00	□1 □□0	8 □4	□.1 □	7.8
10	1 □.20	□1 □□0	7 □2	□.3 □	6.8
10	1 □.90	□1 □□0	7 □2	□.3 □	6.6

Percolation Rate: **1.39** **min/in**

6.6 **gal/day/ft²**

82

Infiltration Rate: **0.9** **in/hr***
(Po rch et Me□□□d)

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□□□ D□- D□

ΔH = ΔD = H□ - □□

□□v□ □ (□□ + □□) / □

□R□□ □u□ □er, D□e□ □ □□□□□lude □ □□□□□r □□□□e□y

Re□ere□□e□ R□□□□ □D□De□□□□ □□□d□□□□ □r L□D□M□□d□□ed □e□□e□ □er□□□□□

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PERCOLATION TEST SUMMARY

D□ver□□□ed Paci ic / □ □□ev□lle M□r□e□□□d V□ll□□e□
Juru□□ V□lley, Ca li orn□a

PETRA GEOSCIENCES INC

D□□□□Ju□e □□2□

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Figure 5

APPENDIX F

SLOPE STABILITY ANALYSIS

***** GSTABL7 *****

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **
** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **
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****

SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 10/23/2023
Time of Run: 02:16PM
Run By: G Walker
Input Data Filename: S:\SOFTWARE\GSTABL7 v2.005.3\GSTABL720053LDK2\program files\GREGEO\G72SW\21-392 section b-b' seismic.in
Output Filename: S:\SOFTWARE\GSTABL7 v2.005.3\GSTABL720053LDK2\program files\GREGEO\G72SW\21-392 section b-b' seismic.OUT
Unit System: English
Plotted Output Filename: S:\SOFTWARE\GSTABL7 v2.005.3\GSTABL720053LDK2\program files\GREGEO\G72SW\21-392 section b-b' seismic.PLT
PROBLEM DESCRIPTION: 21-392 Section B-B' SEISMIC
Slope w/ Retaining Walls

BOUNDARY COORDINATES
9 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	53.00	10.00	53.00	1
2	10.00	53.00	10.01	57.00	3
3	10.01	57.00	10.50	57.00	3
4	10.50	57.00	13.01	57.50	2
5	13.01	57.50	22.00	59.20	1
6	22.00	59.20	22.01	63.20	3
7	22.01	63.20	22.50	63.20	3
8	22.50	63.20	25.00	63.20	2
9	25.00	63.20	43.00	63.20	1
10	10.00	53.00	10.01	51.00	1
11	10.50	57.00	10.51	52.00	3
12	13.01	57.50	13.02	52.00	2
13	13.02	51.00	13.03	52.00	1
14	10.71	52.00	13.02	52.00	3
15	10.01	51.00	13.02	51.00	1
16	22.00	59.20	22.01	57.20	1
17	22.50	63.20	22.51	58.20	3
18	25.00	63.20	25.01	58.20	2
19	22.51	58.20	25.01	58.20	3
20	25.01	58.20	25.02	57.20	1
21	22.01	57.20	25.02	57.20	1

User Specified Y-Origin = 44.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	125.0	130.0	50.0	32.0	0.00	0.0	0
2	125.0	130.0	0.0	30.0	0.00	0.0	0
3	150.0	150.0	10000.0	0.0	0.00	0.0	0

Specified Peak Ground Acceleration Coefficient (A) = 0.484(g)
Specified Horizontal Earthquake Coefficient (kh) = 0.150(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
Specified Seismic Pore-Pressure Factor = 0.000
A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
500 Trial Surfaces Have Been Generated.

10 Surface(s) Initiate(s) From Each Of 50 Points Equally Spaced
Along The Ground Surface Between X = 1.00(ft)
and X = 6.00(ft)
Each Surface Terminates Between X = 26.00(ft)
and X = 32.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 46.00(ft)
1.00(ft) Line Segments Define Each Trial Failure Surface.
Restrictions Have Been Imposed Upon The Angle Of Initiation.
The Angle Has Been Restricted Between The Angles Of -45.0
And 10.0 deg.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Total Number of Trial Surfaces Attempted = 500
Number of Trial Surfaces With Valid FS = 500
Statistical Data On All Valid FS Values:
FS Max = 9.410 FS Min = 1.551 FS Ave = 2.943
Standard Deviation = 1.849 Coefficient of Variation = 62.82 %
Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.020	53.000
2	2.927	52.577
3	3.852	52.198
4	4.795	51.865
5	5.752	51.577
6	6.723	51.335
7	7.704	51.141
8	8.693	50.993
9	9.688	50.894
10	10.687	50.843
11	11.687	50.840
12	12.686	50.885
13	13.681	50.978
14	14.671	51.119
15	15.653	51.307
16	16.625	51.542
17	17.585	51.824
18	18.529	52.152
19	19.457	52.525
20	20.366	52.942
21	21.254	53.402
22	22.118	53.905
23	22.958	54.449
24	23.770	55.032
25	24.553	55.654
26	25.305	56.313
27	26.025	57.007
28	26.711	57.735
29	27.360	58.495
30	27.972	59.286
31	28.546	60.105
32	29.079	60.951
33	29.571	61.822
34	30.021	62.715
35	30.237	63.200

Circle Center At X = 11.252 ; Y = 71.601 ; and Radius = 20.766
Factor of Safety
*** 1.551 ***
Individual data on the 49 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	0.9	23.9	0.0	0.0	0.	0.	3.6	0.0	0.0
2	0.9	70.8	0.0	0.0	0.	0.	10.6	0.0	0.0
3	0.9	114.1	0.0	0.0	0.	0.	17.1	0.0	0.0
4	1.0	153.1	0.0	0.0	0.	0.	23.0	0.0	0.0

5	1.0	187.3	0.0	0.0	0.	0.	28.1	0.0	0.0
6	1.0	216.1	0.0	0.0	0.	0.	32.4	0.0	0.0
7	1.0	239.0	0.0	0.0	0.	0.	35.8	0.0	0.0
8	1.0	255.8	0.0	0.0	0.	0.	38.4	0.0	0.0
9	0.3	82.5	0.0	0.0	0.	0.	12.4	0.0	0.0
10	0.0	6.5	0.0	0.0	0.	0.	1.0	0.0	0.0
11	0.5	448.7	0.0	0.0	0.	0.	67.3	0.0	0.0
12	0.0	8.6	0.0	0.0	0.	0.	1.3	0.0	0.0
13	0.2	136.2	0.0	0.0	0.	0.	20.4	0.0	0.0
14	0.0	18.2	0.0	0.0	0.	0.	2.7	0.0	0.0
15	1.0	793.2	0.0	0.0	0.	0.	119.0	0.0	0.0
16	1.0	833.4	0.0	0.0	0.	0.	125.0	0.0	0.0
17	0.3	274.5	0.0	0.0	0.	0.	41.2	0.0	0.0
18	0.0	8.5	0.0	0.0	0.	0.	1.3	0.0	0.0
19	0.0	8.2	0.0	0.0	0.	0.	1.2	0.0	0.0
20	0.7	538.7	0.0	0.0	0.	0.	80.8	0.0	0.0
21	1.0	825.7	0.0	0.0	0.	0.	123.9	0.0	0.0
22	1.0	821.8	0.0	0.0	0.	0.	123.3	0.0	0.0
23	1.0	810.0	0.0	0.0	0.	0.	121.5	0.0	0.0
24	1.0	790.5	0.0	0.0	0.	0.	118.6	0.0	0.0
25	0.9	763.6	0.0	0.0	0.	0.	114.5	0.0	0.0
26	0.9	729.9	0.0	0.0	0.	0.	109.5	0.0	0.0
27	0.9	689.8	0.0	0.0	0.	0.	103.5	0.0	0.0
28	0.9	643.9	0.0	0.0	0.	0.	96.6	0.0	0.0
29	0.7	513.9	0.0	0.0	0.	0.	77.1	0.0	0.0
30	0.0	10.0	0.0	0.0	0.	0.	1.5	0.0	0.0
31	0.1	142.6	0.0	0.0	0.	0.	21.4	0.0	0.0
32	0.4	494.7	0.0	0.0	0.	0.	74.2	0.0	0.0
33	0.0	12.2	0.0	0.0	0.	0.	1.8	0.0	0.0
34	0.4	509.1	0.0	0.0	0.	0.	76.4	0.0	0.0
35	0.8	879.2	0.0	0.0	0.	0.	131.9	0.0	0.0
36	0.8	788.7	0.0	0.0	0.	0.	118.3	0.0	0.0
37	0.4	421.8	0.0	0.0	0.	0.	63.3	0.0	0.0
38	0.0	9.2	0.0	0.0	0.	0.	1.4	0.0	0.0
39	0.0	8.9	0.0	0.0	0.	0.	1.3	0.0	0.0
40	0.3	250.1	0.0	0.0	0.	0.	37.5	0.0	0.0
41	0.7	588.4	0.0	0.0	0.	0.	88.3	0.0	0.0
42	0.7	499.5	0.0	0.0	0.	0.	74.9	0.0	0.0
43	0.6	412.9	0.0	0.0	0.	0.	61.9	0.0	0.0
44	0.6	329.8	0.0	0.0	0.	0.	49.5	0.0	0.0
45	0.6	251.2	0.0	0.0	0.	0.	37.7	0.0	0.0
46	0.5	178.1	0.0	0.0	0.	0.	26.7	0.0	0.0
47	0.5	111.6	0.0	0.0	0.	0.	16.7	0.0	0.0
48	0.4	52.4	0.0	0.0	0.	0.	7.9	0.0	0.0
49	0.2	6.5	0.0	0.0	0.	0.	1.0	0.0	0.0

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	1.816	53.000
2	2.732	52.598
3	3.664	52.236
4	4.612	51.916
5	5.572	51.638
6	6.544	51.403
7	7.525	51.210
8	8.514	51.061
9	9.509	50.956
10	10.507	50.894
11	11.507	50.877
12	12.506	50.903
13	13.504	50.974
14	14.497	51.088
15	15.485	51.246
16	16.464	51.447
17	17.434	51.691
18	18.392	51.978
19	19.337	52.306
20	20.266	52.676
21	21.178	53.087
22	22.071	53.537

23	22.943	54.025
24	23.793	54.552
25	24.619	55.116
26	25.419	55.716
27	26.192	56.350
28	26.937	57.017
29	27.651	57.717
30	28.334	58.448
31	28.984	59.207
32	29.600	59.995
33	30.181	60.809
34	30.725	61.648
35	31.232	62.510
36	31.598	63.200

Circle Center At X = 11.405 ; Y = 73.582 ; and Radius = 22.706

Factor of Safety

*** 1.556 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	3.041	53.000
2	3.938	52.558
3	4.858	52.166
4	5.798	51.826
5	6.756	51.539
6	7.729	51.306
7	8.713	51.128
8	9.705	51.004
9	10.703	50.936
10	11.703	50.924
11	12.702	50.967
12	13.697	51.066
13	14.685	51.220
14	15.663	51.429
15	16.627	51.692
16	17.576	52.009
17	18.506	52.377
18	19.413	52.797
19	20.296	53.267
20	21.151	53.786
21	21.976	54.351
22	22.768	54.961
23	23.525	55.614
24	24.245	56.309
25	24.924	57.042
26	25.562	57.813
27	26.156	58.617
28	26.704	59.454
29	27.205	60.319
30	27.657	61.211
31	28.058	62.127
32	28.408	63.064
33	28.450	63.200

Circle Center At X = 11.425 ; Y = 68.870 ; and Radius = 17.948

Factor of Safety

*** 1.556 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	1.306	53.000
2	2.192	52.537
3	3.101	52.120
4	4.031	51.751
5	4.978	51.430
6	5.941	51.159
7	6.916	50.938
8	7.901	50.768
9	8.894	50.649
10	9.892	50.582
11	10.892	50.566

12	11.891	50.602
13	12.887	50.690
14	13.878	50.829
15	14.859	51.019
16	15.830	51.260
17	16.787	51.551
18	17.727	51.891
19	18.649	52.279
20	19.549	52.714
21	20.426	53.195
22	21.276	53.721
23	22.098	54.290
24	22.890	54.901
25	23.649	55.553
26	24.373	56.242
27	25.061	56.968
28	25.710	57.729
29	26.319	58.522
30	26.886	59.346
31	27.409	60.198
32	27.888	61.076
33	28.321	61.978
34	28.706	62.900
35	28.813	63.200

Circle Center At X = 10.695 ; Y = 69.883 ; and Radius = 19.318

Factor of Safety

*** 1.573 ***

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	3.347	53.000
2	4.239	52.547
3	5.154	52.145
4	6.091	51.796
5	7.046	51.499
6	8.016	51.257
7	8.999	51.070
8	9.990	50.939
9	10.987	50.864
10	11.987	50.845
11	12.986	50.883
12	13.982	50.976
13	14.971	51.126
14	15.949	51.331
15	16.915	51.592
16	17.864	51.906
17	18.795	52.273
18	19.703	52.692
19	20.585	53.161
20	21.441	53.680
21	22.265	54.246
22	23.056	54.857
23	23.812	55.512
24	24.529	56.209
25	25.206	56.945
26	25.841	57.718
27	26.431	58.525
28	26.974	59.365
29	27.469	60.234
30	27.915	61.129
31	28.309	62.048
32	28.651	62.988
33	28.715	63.200

Circle Center At X = 11.821 ; Y = 68.578 ; and Radius = 17.734

Factor of Safety

*** 1.574 ***

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.531	53.000

2	3.438	52.579
3	4.363	52.200
4	5.305	51.864
5	6.261	51.572
6	7.230	51.324
7	8.209	51.121
8	9.197	50.964
9	10.191	50.852
10	11.188	50.786
11	12.188	50.766
12	13.188	50.792
13	14.185	50.864
14	15.178	50.982
15	16.165	51.146
16	17.143	51.354
17	18.110	51.608
18	19.065	51.906
19	20.004	52.248
20	20.928	52.632
21	21.832	53.059
22	22.716	53.527
23	23.577	54.035
24	24.414	54.582
25	25.225	55.167
26	26.008	55.789
27	26.762	56.447
28	27.484	57.138
29	28.174	57.862
30	28.830	58.617
31	29.450	59.401
32	30.034	60.213
33	30.579	61.051
34	31.086	61.914
35	31.552	62.799
36	31.740	63.200

Circle Center At X = 12.121 ; Y = 72.459 ; and Radius = 21.694

Factor of Safety

*** 1.583 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	3.143	53.000
2	4.050	52.579
3	4.976	52.202
4	5.919	51.870
5	6.877	51.583
6	7.848	51.342
7	8.829	51.147
8	9.818	51.000
9	10.813	50.900
10	11.811	50.848
11	12.811	50.843
12	13.810	50.887
13	14.806	50.977
14	15.797	51.116
15	16.779	51.301
16	17.752	51.533
17	18.712	51.812
18	19.659	52.136
19	20.588	52.504
20	21.499	52.917
21	22.389	53.373
22	23.257	53.871
23	24.099	54.409
24	24.915	54.987
25	25.702	55.604
26	26.459	56.257
27	27.184	56.946
28	27.876	57.668
29	28.532	58.423

30	29.151	59.208
31	29.732	60.022
32	30.273	60.863
33	30.774	61.729
34	31.233	62.617
35	31.500	63.200

Circle Center At X = 12.406 ; Y = 71.776 ; and Radius = 20.937

Factor of Safety

*** 1.585 ***

Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	1.918	53.000
2	2.824	52.575
3	3.747	52.191
4	4.686	51.849
5	5.640	51.549
6	6.607	51.292
7	7.584	51.078
8	8.569	50.908
9	9.561	50.783
10	10.558	50.702
11	11.557	50.666
12	12.557	50.674
13	13.556	50.727
14	14.551	50.825
15	15.541	50.967
16	16.523	51.154
17	17.497	51.384
18	18.459	51.657
19	19.407	51.973
20	20.341	52.332
21	21.258	52.731
22	22.155	53.171
23	23.033	53.651
24	23.888	54.170
25	24.718	54.727
26	25.524	55.320
27	26.301	55.948
28	27.050	56.611
29	27.769	57.306
30	28.456	58.033
31	29.109	58.790
32	29.728	59.575
33	30.312	60.388
34	30.858	61.225
35	31.366	62.086
36	31.836	62.969
37	31.945	63.200

Circle Center At X = 11.868 ; Y = 73.016 ; and Radius = 22.353

Factor of Safety

*** 1.586 ***

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.633	53.000
2	3.533	52.565
3	4.454	52.174
4	5.392	51.827
5	6.345	51.526
6	7.312	51.270
7	8.289	51.060
8	9.276	50.898
9	10.269	50.782
10	11.267	50.714
11	12.267	50.694
12	13.267	50.721
13	14.264	50.796
14	15.256	50.918
15	16.242	51.088

16	17.218	51.304
17	18.183	51.567
18	19.134	51.875
19	20.070	52.229
20	20.987	52.626
21	21.885	53.067
22	22.760	53.550
23	23.612	54.074
24	24.438	54.639
25	25.235	55.242
26	26.003	55.882
27	26.740	56.558
28	27.444	57.269
29	28.113	58.012
30	28.745	58.786
31	29.341	59.590
32	29.897	60.421
33	30.413	61.278
34	30.887	62.158
35	31.319	63.060
36	31.378	63.200

Circle Center At X = 12.194 ; Y = 71.660 ; and Radius = 20.967

Factor of Safety

*** 1.590 ***

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	1.714	53.000
2	2.608	52.552
3	3.523	52.147
4	4.455	51.785
5	5.403	51.468
6	6.366	51.196
7	7.340	50.970
8	8.323	50.790
9	9.314	50.656
10	10.311	50.570
11	11.310	50.530
12	12.310	50.538
13	13.308	50.593
14	14.303	50.695
15	15.292	50.844
16	16.273	51.040
17	17.243	51.281
18	18.201	51.568
19	19.144	51.900
20	20.071	52.276
21	20.978	52.696
22	21.865	53.158
23	22.730	53.661
24	23.569	54.204
25	24.382	54.787
26	25.166	55.407
27	25.921	56.064
28	26.643	56.755
29	27.332	57.480
30	27.986	58.236
31	28.604	59.023
32	29.183	59.838
33	29.724	60.679
34	30.224	61.545
35	30.683	62.433
36	31.034	63.200

Circle Center At X = 11.644 ; Y = 71.699 ; and Radius = 21.171

Factor of Safety

*** 1.590 ***

**** END OF GSTABL7 OUTPUT ****

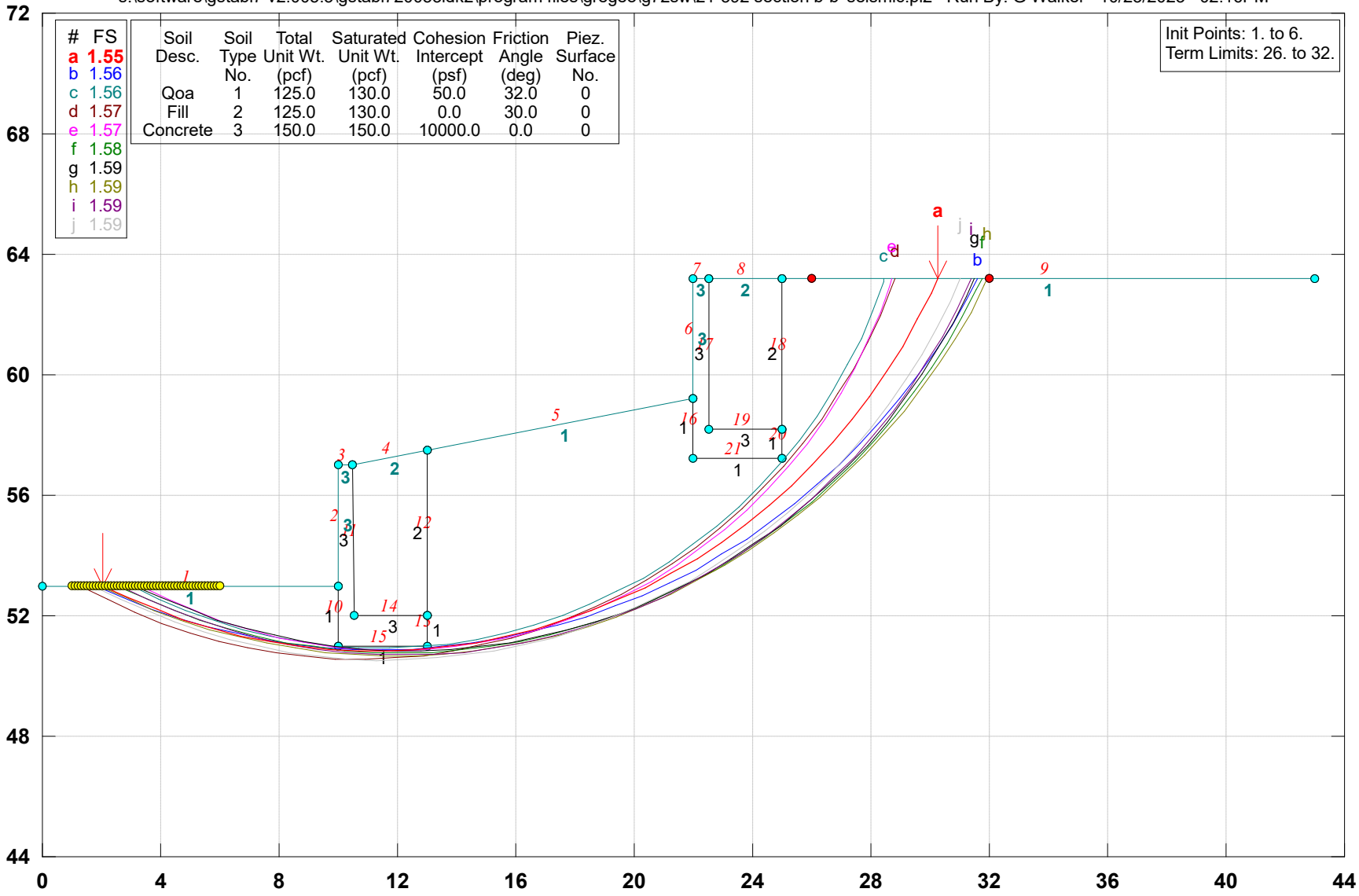
21-392 Section B-B' SEISMIC Slope w/ Retaining Walls

s:\software\gstabl7 v2.005.3\gstabl720053ldk2\program files\gregeo\g72sw\21-392 section b-b' seismic.pl2 Run By: G Walker 10/23/2023 02:16PM

#	FS
a	1.55
b	1.56
c	1.56
d	1.57
e	1.57
f	1.58
g	1.59
h	1.59
i	1.59
j	1.59

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qoa	1	125.0	130.0	50.0	32.0	0
Fill	2	125.0	130.0	0.0	30.0	0
Concrete	3	150.0	150.0	10000.0	0.0	0

Init Points: 1. to 6.
Term Limits: 26. to 32.



GSTABL7 v.2 FSmin=1.55

Safety Factors Are Calculated By The Modified Bishop Method

***** GSTABL7 *****

** GSTABL7 by Dr. Garry H. Gregory, Ph.D.,P.E.,D.GE **
** Original Version 1.0, January 1996; Current Ver. 2.005.3, Feb. 2013 **
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SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

Analysis Run Date: 10/23/2023
Time of Run: 02:13PM
Run By: G Walker
Input Data Filename: S:\SOFTWARE\GSTABL7 v2.005.3\GSTABL720053LDK2\program files\GREGEO\G72SW\21-392 section b-b' static.in
Output Filename: S:\SOFTWARE\GSTABL7 v2.005.3\GSTABL720053LDK2\program files\GREGEO\G72SW\21-392 section b-b' static.OUT
Unit System: English
Plotted Output Filename: S:\SOFTWARE\GSTABL7 v2.005.3\GSTABL720053LDK2\program files\GREGEO\G72SW\21-392 section b-b' static.PLT
PROBLEM DESCRIPTION: 21-392 Section B-B' STATIC
Slope w/ Retaining Walls

BOUNDARY COORDINATES
9 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	53.00	10.00	53.00	1
2	10.00	53.00	10.01	57.00	3
3	10.01	57.00	10.50	57.00	3
4	10.50	57.00	13.01	57.50	2
5	13.01	57.50	22.00	59.20	1
6	22.00	59.20	22.01	63.20	3
7	22.01	63.20	22.50	63.20	3
8	22.50	63.20	25.00	63.20	2
9	25.00	63.20	43.00	63.20	1
10	10.00	53.00	10.01	51.00	1
11	10.50	57.00	10.51	52.00	3
12	13.01	57.50	13.02	52.00	2
13	13.02	51.00	13.03	52.00	1
14	10.71	52.00	13.02	52.00	3
15	10.01	51.00	13.02	51.00	1
16	22.00	59.20	22.01	57.20	1
17	22.50	63.20	22.51	58.20	3
18	25.00	63.20	25.01	58.20	2
19	22.51	58.20	25.01	58.20	3
20	25.01	58.20	25.02	57.20	1
21	22.01	57.20	25.02	57.20	1

User Specified Y-Origin = 44.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	125.0	130.0	50.0	32.0	0.00	0.0	0
2	125.0	130.0	0.0	30.0	0.00	0.0	0
3	150.0	150.0	10000.0	0.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
500 Trial Surfaces Have Been Generated.
10 Surface(s) Initiate(s) From Each Of 50 Points Equally Spaced
Along The Ground Surface Between X = 1.00(ft)
and X = 6.00(ft)
Each Surface Terminates Between X = 26.00(ft)

and X = 32.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 46.00(ft)
1.00(ft) Line Segments Define Each Trial Failure Surface.
Restrictions Have Been Imposed Upon The Angle Of Initiation.
The Angle Has Been Restricted Between The Angles Of -45.0
And 10.0 deg.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Total Number of Trial Surfaces Attempted = 500
Number of Trial Surfaces With Valid FS = 500
Statistical Data On All Valid FS Values:
FS Max = 12.069 FS Min = 2.102 FS Ave = 3.922
Standard Deviation = 2.371 Coefficient of Variation = 60.45 %
Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	3.041	53.000
2	3.938	52.558
3	4.858	52.166
4	5.798	51.826
5	6.756	51.539
6	7.729	51.306
7	8.713	51.128
8	9.705	51.004
9	10.703	50.936
10	11.703	50.924
11	12.702	50.967
12	13.697	51.066
13	14.685	51.220
14	15.663	51.429
15	16.627	51.692
16	17.576	52.009
17	18.506	52.377
18	19.413	52.797
19	20.296	53.267
20	21.151	53.786
21	21.976	54.351
22	22.768	54.961
23	23.525	55.614
24	24.245	56.309
25	24.924	57.042
26	25.562	57.813
27	26.156	58.617
28	26.704	59.454
29	27.205	60.319
30	27.657	61.211
31	28.058	62.127
32	28.408	63.064
33	28.450	63.200

Circle Center At X = 11.425 ; Y = 68.870 ; and Radius = 17.948
Factor of Safety
*** 2.102 ***
Individual data on the 47 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	0.9	24.8	0.0	0.0	0.	0.	0.0	0.0	0.0
2	0.9	73.4	0.0	0.0	0.	0.	0.0	0.0	0.0
3	0.9	118.0	0.0	0.0	0.	0.	0.0	0.0	0.0
4	1.0	157.7	0.0	0.0	0.	0.	0.0	0.0	0.0
5	1.0	191.7	0.0	0.0	0.	0.	0.0	0.0	0.0
6	1.0	219.3	0.0	0.0	0.	0.	0.0	0.0	0.0
7	1.0	239.9	0.0	0.0	0.	0.	0.0	0.0	0.0
8	0.3	74.0	0.0	0.0	0.	0.	0.0	0.0	0.0
9	0.0	5.8	0.0	0.0	0.	0.	0.0	0.0	0.0
10	0.5	443.0	0.0	0.0	0.	0.	0.0	0.0	0.0

11	0.0	8.4	0.0	0.0	0.	0.	0.0	0.0	0.0
12	0.2	146.4	0.0	0.0	0.	0.	0.0	0.0	0.0
13	0.0	5.6	0.0	0.0	0.	0.	0.0	0.0	0.0
14	1.0	795.4	0.0	0.0	0.	0.	0.0	0.0	0.0
15	1.0	823.4	0.0	0.0	0.	0.	0.0	0.0	0.0
16	0.3	257.8	0.0	0.0	0.	0.	0.0	0.0	0.0
17	0.0	8.4	0.0	0.0	0.	0.	0.0	0.0	0.0
18	0.0	8.1	0.0	0.0	0.	0.	0.0	0.0	0.0
19	0.7	544.6	0.0	0.0	0.	0.	0.0	0.0	0.0
20	1.0	812.7	0.0	0.0	0.	0.	0.0	0.0	0.0
21	1.0	804.9	0.0	0.0	0.	0.	0.0	0.0	0.0
22	1.0	787.8	0.0	0.0	0.	0.	0.0	0.0	0.0
23	0.9	761.7	0.0	0.0	0.	0.	0.0	0.0	0.0
24	0.9	727.1	0.0	0.0	0.	0.	0.0	0.0	0.0
25	0.9	684.9	0.0	0.0	0.	0.	0.0	0.0	0.0
26	0.9	635.8	0.0	0.0	0.	0.	0.0	0.0	0.0
27	0.9	580.7	0.0	0.0	0.	0.	0.0	0.0	0.0
28	0.8	520.7	0.0	0.0	0.	0.	0.0	0.0	0.0
29	0.0	14.5	0.0	0.0	0.	0.	0.0	0.0	0.0
30	0.0	9.3	0.0	0.0	0.	0.	0.0	0.0	0.0
31	0.5	602.4	0.0	0.0	0.	0.	0.0	0.0	0.0
32	0.0	11.4	0.0	0.0	0.	0.	0.0	0.0	0.0
33	0.3	275.7	0.0	0.0	0.	0.	0.0	0.0	0.0
34	0.8	767.7	0.0	0.0	0.	0.	0.0	0.0	0.0
35	0.7	669.0	0.0	0.0	0.	0.	0.0	0.0	0.0
36	0.7	571.3	0.0	0.0	0.	0.	0.0	0.0	0.0
37	0.1	59.6	0.0	0.0	0.	0.	0.0	0.0	0.0
38	0.0	7.8	0.0	0.0	0.	0.	0.0	0.0	0.0
39	0.0	7.9	0.0	0.0	0.	0.	0.0	0.0	0.0
40	0.5	387.0	0.0	0.0	0.	0.	0.0	0.0	0.0
41	0.6	370.1	0.0	0.0	0.	0.	0.0	0.0	0.0
42	0.5	285.4	0.0	0.0	0.	0.	0.0	0.0	0.0
43	0.5	207.4	0.0	0.0	0.	0.	0.0	0.0	0.0
44	0.5	137.5	0.0	0.0	0.	0.	0.0	0.0	0.0
45	0.4	76.8	0.0	0.0	0.	0.	0.0	0.0	0.0
46	0.3	26.4	0.0	0.0	0.	0.	0.0	0.0	0.0
47	0.0	0.4	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 33 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	3.347	53.000
2	4.239	52.547
3	5.154	52.145
4	6.091	51.796
5	7.046	51.499
6	8.016	51.257
7	8.999	51.070
8	9.990	50.939
9	10.987	50.864
10	11.987	50.845
11	12.986	50.883
12	13.982	50.976
13	14.971	51.126
14	15.949	51.331
15	16.915	51.592
16	17.864	51.906
17	18.795	52.273
18	19.703	52.692
19	20.585	53.161
20	21.441	53.680
21	22.265	54.246
22	23.056	54.857
23	23.812	55.512
24	24.529	56.209
25	25.206	56.945
26	25.841	57.718
27	26.431	58.525
28	26.974	59.365
29	27.469	60.234
30	27.915	61.129

31	28.309	62.048
32	28.651	62.988
33	28.715	63.200

Circle Center At X = 11.821 ; Y = 68.578 ; and Radius = 17.734

Factor of Safety

*** 2.127 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.020	53.000
2	2.927	52.577
3	3.852	52.198
4	4.795	51.865
5	5.752	51.577
6	6.723	51.335
7	7.704	51.141
8	8.693	50.993
9	9.688	50.894
10	10.687	50.843
11	11.687	50.840
12	12.686	50.885
13	13.681	50.978
14	14.671	51.119
15	15.653	51.307
16	16.625	51.542
17	17.585	51.824
18	18.529	52.152
19	19.457	52.525
20	20.366	52.942
21	21.254	53.402
22	22.118	53.905
23	22.958	54.449
24	23.770	55.032
25	24.553	55.654
26	25.305	56.313
27	26.025	57.007
28	26.711	57.735
29	27.360	58.495
30	27.972	59.286
31	28.546	60.105
32	29.079	60.951
33	29.571	61.822
34	30.021	62.715
35	30.237	63.200

Circle Center At X = 11.252 ; Y = 71.601 ; and Radius = 20.766

Factor of Safety

*** 2.127 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	1.306	53.000
2	2.192	52.537
3	3.101	52.120
4	4.031	51.751
5	4.978	51.430
6	5.941	51.159
7	6.916	50.938
8	7.901	50.768
9	8.894	50.649
10	9.892	50.582
11	10.892	50.566
12	11.891	50.602
13	12.887	50.690
14	13.878	50.829
15	14.859	51.019
16	15.830	51.260
17	16.787	51.551
18	17.727	51.891
19	18.649	52.279
20	19.549	52.714

21	20.426	53.195
22	21.276	53.721
23	22.098	54.290
24	22.890	54.901
25	23.649	55.553
26	24.373	56.242
27	25.061	56.968
28	25.710	57.729
29	26.319	58.522
30	26.886	59.346
31	27.409	60.198
32	27.888	61.076
33	28.321	61.978
34	28.706	62.900
35	28.813	63.200

Circle Center At X = 10.695 ; Y = 69.883 ; and Radius = 19.318

Factor of Safety

*** 2.142 ***

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.122	53.000
2	3.001	52.522
3	3.904	52.093
4	4.830	51.715
5	5.775	51.388
6	6.736	51.113
7	7.712	50.892
8	8.698	50.725
9	9.691	50.613
10	10.690	50.556
11	11.690	50.553
12	12.688	50.606
13	13.682	50.714
14	14.669	50.876
15	15.646	51.092
16	16.608	51.362
17	17.555	51.685
18	18.482	52.059
19	19.388	52.484
20	20.268	52.958
21	21.121	53.479
22	21.944	54.047
23	22.735	54.660
24	23.491	55.315
25	24.209	56.010
26	24.888	56.744
27	25.525	57.515
28	26.120	58.319
29	26.668	59.155
30	27.170	60.020
31	27.624	60.911
32	28.028	61.826
33	28.380	62.762
34	28.519	63.200

Circle Center At X = 11.231 ; Y = 68.682 ; and Radius = 18.136

Factor of Safety

*** 2.155 ***

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	1.816	53.000
2	2.732	52.598
3	3.664	52.236
4	4.612	51.916
5	5.572	51.638
6	6.544	51.403
7	7.525	51.210
8	8.514	51.061
9	9.509	50.956

10	10.507	50.894
11	11.507	50.877
12	12.506	50.903
13	13.504	50.974
14	14.497	51.088
15	15.485	51.246
16	16.464	51.447
17	17.434	51.691
18	18.392	51.978
19	19.337	52.306
20	20.266	52.676
21	21.178	53.087
22	22.071	53.537
23	22.943	54.025
24	23.793	54.552
25	24.619	55.116
26	25.419	55.716
27	26.192	56.350
28	26.937	57.017
29	27.651	57.717
30	28.334	58.448
31	28.984	59.207
32	29.600	59.995
33	30.181	60.809
34	30.725	61.648
35	31.232	62.510
36	31.598	63.200

Circle Center At X = 11.405 ; Y = 73.582 ; and Radius = 22.706

Factor of Safety

*** 2.158 ***

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.837	53.000
2	3.716	52.523
3	4.620	52.096
4	5.546	51.720
5	6.493	51.396
6	7.455	51.126
7	8.432	50.910
8	9.419	50.749
9	10.413	50.643
10	11.412	50.593
11	12.412	50.599
12	13.410	50.661
13	14.403	50.778
14	15.388	50.951
15	16.362	51.178
16	17.321	51.459
17	18.264	51.794
18	19.186	52.181
19	20.085	52.619
20	20.958	53.106
21	21.803	53.641
22	22.616	54.223
23	23.396	54.849
24	24.140	55.518
25	24.845	56.227
26	25.509	56.974
27	26.130	57.758
28	26.707	58.575
29	27.237	59.423
30	27.719	60.299
31	28.151	61.200
32	28.533	62.125
33	28.862	63.069
34	28.899	63.200

Circle Center At X = 11.807 ; Y = 68.476 ; and Radius = 17.888

Factor of Safety

*** 2.167 ***

Failure Surface Specified By 34 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.429	53.000
2	3.299	52.507
3	4.196	52.065
4	5.117	51.676
5	6.059	51.340
6	7.018	51.059
7	7.993	50.833
8	8.978	50.664
9	9.972	50.552
10	10.970	50.497
11	11.970	50.500
12	12.969	50.560
13	13.962	50.677
14	14.946	50.852
15	15.919	51.082
16	16.878	51.369
17	17.818	51.710
18	18.737	52.104
19	19.631	52.551
20	20.499	53.048
21	21.336	53.594
22	22.141	54.188
23	22.910	54.827
24	23.642	55.509
25	24.333	56.232
26	24.981	56.994
27	25.584	57.791
28	26.140	58.622
29	26.648	59.484
30	27.105	60.373
31	27.511	61.287
32	27.863	62.223
33	28.160	63.178
34	28.166	63.200

Circle Center At X = 11.424 ; Y = 67.873 ; and Radius = 17.382

Factor of Safety

*** 2.171 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	3.143	53.000
2	4.050	52.579
3	4.976	52.202
4	5.919	51.870
5	6.877	51.583
6	7.848	51.342
7	8.829	51.147
8	9.818	51.000
9	10.813	50.900
10	11.811	50.848
11	12.811	50.843
12	13.810	50.887
13	14.806	50.977
14	15.797	51.116
15	16.779	51.301
16	17.752	51.533
17	18.712	51.812
18	19.659	52.136
19	20.588	52.504
20	21.499	52.917
21	22.389	53.373
22	23.257	53.871
23	24.099	54.409
24	24.915	54.987
25	25.702	55.604
26	26.459	56.257
27	27.184	56.946

28	27.876	57.668
29	28.532	58.423
30	29.151	59.208
31	29.732	60.022
32	30.273	60.863
33	30.774	61.729
34	31.233	62.617
35	31.500	63.200

Circle Center At X = 12.406 ; Y = 71.776 ; and Radius = 20.937

Factor of Safety

*** 2.187 ***

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.531	53.000
2	3.438	52.579
3	4.363	52.200
4	5.305	51.864
5	6.261	51.572
6	7.230	51.324
7	8.209	51.121
8	9.197	50.964
9	10.191	50.852
10	11.188	50.786
11	12.188	50.766
12	13.188	50.792
13	14.185	50.864
14	15.178	50.982
15	16.165	51.146
16	17.143	51.354
17	18.110	51.608
18	19.065	51.906
19	20.004	52.248
20	20.928	52.632
21	21.832	53.059
22	22.716	53.527
23	23.577	54.035
24	24.414	54.582
25	25.225	55.167
26	26.008	55.789
27	26.762	56.447
28	27.484	57.138
29	28.174	57.862
30	28.830	58.617
31	29.450	59.401
32	30.034	60.213
33	30.579	61.051
34	31.086	61.914
35	31.552	62.799
36	31.740	63.200

Circle Center At X = 12.121 ; Y = 72.459 ; and Radius = 21.694

Factor of Safety

*** 2.192 ***

**** END OF GSTABL7 OUTPUT ****

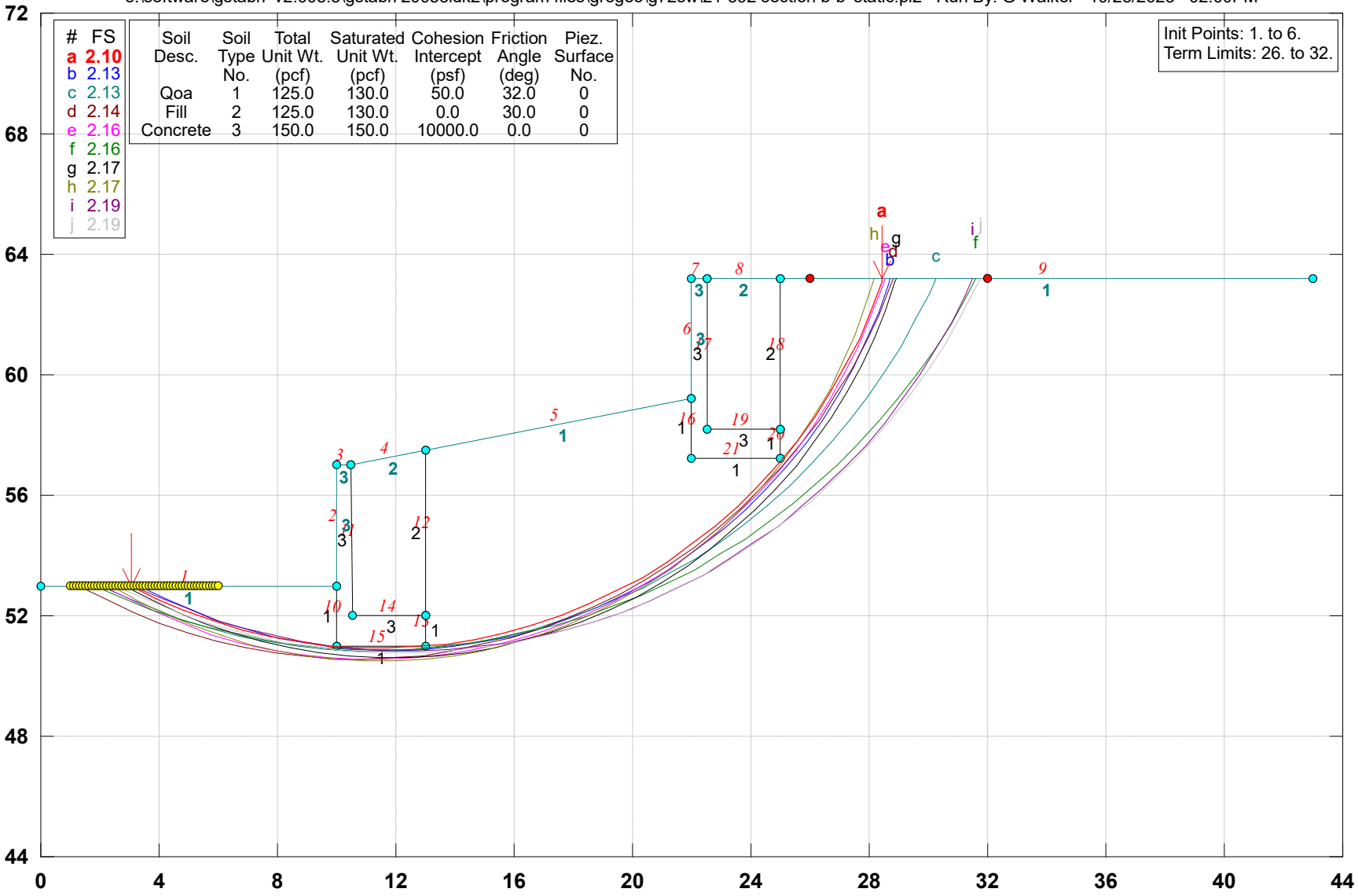
21-392 Section B-B' STATIC Slope w/ Retaining Walls

s:\software\gstabl7 v2.005.3\gstabl720053ldk2\program files\gregeo\g72sw\21-392 section b-b' static.pl2 Run By: G Walker 10/23/2023 02:00PM

#	FS
a	2.10
b	2.13
c	2.13
d	2.14
e	2.16
f	2.16
g	2.17
h	2.17
i	2.19
j	2.19

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qoa	1	125.0	130.0	50.0	32.0	0
Fill	2	125.0	130.0	0.0	30.0	0
Concrete	3	150.0	150.0	10000.0	0.0	0

Init Points: 1. to 6.
Term Limits: 26. to 32.



GSTABL7 v.2 FSmin=2.10

Safety Factors Are Calculated By The Modified Bishop Method

APPENDIX G

STANDARD GRADING SPECIFICATIONS

STANDARD GRADING SPECIFICATIONS

These specifications present the usual and minimum requirements for projects on which Petra Geosciences, Inc. (Petra) is the geotechnical consultant. No deviation from these specifications will be allowed, except where specifically superseded in the preliminary geology and soils report, or in other written communication signed by the Soils Engineer and Engineering Geologist of record (Geotechnical Consultant).

I. GENERAL

A. The Geotechnical Consultant is the Owner's or Builder's representative on the project. For the purpose of these specifications, participation by the Geotechnical Consultant includes that observation performed by any person or persons employed by, and responsible to, the licensed Soils Engineer and Engineering Geologist signing the soils report.

B. The contractor should prepare and submit to the Owner and Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "spreads" and the estimated quantities of daily earthwork to be performed prior to the commencement of grading. This work plan should be reviewed by the Geotechnical Consultant to schedule personnel to perform the appropriate level of observation, mapping, and compaction testing as necessary.

C. All clearing, site preparation, or earthwork performed on the project shall be conducted by the Contractor in accordance with the recommendations presented in the geotechnical report and under the observation of the Geotechnical Consultant.

D. It is the Contractor's responsibility to prepare the ground surface to receive the fills to the satisfaction of the Geotechnical Consultant and to place, spread, mix, water, and compact the fill in accordance with the specifications of the Geotechnical Consultant. The Contractor shall also remove all material considered unsatisfactory by the Geotechnical Consultant.

E. It is the Contractor's responsibility to have suitable and sufficient compaction equipment on the job site to handle the amount of fill being placed. If necessary, excavation equipment will be shut down to permit completion of compaction to project specifications. Sufficient watering apparatus will also be provided by the Contractor, with due consideration for the fill material, rate of placement, and time of year.

F. After completion of grading a report will be submitted by the Geotechnical Consultant.

II. SITE PREPARATION

A. Clearing and Grubbing

1. All vegetation such as trees, brush, grass, roots, and deleterious material shall be disposed of offsite. This removal shall be concluded prior to placing fill.

2. Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipe lines, etc., are to be removed or treated in a manner prescribed by the Geotechnical Consultant.

III. FILL AREA PREPARATION

A. Remedial Removals/Overexcavations

1. Remedial removals, as well as overexcavation for remedial purposes, shall be evaluated by the Geotechnical Consultant. Remedial removal depths presented in the geotechnical report and shown on the geotechnical plans are estimates only. The actual extent of removal should be determined by the Geotechnical Consultant based on the conditions exposed during grading. All soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as determined by the Geotechnical Consultant.

2. Soil, alluvium, or bedrock materials determined by the Soils Engineer as being unsuitable for placement in compacted fills shall be removed from the site. Any material incorporated as a part of a compacted fill must be approved by the Geotechnical Consultant.

3. Should potentially hazardous materials be encountered, the Contractor should stop work in the affected area. An environmental consultant specializing in hazardous materials should be notified immediately for evaluation and handling of these materials prior to continuing work in the affected area.

B. Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide sufficient survey control for determining locations and elevations of processed areas, keys, and benches.

C. Processing

After the ground surface to receive fill has been declared satisfactory for support of fill by the Geotechnical Consultant, it shall be scarified to a minimum depth of 6 inches and until the ground surface is uniform and free from ruts, hollows, hummocks, or other uneven features which may prevent uniform compaction.

The scarified ground surface shall then be brought to optimum moisture, mixed as required, and compacted to a minimum relative compaction of 90 percent.

D. Subdrains

Subdrainage devices shall be constructed in compliance with the ordinances of the controlling governmental agency, and/or with the recommendations of the Geotechnical Consultant. (Typical Canyon Subdrain details are given on Plate SG-1).

E. Cut/Fill & Deep Fill/Shallow Fill Transitions

In order to provide uniform bearing conditions in cut/fill and deep fill/shallow fill transition lots, the cut and shallow fill portions of the lot should be overexcavated to the depths and the horizontal limits discussed in the approved geotechnical report and replaced with compacted fill. (Typical details are given on Plate SG-7.)

STANDARD GRADING SPECIFICATIONS

IV. COMPACTED FILL MATERIAL

A. General

Materials excavated on the property may be utilized in the fill, provided each material has been determined to be suitable by the Geotechnical Consultant. Material to be used for fill shall be essentially free of organic material and other deleterious substances. Roots, tree branches, and other matter missed during clearing shall be removed from the fill as recommended by the Geotechnical Consultant. Material that is spongy, subject to decay, or otherwise considered unsuitable shall not be used in the compacted fill.

Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

B. Oversize Materials

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches in diameter, shall be taken offsite or placed in accordance with the recommendations of the Geotechnical Consultant in areas designated as suitable for rock disposal (Typical details for Rock Disposal are given on Plate SG-4).

Rock fragments less than 12 inches in diameter may be utilized in the fill provided, they are not nested or placed in concentrated pockets; they are surrounded by compacted fine grained soil material and the distribution of rocks is approved by the Geotechnical Consultant.

C. Laboratory Testing

Representative samples of materials to be utilized as compacted fill shall be analyzed by the laboratory of the Geotechnical Consultant to determine their physical properties. If any material other than that previously tested is encountered during grading, the appropriate analysis of this material shall be conducted by the Geotechnical Consultant as soon as possible.

D. Import

If importing of fill material is required for grading, proposed import material should meet the requirements of the previous section. The import source shall be given to the Geotechnical Consultant at least 2 working days prior to importing so that appropriate tests can be performed and its suitability determined.

V. FILL PLACEMENT AND COMPACTION

A. Fill Layers

Material used in the compacting process shall be evenly spread, watered, processed, and compacted in thin lifts not to exceed 6 inches in thickness to obtain a uniformly dense layer. The fill shall be placed and compacted on a horizontal plane, unless otherwise approved by the Geotechnical Consultant.

B. Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly above optimum moisture content.

C. Compaction

Each layer shall be compacted to 90 percent of the maximum density in compliance with the testing method specified by the controlling governmental agency. (In general, ASTM D 1557-02, will be used.)

If compaction to a lesser percentage is authorized by the controlling governmental agency because of a specific land use or expansive soils condition, the area to received fill compacted to less than 90 percent shall either be delineated on the grading plan or appropriate reference made to the area in the soils report.

D. Failing Areas

If the moisture content or relative density varies from that required by the Geotechnical Consultant, the Contractor shall rework the fill until it is approved by the Geotechnical Consultant.

E. Benching

All fills shall be keyed and benched through all topsoil, colluvium, alluvium or creep material, into sound bedrock or firm material where the slope receiving fill exceeds a ratio of 5 horizontal to 1 vertical, in accordance with the recommendations of the Geotechnical Consultant.

VI. SLOPES

A. Fill Slopes

The contractor will be required to obtain a minimum relative compaction of 90 percent out to the finish slope face of fill slopes, buttresses, and stabilization fills. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required compaction.

B. Side Hill Fills

The key for side hill fills shall be a minimum of 15 feet within bedrock or firm materials, unless otherwise specified in the soils report. (See detail on Plate SG-5.)

C. Fill-Over-Cut Slopes

Fill-over-cut slopes shall be properly keyed through topsoil, colluvium or creep material into rock or firm materials, and the transition shall be stripped of all soils prior to placing fill. (see detail on Plate SG-6).

D. Landscaping

All fill slopes should be planted or protected from erosion by other methods specified in the soils report.

E. Cut Slopes

1. The Geotechnical Consultant should observe all cut slopes at vertical intervals not exceeding 10 feet.

2. If any conditions not anticipated in the preliminary report such as perched water, seepage, lenticular or confined strata of a potentially adverse nature, unfavorably inclined bedding, joints or fault planes are encountered during grading, these conditions shall be evaluated by the Geotechnical Consultant, and recommendations shall be made to treat these problems (Typical details for stabilization of a portion of a cut slope are given in Plates SG-2 and SG-3.).

3. Cut slopes that face in the same direction as the prevailing drainage shall be protected from slope wash by a non-erodible interceptor swale placed at the top of the slope.

4. Unless otherwise specified in the soils and geological report, no cut slopes shall be excavated higher or steeper than that allowed by the ordinances of controlling governmental agencies.

5. Drainage terraces shall be constructed in compliance with the ordinances of controlling governmental agencies, or with the recommendations of the Geotechnical Consultant.

VII. GRADING OBSERVATION

A. General

All cleanouts, processed ground to receive fill, key excavations, subdrains, and rock disposals must be observed and approved by the Geotechnical Consultant prior to placing any fill. It shall be the Contractor's responsibility to notify the Geotechnical Consultant when such areas are ready.

B. Compaction Testing

Observation of the fill placement shall be provided by the Geotechnical Consultant during the progress of grading. Location and frequency of tests shall be at the Consultants discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations may be selected to verify adequacy of compaction levels in areas that are judged to be susceptible to inadequate compaction.

C. Frequency of Compaction Testing

In general, density tests should be made at intervals not exceeding 2 feet of fill height or every 1000 cubic yards of fill placed. This criteria will vary depending on soil conditions and the size of the job. In any event, an adequate number of field density tests shall be made to verify that the required compaction is being achieved.

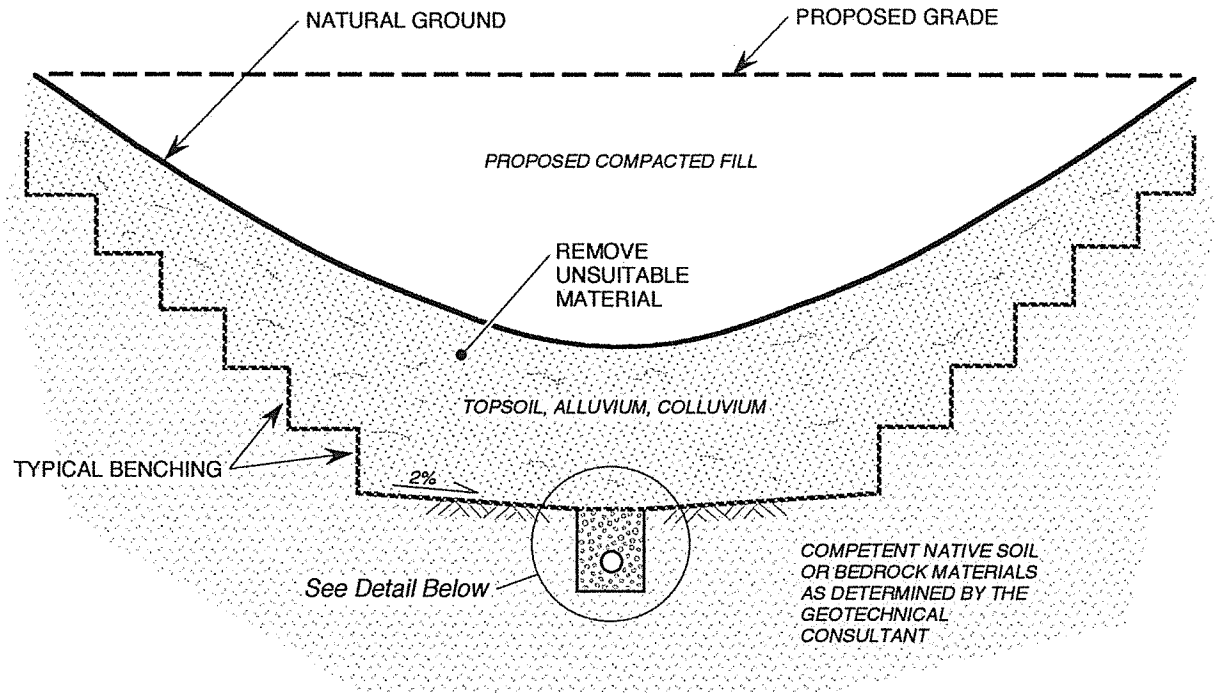
VIII. CONSTRUCTION CONSIDERATIONS

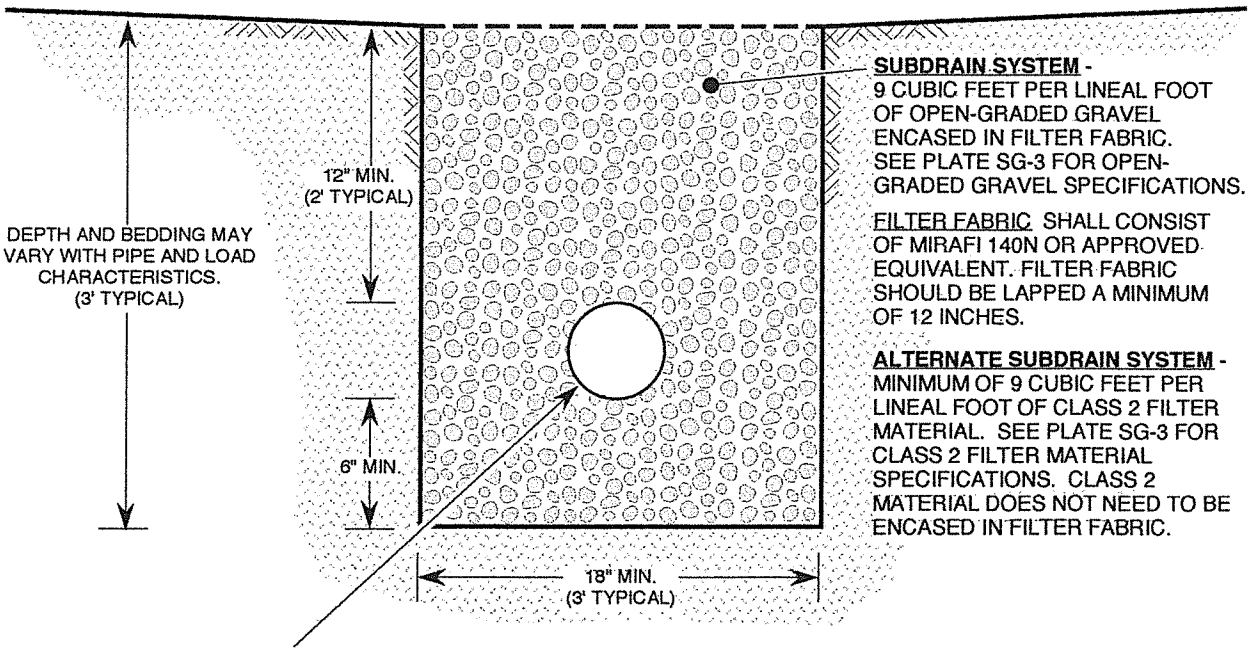
A. Erosion control measures, when necessary, shall be provided by the Contractor during grading and prior to the completion and construction of permanent drainage controls.

B. Upon completion of grading and termination of observations by the Geotechnical Consultant, no further filling or excavating, including that necessary for footings, foundations, large tree wells, retaining walls, or other features shall be performed without the approval of the Geotechnical Consultant.

C. Care shall be taken by the Contractor during final grading to preserve any berms, drainage terraces, interceptor swales, or other devices of permanent nature on or adjacent to the property.

S:\!BOILERS-WORK\REPORT INSERTS\STANDARD GRADING SPECS





SUBDRAIN SYSTEM - 9 CUBIC FEET PER LINEAL FOOT OF OPEN-GRADED GRAVEL ENCASED IN FILTER FABRIC. SEE PLATE SG-3 FOR OPEN-GRADED GRAVEL SPECIFICATIONS.

FILTER FABRIC SHALL CONSIST OF MIRAFI 140N OR APPROVED EQUIVALENT. FILTER FABRIC SHOULD BE LAPPED A MINIMUM OF 12 INCHES.

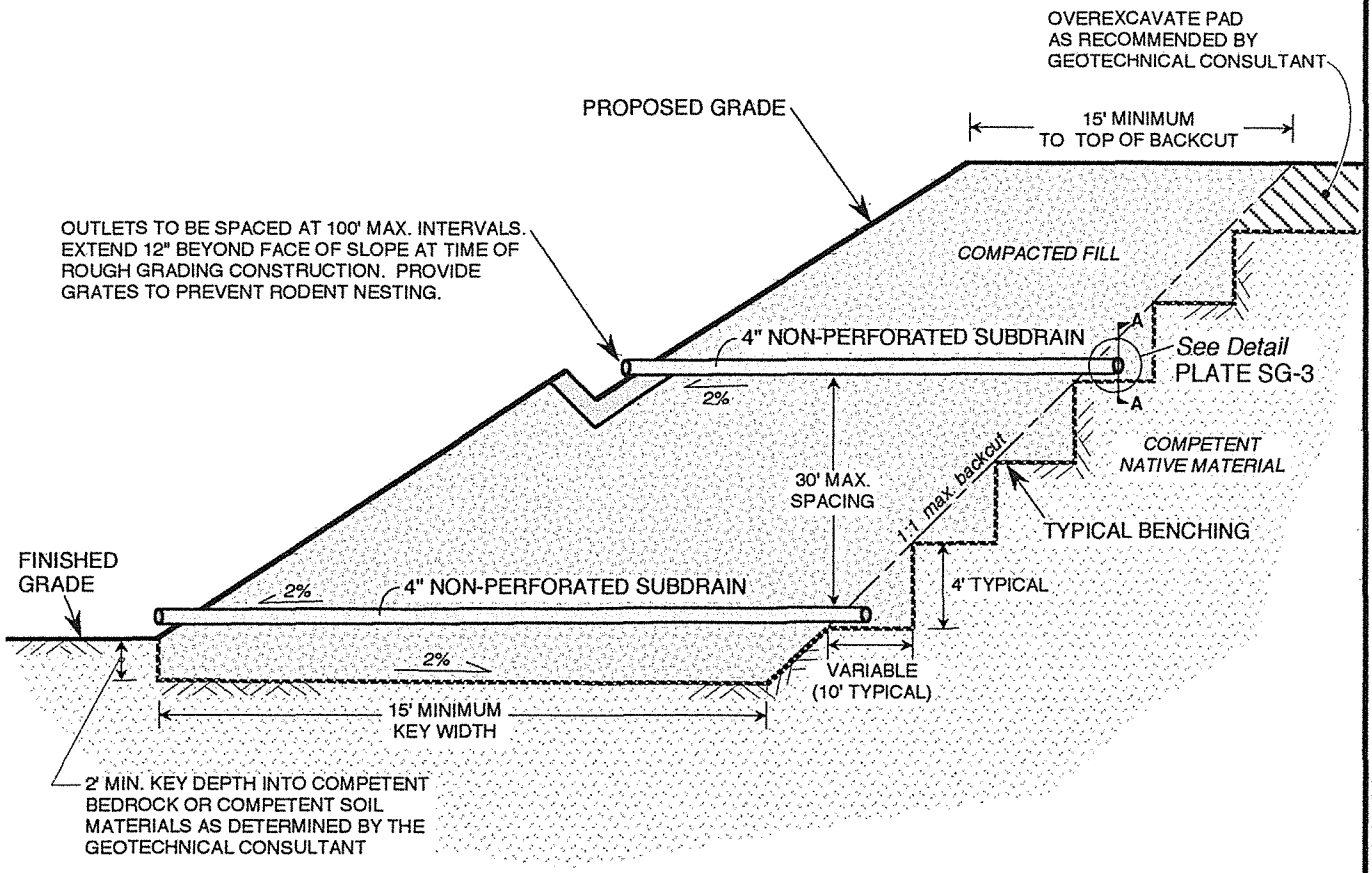
ALTERNATE SUBDRAIN SYSTEM - MINIMUM OF 9 CUBIC FEET PER LINEAL FOOT OF CLASS 2 FILTER MATERIAL. SEE PLATE SG-3 FOR CLASS 2 FILTER MATERIAL SPECIFICATIONS. CLASS 2 MATERIAL DOES NOT NEED TO BE ENCASED IN FILTER FABRIC.

MINIMUM 6-INCH DIAMETER PVC SCHEDULE 40, OR ABS SDR-35 WITH A MINIMUM OF EIGHT 1/4-INCH DIAMETER PERFORATIONS PER LINEAL FOOT IN BOTTOM HALF OF PIPE. PIPE TO BE LAID WITH PERFORATIONS FACING DOWN.

NOTES:

1. FOR CONTINUOUS RUNS IN EXCESS OF 500 FEET USE 8-INCH DIAMETER PIPE.
2. FINAL 20 FEET OF PIPE AT OUTLET SHALL BE NON-PERFORATED AND BACKFILLED WITH FINE-GRAINED MATERIAL.

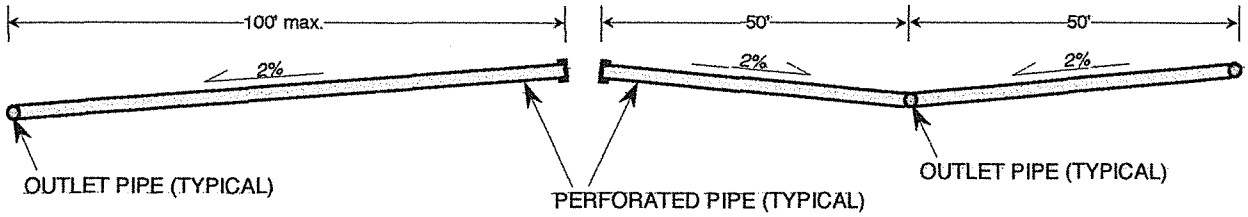
PETRA	CANYON SUBDRAIN DETAIL	PLATE SG-1



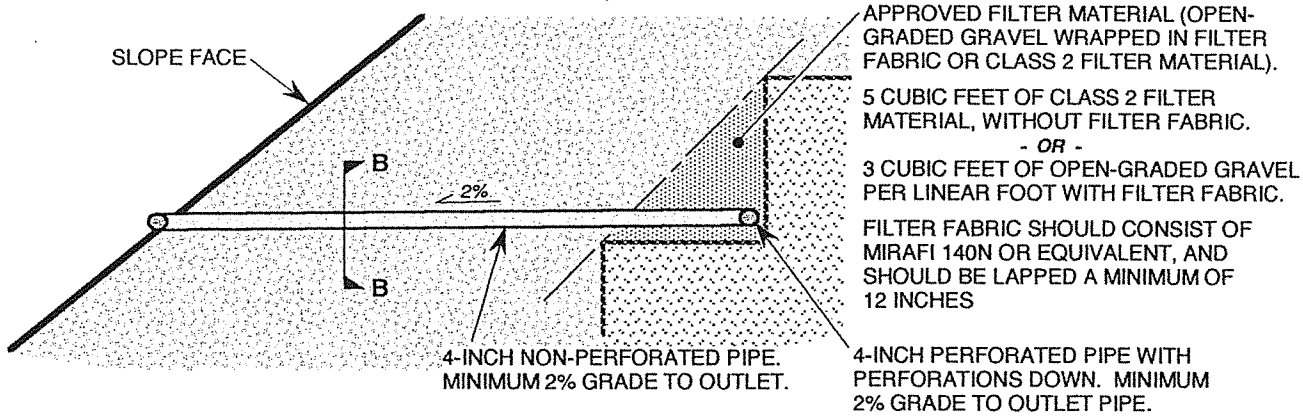
NOTES:

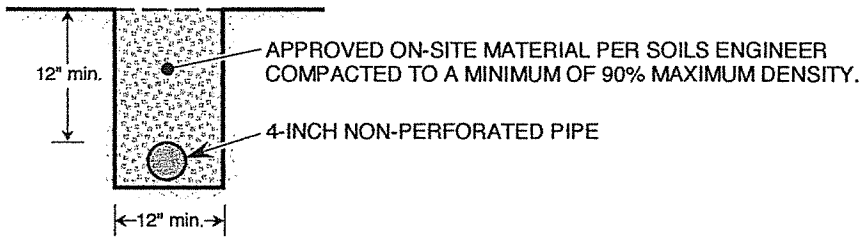
1. 30' MAXIMUM VERTICAL SPACING BETWEEN SUBDRAIN SYSTEMS.
2. 100' MAXIMUM HORIZONTAL DISTANCE BETWEEN NON-PERFORATED OUTLET PIPES. *(See Below)*
3. MINIMUM GRADIENT OF 2% FOR ALL PERFORATED AND NON-PERFORATED PIPE.

SECTION A-A (PERFORATED PIPE PROFILE)



PETRA	BUTTRESS OR STABILIZATION FILL DETAIL	PLATE SG-2





SECTION B-B (OUTLET PIPE)

PIPE SPECIFICATIONS:

1. 4-INCH MINIMUM DIAMETER, PVC SCHEDULE 40 OR ABS SDR-35.
2. FOR PERFORATED PIPE, MINIMUM 8 PERFORATIONS PER FOOT ON BOTTOM HALF OF PIPE.

FILTER MATERIAL/FABRIC SPECIFICATIONS:

OPEN-GRADED GRAVEL ENCASED IN FILTER FABRIC.
(MIRAFI 140N OR EQUIVALENT)

OPEN-GRADED GRAVEL

SIEVE SIZE	PERCENT PASSING
1 1/2-INCH	88 - 100
1-INCH	5 - 40
3/4-INCH	0 - 17
3/8-INCH	0 - 7
No. 200	0 - 3

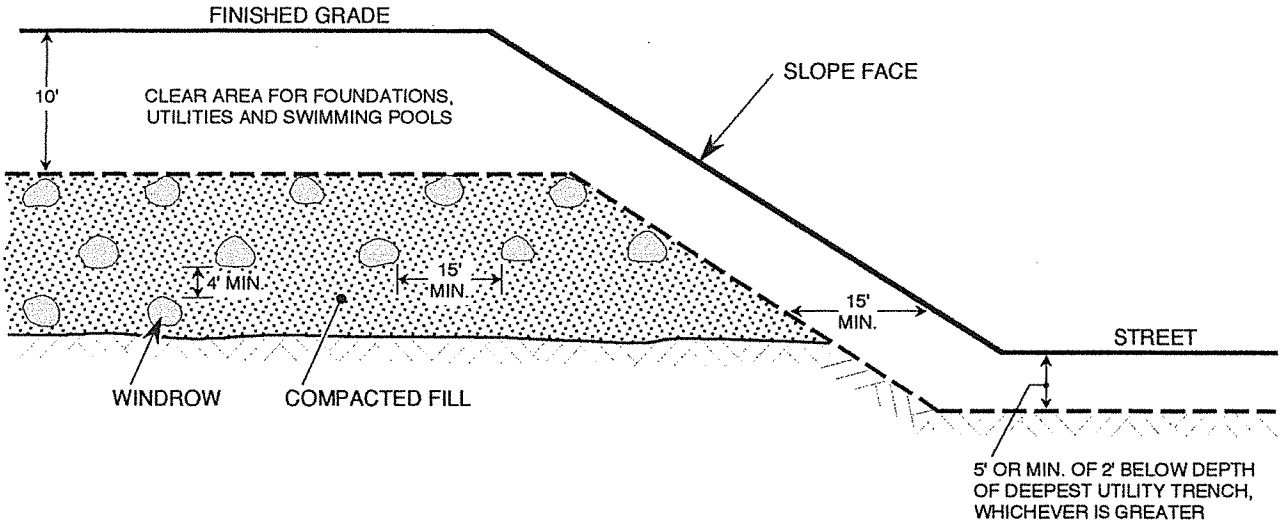
ALTERNATE:

CLASS 2 PERMEABLE FILTER MATERIAL PER CALTRANS STANDARD SPECIFICATION 68-1.025.

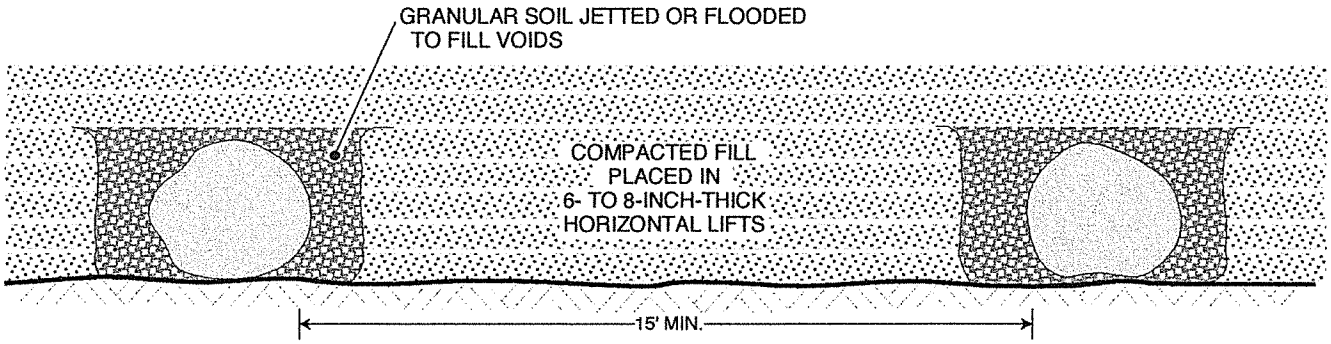
CLASS 2 FILTER MATERIAL

SIEVE SIZE	PERCENT PASSING
1-INCH	100
3/4-INCH	90 - 100
3/8-INCH	40 - 100
No. 4	25 - 40
No. 8	18 - 33
No. -30	5 - 15
No. -50	0 - 7
No. 200	0 - 3

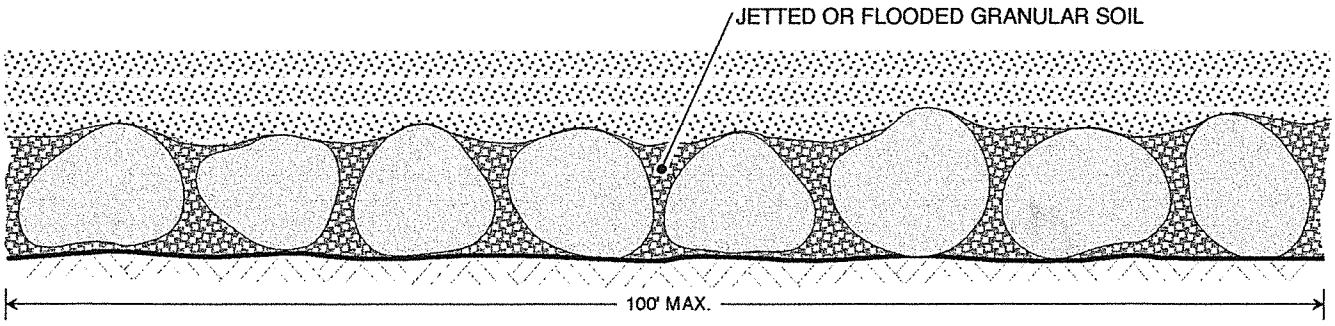
PETRA	BUTTRESS OR STABILIZATION FILL SUBDRAIN	PLATE SG-3



TYPICAL WINDROW DETAIL (END VIEW)

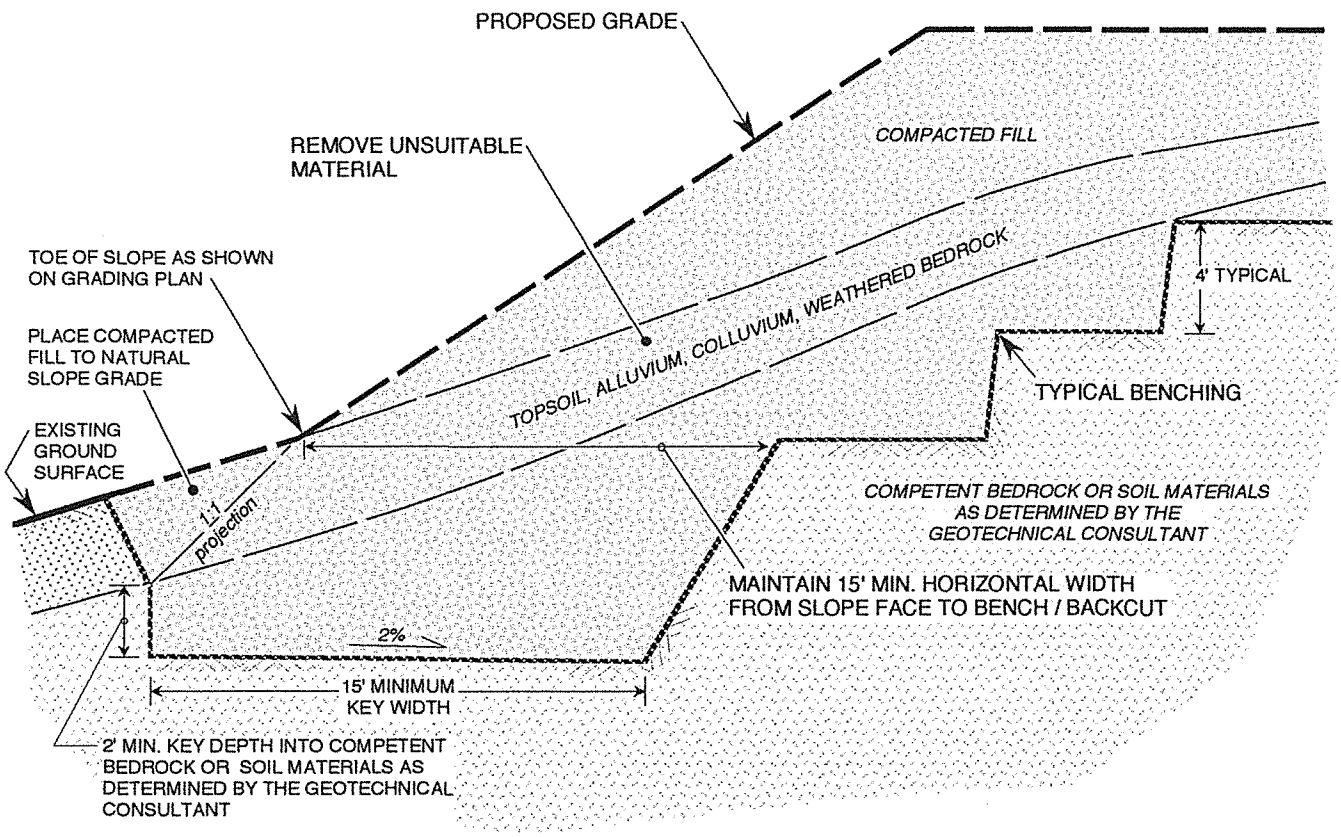


TYPICAL WINDROW DETAIL (PROFILE VIEW)



NOTE: OVERSIZE ROCK IS DEFINED AS CLASTS HAVING A MAXIMUM DIMENSION OF 12" OR LARGER

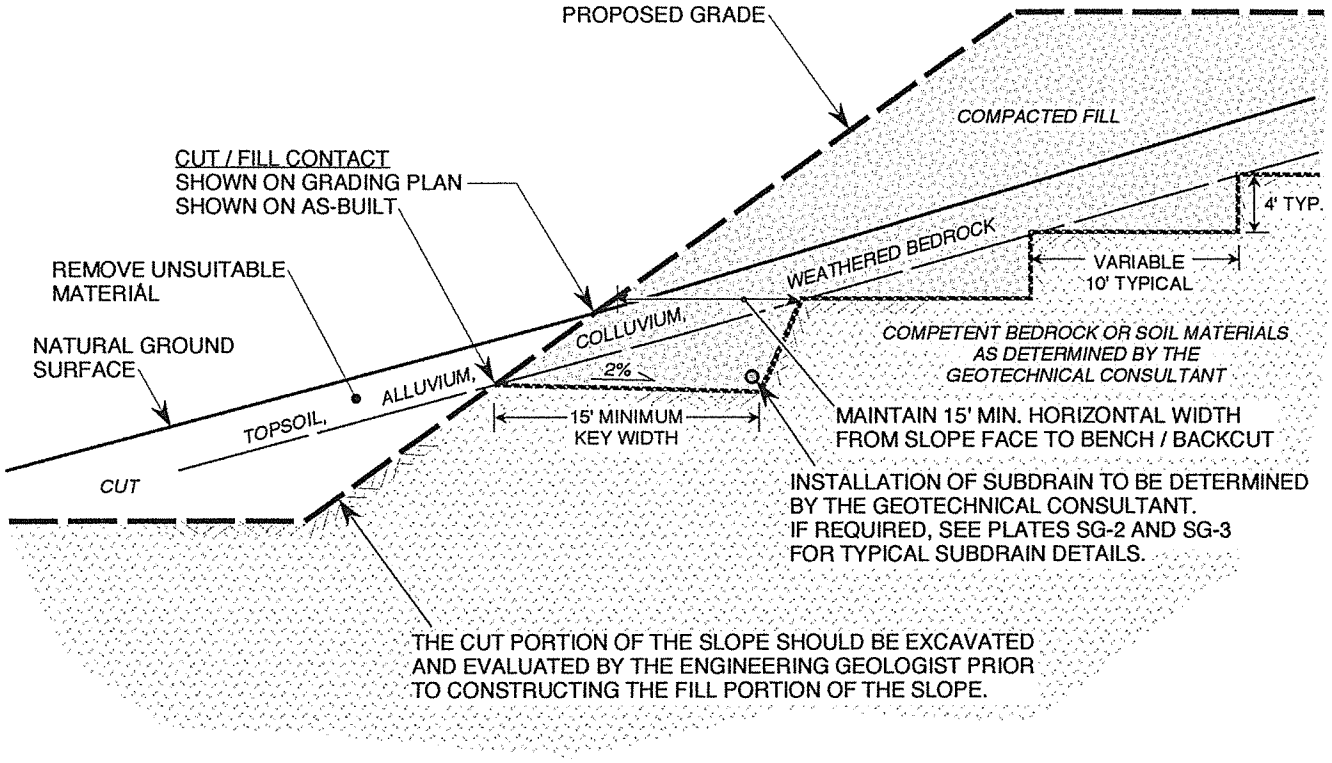
PETRA	TYPICAL ROCK DISPOSAL DETAIL	PLATE SG-4



NOTES:

1. WHERE NATURAL SLOPE GRADIENT IS 5:1 OR LESS, BENCHING IS NOT NECESSARY; HOWEVER, FILL IS NOT TO BE PLACED ON COMPRESSIBLE OR UNSUITABLE MATERIAL.
2. SOILS ENGINEER TO DETERMINE IF SUBDRAIN IS REQUIRED.

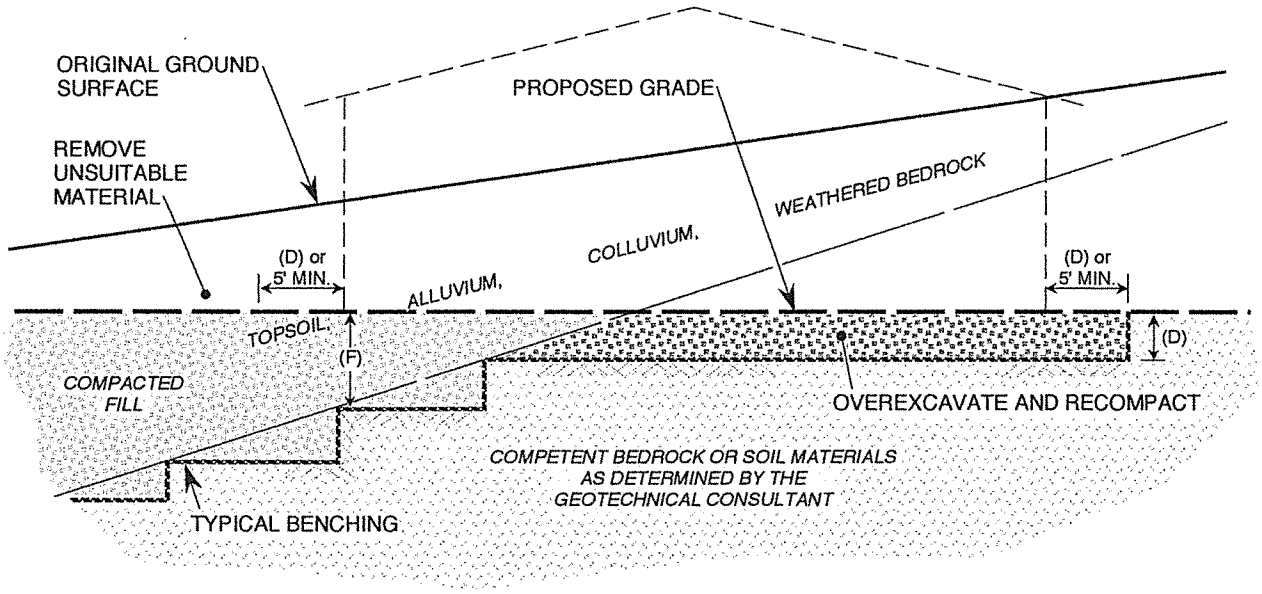
PETRA	FILL SLOPE ABOVE NATURAL SLOPE	PLATE SG-5



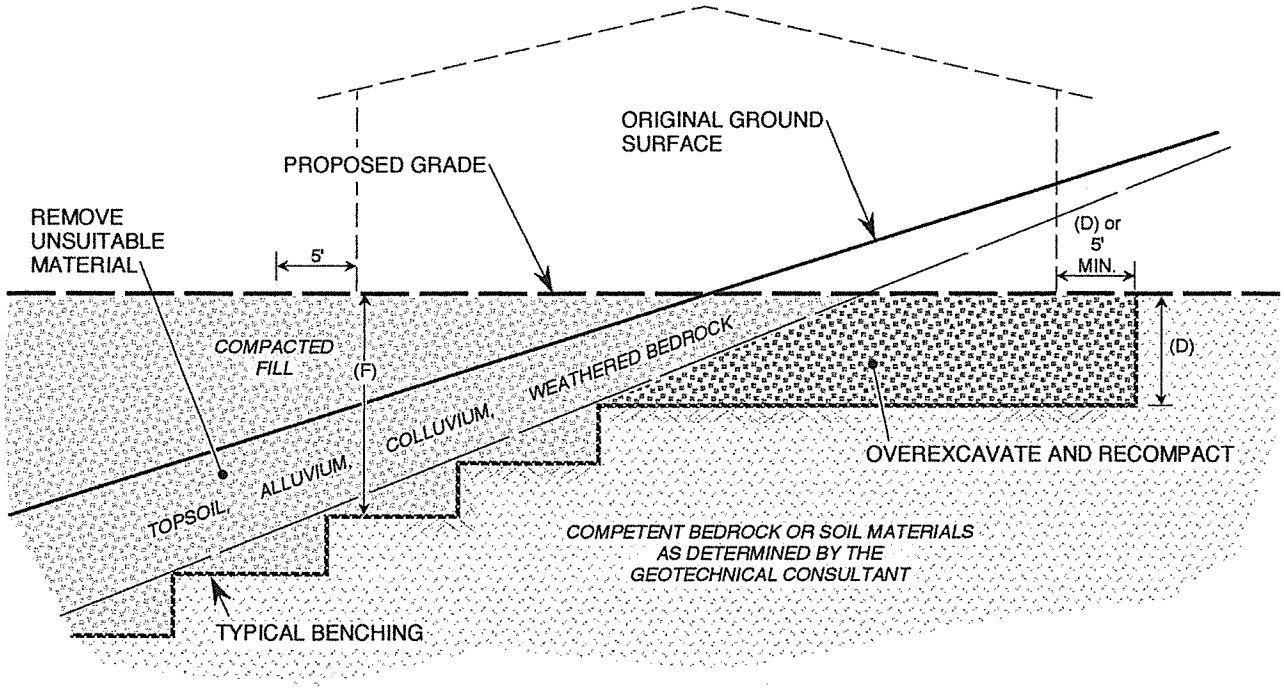
PETRA	FILL SLOPE ABOVE CUT SLOPE	PLATE SG-6

CUT LOT

UNSUITABLE MATERIAL EXPOSED IN PORTION OF CUT PAD

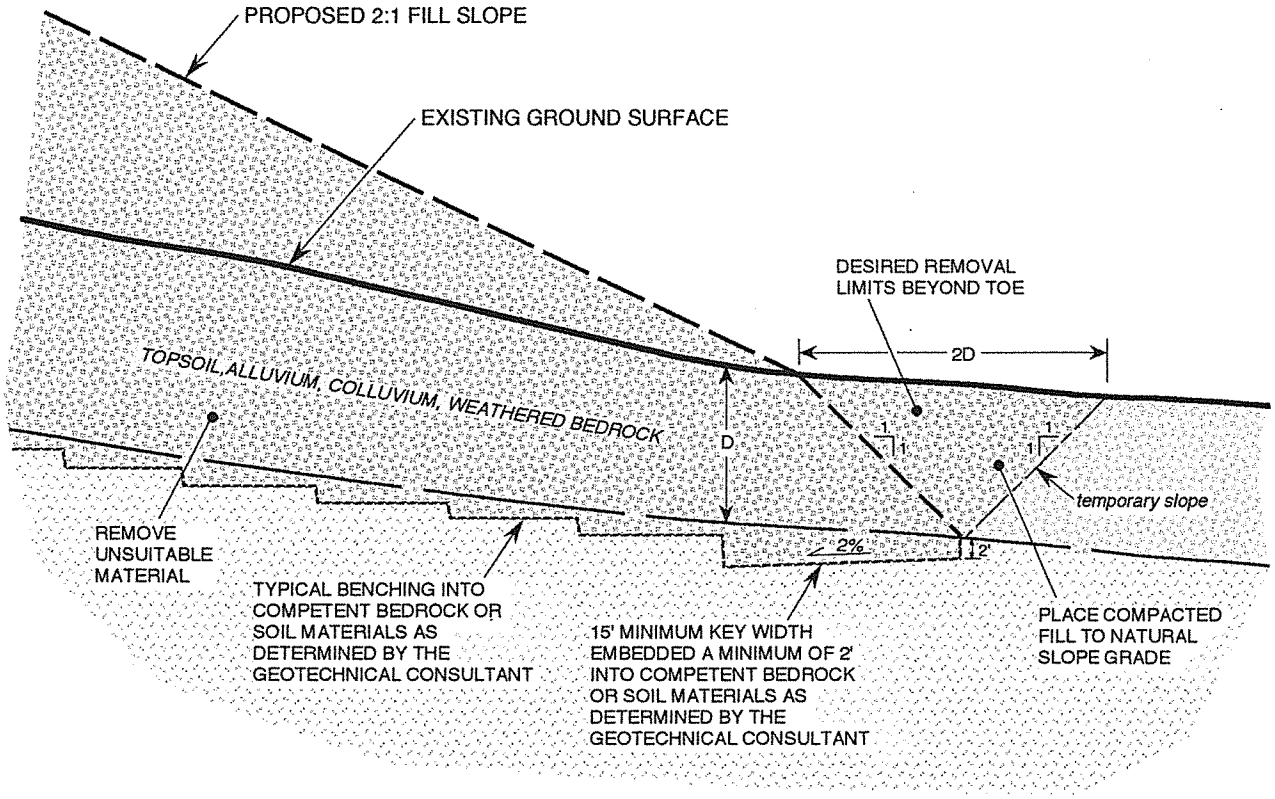


CUT-FILL TRANSITION LOT



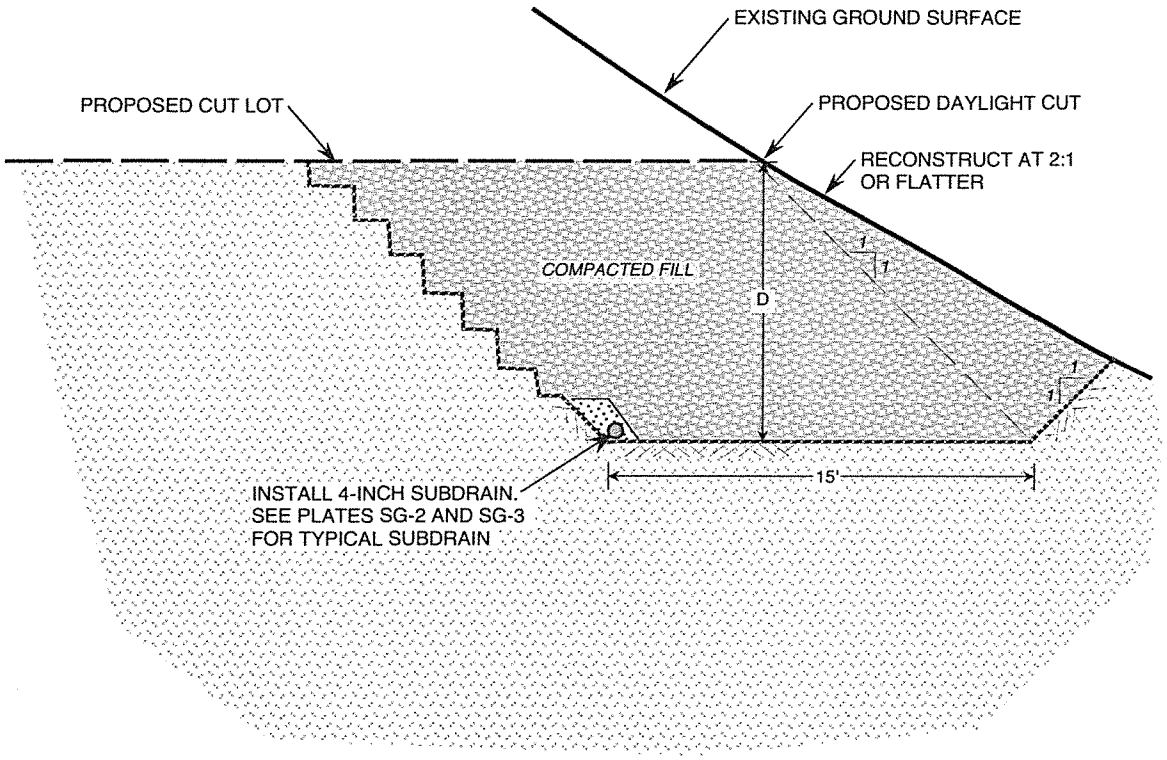
MAXIMUM FILL THICKNESS (F)	DEPTH OF OVEREXCAVATION (D)
FOOTING DEPTH TO 3 FEET	EQUAL DEPTH
3 TO 6 FEET	3 FEET
GREATER THAN 6 FEET	1/2 THE THICKNESS OF DEEPEST FILL PLACED WITHIN THE "FILL" PORTION (F) TO 15 FEET MAXIMUM

PETRA	CUT LOTS AND CUT-FILL TRANSITION LOTS	PLATE SG-7



D = RECOMMENDED DEPTH OF REMOVAL
PER GEOTECHNICAL REPORT

PETRA	TYPICAL REMOVALS BEYOND TOE OF PROPOSED FILL SLOPE	PLATE SG-8



NOTE:

1. "D" SHALL BE 10 FEET MINIMUM OR AS DETERMINED BY SOILS ENGINEER.

PETRA	SHEAR KEY ON DAYLIGHT CUT LOTS	PLATE SG-9