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RB INYOKERN DATA CENTER

Application for Small Power Plant Exemption (SPPE)

Inyokern, Kern County, California

Docket Number – 26-SPPE-01

Appendix J, K Supplement — Section K.1 Revision 1

SOILS ENGINEERING, INC.

GEOTECHNICAL INVESTIGATION

FOR THE

RB INYOKERN DATA CENTER

35.650980, -117.809018 | BROWN RD & 178 HWY

KERN COUNTY, CA

Prepared for:

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By:

SOILS ENGINEERING, INC.
SEI File 26-20852
July 20, 2026

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INTRODUCTION

At your request, Soils Engineering, Inc. has prepared this Geotechnical Investigation for the subject site. This report includes recommendations for the site preparation and grading and for foundation design.

Appendix A, "Guide Specifications for Earthwork," is provided as supplement to the "Earthwork Recommendations" section of this report.

Appendix B, "Field Investigation", contains a boring location map, Figure 1, and Logs of Test Borings, Figures 2 through 17, and CPT results.

Appendix C, "Soils Test Data," contains tabulations of laboratory test data.

Appendix D, "Seismic Investigation & Geological Hazard Study," contains information provided by EQFAULT, and the USGS and Liquefypro.

We hope this provides the information you require. If you have any questions regarding the contents of our report, or if we can be of further assistance, please contact us.

Respectfully submitted,
SOILS ENGINEERING, INC.

SITE INFORMATION

A. SITE LOCATION AND CONDITIONS

The RB Inyokern Data Center (CE1 #1160-01) Project is located approximately 1,500 feet northeast of the intersection of Brown Rd and Hwy 178 in Inyokern, CA. The site is located at the approximate GPS coordinates: 35.650980, -117.809018. The proposed improvements are to construct a data center, which will consist of various generators, batteries, chillers, and servers. A sump is proposed at the project site but the exact location and dimensions are to be determined. It is assumed that the pavement areas will be made up of a combination of aggregate base, Portland Cement Concrete (PCC), and Hot Mix Asphalt (HMA). The project site appears to be bordered by a solar array to the north, a dirt access road & train track to the west, Hwy 178 & a gas station to the south, and a Hwy 395 off ramp to the east.

The majority of the project area appears to be comprised of a relatively planar surface.

B. GEOLOGIC SETTING

According to the California Department of Conservation's Geologic Atlas of California, Trona Sheet, and the 2010 Geologic Map of California, the project site is situated on Pleistocene-Holocene marine and nonmarine (continental) sedimentary rocks (Q). Based on the California Department of Conservation's Geological Survey maps, the site is not located in an Alquist-Priolo (earthquake fault) Special Study Zone. Nearby active earthquake faults include the following:

So. Sierra Nevada	*0.0	miles/	0.0	kilometers
Little Lake	8.9	miles/	14.3	kilometers
Garlock (East)	16.0	miles/	25.7	kilometers
Blackwater	26.2	miles/	42.2	kilometers
Tank Canyon	27.6	miles/	44.0	kilometers
Garlock (West)	28.6	miles/	46.0	kilometers
Lenwood-Lockhart-Old Woman Sprgs	29.9	miles/	48.1	kilometers
Gravel Hills-Harper Lake	33.8	miles/	54.4	kilometers
Owens Valley	38.6	miles/	62.2	kilometers
Panamint Valley	38.8	miles/	62.4	kilometers
White Wolf	39.2	miles/	63.1	kilometers
Helendale-S. Lockhardt	44.2	miles/	71.2	kilometers

*EQFault data shows the So. Sierra Nevada fault located 0.0 miles from the site. Based on the Kern County Seismic Hazard Atlas, the So. Sierra Nevada fault is located approximately 6.1 Km from the site.

Major fault systems and their distances from the site are given in the EQFault Summary attached in Appendix D. The largest estimated peak site acceleration, based on deterministic methods, is 0.8782-g from a magnitude 7.3 earthquake on the So. Sierra Nevada fault located approximately 6.1 kilometers from the site.

C. SUBSURFACE CONDITIONS

Earth materials identified in the seventeen (17) onsite soil borings (B-1 to B-16 & CPT-01) conducted in June and July 2026, consisted generally of intervals of Silty Sand (SM), Clayey Sand (SC), Sandy Clay/Clay (CL), Poorly Graded Sand (SP) and Sand with Silt (SP-SM) to the explored depth of 85 feet below the ground surface (bgs). Gravelly soil along with zones with cobbles were present in some borings. Refusal due to cobbles was encountered at approximately 18 feet bgs at Boring B-14 and at 20 feet bgs at Boring B-15. Refusal from the CPT-01 was encountered at 85 feet bgs due to very dense soils. These soils are classified as SM, SC, CL, SP, and SP-SM respectively, in the Unified Soils Classification System (USCS).

Testing performed in our laboratory showed Expansion Indices (EI) between 0 and 3; these test results indicate very low expansion potential. Expansive soils are defined in the 2025 California Building Code (CBC), Section 1803A.5.3. Soils are considered to be expansive when the EI result is greater than 20, per ASTM D4829, Expansion Index of Soils. Design of foundations for structures shall be designed in accordance with the 2025 CBC, Sections 1808A.6.1, & 1808A.6.2.

The majority of the near surface soils should provide adequate support for the proposed structure provided that the recommendations outlined in this report are implemented under our observation and testing program. Detailed descriptions of the various soils encountered during our field investigation are shown on Figures 2 through 17 in Appendix B, “Field Investigation.” A “Key to Symbols” legend describing the symbols in the boring logs is also attached.

D. GROUNDWATER

No groundwater was encountered in any of the soil borings (B-1 to B-16 & CPT-01) to the total depth explored of 85 feet bgs. The depth to the unconfined aquifer as shown on maps prepared by the Kern County Water Agency (KCWA), and data available on the California Department of Water Resources Water Data Library Station map indicate current depth to water within a mile of the site ranges between 240.8 feet bgs to 256.1 feet bgs in 2026. Historical depth to water data (Department of Water Resources (DWR) database and KCWA maps) indicates that the depth to groundwater has been below 190 feet bgs since at least the 1940s within 1-mile of the site.

E. SEISMIC DESIGN VALUES

The seismic design values are presented in the table below based on the 2025 California Building Code (CBC). An estimated shear wave velocity (Vs30) was calculated utilizing 85 feet CPT shear wave velocity data and on-site SPT equivalent blowcounts to a depth of 51.5 feet bgs correlated to a shear wave velocity per ASCE 7-22 § C20.3. The estimated Vs30 was then utilized to determine a Site Class and alternate Site Classes based on the results of Vs30 x 1.3 and Vs30/1.3 per 2025 CBC § 1613.2.2 and ASCE 7-22 § 20.2-20.3.

SEISMIC DESIGN CRITERIA		VALUE	SOURCE
Risk Category		**IV**	2025 CBC Table 1604.5 or 1604*A*.5
Site Class		***CD**	2025 CBC § 1613.2.2 or 1613*A*.2.2; ASCE 7-22 Table. 20.2-1; Site Specific Soils Report, Estimation of Shear Wave Velocity per ASCE 7-22 § 20.3.
Mapped MCE_R Spectral Response Acceleration, short period	S_S	**1.69g**	SEAOC-OSHPD software;
Mapped MCE_R Spectral Response Acceleration, at 1-sec. Period	S_1	**0.48g**	SEAOC-OSHPD software;
MCE_R Spectral Response Acceleration, short period	S_{MS}	**1.9**	SEAOC- OSHPD software;
MCE_R Spectral Response Acceleration, 1-sec. period	S_{M1}	**1.19**	SEAOC- OSHPD software;
Design Spectral Response Acceleration, short period, 2/3 S_{MS}	S_{DS}	**1.27**	SEAOC- OSHPD software;
Design Spectral Response Acceleration, 1-sec. period, 2/3 S_{MI}	S_{D1}	**0.79**	SEAOC- OSHPD software;
Peak Ground Acceleration (PGA) for Geometric-Mean Max. Considered Earthquake (MCE_G)	PGA_M	**0.75g**	SEAOC- OSHPD software; ASCE 7-22 § 11.8.3.2
Seismic Design Category (SDC)		**D**	2025 CBC § 1613.2 or 2025 CBC § 1613*A*.2
*Site class to be determined using measured shear wave velocity (V_s). If V_s is not measured and the boring(s) is to a minimum of 50 feet, then the Vs30 can be estimated based on a correlation of the SPT equivalent blowcounts per ASCE 7-22 Table C20.3-1. The estimated V_s30 was then utilized to determine a Site Class and alternate Site Classes based on the results of V_s30x1.3 and V_s30/1.3 per ASCE 7-22 Section 20.2-20.3.			
MCE_R = Maximum Considered Earthquake (risk targeted) MCE_G = Maximum Considered Earthquake (geometric mean)			

F. LIQUEFACTION & SEISMIC SETTLEMENT

Liquefaction Potential

No groundwater was encountered in any of the soil borings in the 17 geotechnical soil borings conducted on-site to depths as great as 85 feet bgs. The unconfined aquifer is not shown to be less than 100 feet below ground surface at the site based on current and historical information from the Kern County Water Agency and the Kern County Safety Element. The shallowest depth to water on a nearby well within 1-mile of the subject property is 192 feet bgs in 1973 (DWR) located north of the site. SPT blowcounts in the two (2) SEI soil borings, B-7 and B-10, ranged from 10 to 94 blowcounts per foot to a depth of 51'. The lithology encountered in the subsurface includes multiple silty sand, clayey sand, poorly graded sand, and sand with silt layers in the borings. A liquefaction analysis was performed on the deep borings B-7 and B-10 utilizing the program LiquefyPro (version 5.10). Site-specific information was used in this analysis including; SPT blowcounts per foot, grain-size analysis, wet weight densities, the moment magnitude earthquake and the PGA for the MCEg earthquake motion (0.5537g) and a very conservative depth to water of 100'. See attached LiquefyPro data in Appendix D, Geologic Hazard Study.

Settlement

The estimated amount of dynamic settlement that would occur at this site during a major earthquake is approximately 0.96 inches (B-7) and 0.95 inches (B-10) based on the lithology encountered, engineered fill in the top 4 feet, the SPT equivalent blowcounts recorded during sampling, and the settlement analysis conducted on borings B-7 & B-10 utilizing the program LiquefyPro. The estimated amount of differential settlement is 0.01 inch over a span of approximately 535 feet between B-7 and B-10 based on the program LiquefyPro results. These estimated settlements appear to be appropriate for a this project with no mitigation required. See attached Liquefaction Analysis Calculation Sheets and graphs in Appendix D, Geologic Hazard Study for more detail.

EARTHWORK RECOMMENDATIONS

"Earthwork Specifications," in Appendix A are provided for general guidance in preparing site grading plans. In addition, the following specific recommendations are provided and supersede the latter wherever discrepancies may exist:

A. COMPACTION AND OPTIMUM MOISTURE

Unless otherwise specified herein, the terms, "Compaction," or "Compacted," wherever used or implied within this report should be interpreted as compaction to 90 percent of the maximum density obtainable by ASTM Test Method D1557. The term, "Optimum Moisture," wherever used or implied within this report, should be interpreted as that obtained by the above-described test method.

B. STRIPPING

Prior to soil compaction, existing ground surfaces should be stripped of surface vegetation. A stripping depth of one inch should be adequate. In no instance should stripped material be used in engineered fill or blended with and compacted in original ground.

C. GROUND SURFACE PREPARATION

Proposed Structure Areas:

1. Excavate earth material in the proposed structure area to a minimum depth of three (3) feet below existing grade or two (2) feet below bottom of foundations, whichever is deeper.

2. The bottom of the excavation shall be reviewed by the soil engineer or his representative prior to any backfill operations. *The top eight inches of materials exposed at the bottom of the excavation shall be scarified and compacted to a minimum of 90 percent of ASTM D-1557.*

3. Moisten soils to near the optimum moisture or to a moisture consistent with effective compaction and soil stability. Compact moistened soils to a minimum of 90 percent of the maximum density obtained by ASTM Test Method D1557.

4. Work to lines at least five (5) feet beyond the outside edges of exterior footings. Where excavation may undermine or damage adjacent structures or utilities the geotechnical engineer shall be consulted.

Review of Excavation Bottoms:

Prior to placement of backfill, excavation bottoms shall be reviewed for indications of loose-fill, discoloration, or loose, compressible, native materials. Where these are encountered, they should be excavated and removed, or excavated and compacted as directed by the geotechnical engineer. Fill placement in excavations shall not proceed until the geotechnical engineer or his representative on the site has reviewed, tested as described above and accepted materials exposed at the bottom of the excavation.

Pavement Areas:

Ground surfaces to receive concrete driveway and bituminous pavements should be scarified and compacted to a minimum depth of 12 inches below the grading plane in cut areas or to 12 inches in areas to receive fill. Engineered fill placed in proposed pavement areas should conform to the requirements of section 5.4, “Placing, Spreading and Compacting Fill Materials,” of Appendix A.

Compaction in proposed pavement areas should be a minimum of 90 percent of the maximum density as obtained to ASTM Test Method D1557, and should extend to a minimum of two feet beyond the outside edges of pavements.

Utility Lines:

Backfill for utility lines traversing areas proposed for facilities, pavements, concrete slabs-on-grade, or areas to receive engineered fill for future construction should be compacted in accordance with the same requirements for adjacent and/or overlying fill materials.

Compaction should include haunch area, spring line and from top of pipe to finished subgrade. The haunch area up to one foot above the top of the pipe should be backfilled with “cohesionless” material.

Cohesionless native materials may be used for trench and pipe or conduit backfill. The term “cohesionless,” as used herein, is defined as material which, when dry, will flow readily in the haunch areas of the pipe trench.

Pipe backfill materials should <u>not</u> contain rocks larger than two inches in maximum dimension. Where adjacent native materials exposed on the trench bottoms contain protruding rock fragments larger than two inches in maximum dimension, conduits and pipelines should be laid on a bedding consisting of clean, cohesionless sand (SP), in the Unified Soils Classification System.

Compaction Requirements – where not otherwise specified in our plans or in these recommendations, the following compaction requirements are applicable to all electrical, gas or water conduits:

TABLE A COMPACTION REQUIREMENTS BY DEPTH			
Area	**Haunch to 1 ft. Above Top of Pipe**	**1 ft. Above Top of Pipe to 2.5 ft. Below Finished Grade**	**2.5 ft. Below Finished Grade to Finished Subgrade**
Structures	90%	90%	90%
Pavements	90%	90%	90%
Non-Structural	90%	90%	90%

D. ENGINEERED FILL

Earth materials obtained on-site are acceptable for use as engineered fill provided that all grasses, weeds, and other deleterious debris are first removed. Engineered fill materials should be placed in thin layers (less than ten inches uncompacted thickness), brought to near the optimum moisture content or to a moisture content commensurate with effective compaction and soil stability, and compacted to a minimum of 90 percent of the maximum density obtainable by ASTM Test Method D1557, "Placing, Spreading and Compacting Fill Materials," in Appendix A.

E. IMPORTED FILL

The table shown below provides general guidelines for acceptance of import engineered fill. Materials of equal or better quality than on-site material could be reviewed by the Geotechnical Engineer on a case-by-case basis. No soil materials shall be imported onto the project site without prior approval by the Geotechnical Engineer. Any deviation from the specifications given below shall be approved by the Geotechnical Engineer prior to import operations.

MAXIMUM PERCENT PASSING #200 SIEVE 40
MAXIMUM PERCENT RETAINED 3" SIEVE 0
MAXIMUM PERCENT RETAINED 1½" SIEVE *FOR BUILDING AREAS*. 15
MAXIMUM PERCENT RETAINED ¾" SIEVE FOR LANDSCAPE AREAS 5
MAXIMUM LIQUID LIMIT 40
MAXIMUM PLASTICITY INDEX 14
MINIMUM R-VALUE FOR PAVEMENT AREAS 50
MAXIMUM EXPANSION INDEX 20

Furthermore, the soils proposed for import shall be generally homogenous and shall not contain cemented or clayey and/or silty lumps larger than one inch. When such lumps are present, they shall not represent more than ten percent (10%) of the material by dry weight.

Where a proposed import source contains obviously variable soils, such as clay and/or silt layers, the soils which do not meet the above requirements shall be segregated and not used for this project or the various layers shall be thoroughly mixed prior to acceptance testing by the Geotechnical Engineer. The contractor shall provide sufficient advance notice, prior to import operations, to allow testing and evaluation of the proposed import materials. Because of the time

needed to perform the above tests, the contractor shall provide a means by which the Geotechnical Engineer or others can verify that the soil(s) which was sampled and tested is the same soil(s) which is being imported to the project.

F. DRAINAGE

Finished ground grades adjacent to the proposed structures should be sloped to provide positive free drainage away from the foundations. No areas should be constructed that would allow drainage generated on the site, or water impinging upon the site from outside sources, to pond near footings and slabs or behind curbs.

Where ground surfaces adjacent to subsurface walls are to be landscaped, walls should be waterproofed. Installation of gravel-filled drains to route subsurface drainage away from walls will reduce the thickness of damp-proofing resulting in considerable savings.

G. SLOPES

Both fill and cut slopes should be constructed at 2:1 (horizontal to vertical) in accordance with the 2025 California Building Code.

Finished slopes nearer than five feet from building foundations should be graded no steeper than five horizontal to one vertical (5:1). A slope ratio of two horizontal to one vertical (2:1) should provide adequate stability for slopes farther than five feet from footing lines.

The fill slopes shall be compacted to a minimum of 90% of ASTM D1557 and in accordance with the Guide Specifications for Earthwork, Appendix A. This may be achieved by overfilling the constructed slope and trimming to a compacted finished surface, rolling the slope face with a sheepsfoot as the level of the fill is raised, or any method that achieves the desired product.

The cut portion of the slope should be constructed first. Prior to construction of the fill slope, incompetent surface soils should be removed from the top of the cut.

Areas to receive fill or to support structures, slabs or pavements should be removed of all vegetation, debris and disturbed soils. All existing uncertified fill soils should be excavated to expose competent native soils.

Existing underground pipelines, private sewage disposal systems and any water or oil wells, if encountered during grading, should be removed or capped in accordance with procedures considered acceptable by the appropriate governing agency. Tree roots to 2 inches in diameter should be removed.

Both fill and cut slopes will be subject to erosion immediately after grading and should be designed to reduce surficial sloughing by implementing a permanent slope maintenance program as soon as practical after completion of slope construction.

Slope maintenance should include proper care of erosion and drainage control devices, rodent control, and immediate planting with deep-rooting, lightweight, drought-resistant vegetation. An erosion control geotextile may also be used in combination with vegetation to control erosion.

Experience has shown that slope performance is largely dependent upon proper slope maintenance (i.e., planting, proper watering, clearing of drainage devices, etc.). Slopes properly placed and conscientiously maintained are not expected to display excessive raveling or sloughing.

FOUNDATIONS RECOMMENDATIONS

Spread Footings – The proposed foundation could be supported on continuous spread footings in accordance with the following Table B:

TABLE B
FOUNDATION DESIGN CRITERIA

Footing Type	Minimum Width (ft.)	Minimum Depth Below Lowest Adjacent Subgrade (ft.)	Maximum Allowable Soil Bearing Pressure (lbs. / sq. ft.)
Continuous	1	1	2500
Isolated	1	1	2500

Bearing pressures given are for the minimum widths and depths shown above.

Bearing pressures given above are for dead and sustained (loads acting most of the time) live loads; they may be increased by one-third for wind and/or seismic loading conditions.

The proposed foundations shall be reinforced in accordance with the structural engineer's recommendations.

Settlement:

Provided maximum allowable soil bearing pressures given above are not exceeded, total settlement should not exceed one inch. A major portion, two-thirds to one-half, of total settlement should occur before the end of construction. Differential settlements should occur before the end of construction. Differential settlements should, accordingly, be less than one-half of an inch for a horizontal span of twenty feet.

MODULUS OF SUBGRADE REACTION

Modulus of subgrade reaction for use in design of foundations is based on ranges of values for soil types provided by Foundation Analysis and Design by Joseph E Bowles.[1] Equation 1 should be used for footings on sandy soils.

Foundations on clay soils should employ Equation 2. Equation 3 is for rectangular footings having dimensions w= **b** (width) and l = **mb** (length) the variable "m" being the ratio of the length to the width of the foundation. $\mathbf{K_s1}$ is the modulus of subgrade reaction from the source referenced

[1] Bowles, Joseph E; FOUNDATION ANALYSIS AND DESIGN; McGraw-Hill Book Company (1977); Table 9-1 pg 269

above based on a 1 foot x 1 foot square plate. For general guidance K_s1 of 150 kcf may be used for the subsurface soils.

Equation (1) $$k_{sf} = K_{s1} \times \left(\frac{B+1}{2B}\right)^2$$

Equation (2) $$k_{sf} = K_{s1} \times B$$

Equation (3) $$k_{sf} = K_{s1} \times \frac{m+.5}{1.5 \times m}$$

Values given above should be used for guidance. Local values may be higher or lower and should be based on results of in-situ plate bearing tests performed in accordance with ASTM Test Method D1194.

LATERAL EARTH PRESSURES

Lateral earth pressures and friction coefficients for determining the passive lateral resistance of foundations against lateral movement and the active lateral forces against retaining walls and subsurface walls, expressed as equivalent fluid pressures, are given below in Table C. Lateral earth pressures were computed assuming that backfill materials are essentially free draining and level; and that no surcharge loads or sloping backfills are present within a distance from the wall equal to or less than the height (H)* of the wall.

(H)* = the height of backfill above the lowest adjacent ground surface.

TABLE C
LATERAL EARTH PRESSURE

Case	Lateral Earth Pressures
Active	40 P.C.F.
Passive	375 P.C.F.
At-Rest	50 P.C.F.

Active Case: Active lateral earth pressures should be used when computing forces against free standing retaining walls, unrestrained at the tops. Active pressures should not be used where tilting outward of the walls is greater than .002H would not be desirable.

Passive Case: Passive lateral earth pressures should be used when computing the lateral resistance provided by undisturbed or compacted native soils against the movement of footing. When computing passive resistance, the upper one foot of embedment depth should be discounted.

At-Rest Case: At-rest pressures should be used for subsurface walls restrained at their tops by floor diaphragms or tie-backs and for retaining walls where tilting outward greater than .002 H would not be desirable.

Frictional Resistance: A friction coefficient of **0.40** may be used when computing the frictional resistance to sliding of footings, grade beams, and slabs-on-grade. Frictional resistance and passive lateral soil resistance may be combined without reduction.

SLABS-ON-GROUND

Slabs-on-grade can be adequately supported by compacted native soils or by compacted import materials of equal or superior quality.

We recommend that moisture protection be provided for interior concrete slabs-on-ground that will receive moisture-sensitive floor coverings, or where moisture-sensitive equipment, products, or environments may be present. For exceptions to slab moisture protection, refer to the 2025 California Building Code, Section 1907.1. The project designer should provide specific details regarding construction of the concrete slab-on-ground, including the moisture barrier or vapor retarder/barrier, capillary break (if included), and blotter material (if included). The American Concrete Institute recommends a minimum moisture vapor retarder of 10 mil thick polyethylene. The vapor retarder should be protected from damage. Punctures and tears should be repaired prior to concrete placement.

It has been common local practice to use a sandy material as a blotter layer between the moisture barrier and the concrete to absorb some of the bleed water and to potentially reduce slab curling. However, a blotter layer may act as a moisture reservoir and all apparent advantages of its use are then negated. Therefore, it should not be incorporated into the section design for moisture-sensitive slabs if it cannot be kept dry prior to concrete placement or if water may migrate into the layer after slab construction (eg. wet curing, rainfall). If the slab-on-ground section is to include a blotter layer between the moisture barrier and the concrete, it is our recommendation that the blotter material consist of crusher fines (rock dust) or sand with angular, interlocking grains. The material should be easily compacted and should be screened so that 100% of the material is finer than ¼". Do not use blotter material which may be potentially reactive with the alkalis in the concrete or which has high sulfate content. At the time of concrete placement, the blotter material should be dry to damp, compact, and smooth. For slabs which are to be water-cured, a blotter layer should not be used. For further consideration, refer to the American Concrete Institute *Manual of Concrete Practice 302.1R and 360.*

Slab thicknesses, reinforcing, and the concrete characteristics should be in accordance with the project designer's recommendations. The 2025 California Building Code, Section 1907.1 requires that the slab thickness be not less than 3½". Pressurized water lines should not be placed beneath slabs.

Porosity is directly related to the amount of extra water added to the concrete mix of the slab when it was created. The extra water creates permanent space in the slab. Once it is evacuated, that space remains moist and easily passes vapor through it. Creating a slab with the lowest possible permeability starts with keeping a low water/cement ratio.

SOIL CORROSIVITY

Soluble Sulfates (SO_4)

The highest Sulfate (SO_4) concentration measured was 33 ppm.

Based on Table 19.3.1.1 "Exposure categories and classes" of ACI 318-19 "Building Code Requirements for Structural Concrete" the soil exposure is classified as S0. Per Table 19.3.2.1 "Requirement for Concrete by Exposure Class" of the same reference, no restriction applies to the cement type or mix design.

Chlorides (Cl)

The highest Chloride (Cl) concentration measured was 99 ppm. Generally, chloride concentrations greater than 500 ppm are considered to be corrosive to foundation elements. (Ref: Caltrans Corrosion Guidelines / Version 1.0)

pH

The soil pH results were measured between 8.66 and 9.31. Generally, a pH level less than 5.5 are considered to be corrosive to foundation elements. (Ref: Caltrans Corrosion Guidelines / Version 1.0)

Although preliminary test results indicate that soil corrosivity at the locations and depths tested is low to negligible, if the site grading operations will result in a blend of native and/or imported materials at finished subgrade elevations, additional tests should be performed after rough grading has been completed and prior to concrete and/or mechanical design.

The authors of this report are not experts in the field of soil corrosivity. Should detailed analysis of soil corrosivity be required, it is our recommendation to contract a corrosion engineer.

PAVEMENT FIELD INVESTIGATION & DESIGN DATA

A total of eight (8) borings were drilled to a maximum depth of five (5) feet below existing grade. Bore locations are shown on the attached Boring Location Map, Figure 1.

The Resistant (R) Value laboratory testing results ranged from 35 to 76 according to our testing program. Hot Mix Asphalt (HMA) pavement shall be designed based on the lowest R Value of 35. The laboratory test reports are provided as Figures D-1 through D-8.

HMA Pavement Sections:

TI of 5	0.25 feet of AC and 0.45 feet of AB
TI of 6	0.30 feet of AC and 0.60 feet of AB
TI of 7	0.35 feet of AC and 0.70 feet of AB
TI of 8	0.40 feet of AC and 0.85 feet of AB
TI of 9	0.45 feet of AC and 0.95 feet of AB

HMA design should meet the requirements of the 2010 or newer, State of California, Standard Specifications Manual (SSM), Section 39. Aggregate Base should also meet the Class 2 requirements of the SSM, Section 26.

Ground surfaces to receive HMA pavement should be scarified and compacted to a minimum depth of 12 inches below the grading plane in cut areas or to 12 inches in areas to receive fill. Engineered fill placed in proposed pavement areas should conform to the requirements of section 5.4, “Placing, Spreading and Compacting Fill Materials,” of Appendix A.

Compaction in proposed pavement areas should be a minimum of 90 percent of the maximum density as obtained to ASTM Test Method D1557 and should extend to a minimum of two feet beyond the outside edges of pavements.

These recommendations are valid only if the pavement is properly drained and shoulder areas are graded to prevent water ponding at pavement edges. All construction should be subject to adequate tests and observations to verify conformance with these recommendations.

PCC Pavement Sections:

PORTLAND CEMENT CONCRETE PAVEMENT					
Subgrade "R" Value	**Traffic Category**	**Concrete Minimum Flexural Strength**	**Portland Cement Concrete Thickness**	**Class 2 Aggregate Base Thickness***	**Minimum Thickness Subgrade Compaction***
35	"A" with ADDT=1 (autos only)	MOR 550 psi	4.5"	8"	1.0'
	"B" with ADDT=300 (truck parking areas & interior lanes)	MOR 550 psi	6.5”	8”	1.0'
	"D" with ADDT=700 (heavy trucks) Entrance and exterior lanes	MOR 550 psi	8.0”	8”	1.0'
*Compaction of Class 2 Aggregate Base and Subgrade to be not less than 95% of ASTM D1557 laboratory maximum density.					

LIMITATIONS, OBSERVATION AND TESTING

Conclusions and recommendations in this report are given for the RB Inyokern Data Center, located at 35.650980, -117.809018 | Brown Rd & 178 Hwy, Kern County, California and are based on the following:

a. The information retrieved from sixteen (16) exploratory borings drilled at the subject site to a maximum depth of 51.5 feet bgs and one (1) CPT sounding to a maximum depth of 85 feet bgs.

b. Our laboratory testing program results.

c. Our engineering analysis based on the information defined in this report.

d. Our experience in the Kern County area.

Variations in soil type, strength and consistency may exist between specific boring locations. These variations may not become evident until after the start of construction. If such variations appear, a re-evaluation of the soils test data and recommendations may be necessary. Unless a Geotechnical Engineer of this firm is afforded the opportunity to review plans and specifications, we accept no responsibility for compliance with design concepts or interpretations made by others with regard to foundation support, fill selection, fill placement or other recommendations presented in this report.

Changes in conditions of the subject property can occur with time because of natural processes or the works of man on the subject site or on adjacent properties. Changes in applicable engineering and construction standards can also occur as the result of legislation or from the broadening of knowledge. Accordingly, the finding of this report may be invalidated, wholly or in part, by changes beyond our control. Therefore, this report is subject to review and should not be relied upon without review after a period of two years or after any modifications to the site.

REVIEW OF EARTHWORK OPERATIONS

Review of earthwork operations relating to site clearing, ground stabilization, placement and compaction of fill materials, and finished grading is critical to the structural integrity of building foundation and floor systems.

While the preliminary Geotechnical investigation and report provide guidelines which are used by the design team, i.e., architects, grading engineers, structural engineers, landscape engineers, etc., in completing their respective tasks, review of plans and site review and testing during earthwork operations are vital adjuncts to the completion of the Geotechnical engineer's tasks. The most prevalent cause of failure of a structure foundation system is lack of adequate review and testing during the earthwork phase of the project. Projects rarely reach completion without some alteration being required such as may result from a change in subsurface conditions, an amendment in the size and scope of the project, a revision of the grading plans or a variation in structural details. Occasionally, even minor changes can significantly affect the performance of foundations. The most prevalent secondary cause for foundation failure is inadequate implementation of Geotechnical recommendations during the formulation of foundation designs

and grading plans. The error in a foundation design or an omission of a key element from a grading plan occurs most often as a result of inadequate communication between the various project consultants and -- when a change in consultants occurs -- improper transfer of authority and responsibility[2]. It is imperative, therefore, that any revisions to the project scope, any change in structural detail, or change in consultant, be brought to the attention of Soils Engineering, Inc. to allow for timely review and revision of recommendations and for an orderly transfer of responsibility and approval.

It is the responsibility of the owner or his representative to ensure that a representative of our firm is present at all times during earthwork operations relating to site preparation and grading, so that relative compaction tests can be performed, earthwork operations can be observed and compliance with the recommendations provided herein can be established.

This engineering report has been prepared within the limits prescribed to us by the client or his representative, in accordance with the generally accepted principles and practices of Geotechnical engineering. No other warranty, expressed or implied, is included or intended in this report.

Respectfully submitted,
SOILS ENGINEERING, INC.

[2] If the civil engineer, the soils engineer, the engineering geologist or the testing agency of record is changed during the course of the work, the work shall be stopped until the replacement has agreed to accept the responsibility within the area of his technical competence for approval upon completion of the work.

APPENDIX A

GENERAL GUIDE SPECIFICATIONS FOR EARTHWORK

1. GENERAL

1.1 Scope

These specifications and plans include all earthwork pertaining to site rough grading including, but not limited to furnishing all labor and equipment necessary for clearing and grubbing; stripping; preparation of ground surfaces to receive fill; excavation; placement and compaction of structural and non-structural fill; disposal of excess materials and products of clearing, grubbing, and stripping; and any other work necessary to bring ground elevations to the lines and grades shown on the project plans.

1.2 Performance:

It shall be the responsibility of the contractor to complete all earthwork in accordance with project plans and specifications. No variance from plans and specifications shall be permitted without written approval of the Engineer-of-Record, hereinafter referred to as the “engineer” or his designated representative, hereinafter referred to as the “soils engineer.” Earthwork shall not be considered complete until the “engineer” has issued a written statement confirming substantial compliance of earthwork operations to these specifications and to the project plans.

The contractor shall assume sole responsibility for job site conditions during the course of earthwork operations on the project, including safety of all persons and preservation of all property; this requirement shall apply continuously and not be limited to normal working hours. The contractor shall defend, indemnify, and hold harmless the owners, engineer, and soils engineer from any and all liability and claims, real or alleged, arising out of performance of earthwork on this project, except from liability incurred through sole negligence of the owner, engineers, or soils engineers.

2. DEFINITIONS

2.1 Excavations:

Excavation shall be defined within the content of these specifications as earth material excavated for the purpose of constructing fill embankment; grading the site to elevations shown on project plans; or placing underground pipelines, conduits, or other subsurface utilities or minor structures.

Excavations shall be made true to the lines shown on project plans and to within plus or minus one-tenth (0.1) of a foot, of grades shown on the accepted site grading plans.

2.2 Engineered Fill:

Engineered fill shall be construed within the body of these specifications as earth materials conforming to specifications provided in the soils or geotechnical report placed to raise the grade of the site, to backfill excavations, or to construct asphaltic concrete or Portland cement concrete pavement; and upon which the soils engineer has performed sufficient tests and has made sufficient observation during placement and compaction to enable him to issue a written statement confirming substantial conformance of the work to project earthwork specifications.

2.3 On-Site Material:

On-site material is earth material obtained in excavation made on the project site.

2.4 Imported Material:

Imported materials are earth materials obtained off the site, hauled in, and placed as fill.

2.5 "Compaction" or "Compacted:"

Wherever expressed or implied within the context of these specifications shall be interpreted as compaction to ninety (90) percent of the maximum density obtainable by ASTM Test Method D1557.

2.6 Grading Plane:

The grading Plane is the surface of the basement material upon which the lowest layer of subbase, base, asphaltic or Portland cement concrete, surfacing, or other specified layer is placed.

3. SITE CONDITIONS

The contractor shall visit the site, prior to bid submittal, to determine existing soil and topographic conditions, and the nature of materials that may be encountered during the course of the work under this contract, and make his own interpretation of the contents of the Geotechnical Report, as they pertain to said conditions.

The contractor shall assume all liability under the contract for any loss sustained as a result of variations which may exist between specific soil boring locations or changed conditions resulting from natural or man-made circumstances occurring after the date of the Preliminary Field Investigations.

4. CLEARING AND GRUBBING

4.1 Clearing and Grubbing

Clearing and grubbing shall consist of removing all debris such as metal, broken concrete, trash, vegetation growth and other biodegradable substances, from all

areas to be graded. Existing obstructions below shall be removed in accordance with the following procedures:

4.1.1 **Slabs and Pavements** – Shall be completely removed. Asphaltic or Portland Cement, concrete fragments may be used in engineered fills provided they are broken down to a maximum dimension of six (6.0) inches and thoroughly dispersed within a friable soil matrix. Engineered fill containing said fragments should not be placed above the elevation of the bottom of the lowest structure footing.

4.1.2 **Foundations** – existing at the time of grading shall be removed to a depth not less than two (2.0) feet below the bottom of the lowest structure footing.

4.1.3 **Basements, Septic Tanks** – buried concrete containers of similar construction located within areas destined to receive pavements, structures, or engineered fills should be completely removed and disposed of off the site. Basements, septic tanks, etc., situated outside structures, or structural fill areas shall be disposed of by breaking an opening in bottoms to permit drainage, and by breaking walls down to not less than two (2.0) feet below finished subgrade.

4.1.4 **Buried Utilities** – such as sewer, water and gas lines or electrical conduits to remain in service shall be re-routed to pass no closer than four (4.0) feet to the outside edge of proposed exterior footings of structures. Lines to be abandoned shall be completely removed to a minimum depth of two (2.0) feet below finished building pad grade. Concrete lines deeper than two (2.0) feet below finished building pad grade and having diameters less than six (6.0) inches can be crushed in place.

4.1.5 **Root Systems** – shall be completely removed to a minimum depth of two (2.0) feet below the bottom of the lowest proposed structure footing or to two (2.0) feet below finished subgrade, whichever depth is lower. Root systems deeper than the elevation indicated above shall be excavated to allow no roots larger than two (2.0) inches in diameter.

4.1.6 **Cavities** – resulting from clearing and grubbing or cavities existing on the site as a result of man-made or natural activity shall be backfilled with earth materials placed and compacted in accordance with Sections 5.3 and 5.4 of these specifications.

4.1.7 **Preservation or Monuments, Construction Stakes, Property Corner Stakes**, or other temporary or permanent horizontal or vertical control reference points shall be the responsibility of the contractor. Where these markers are disturbed, they shall be replaced at the contractor's expense.

5. SITE GRADING

Site grading shall consist of excavation and placement of fills to lines and grades shown on the project plans and in accordance with project specifications and recommendations

of the Preliminary Soils Report, whichever is more stringent. The following are recommendations issued in this report.

5.1 Areas to Receive Fill:

5.1.1 Surfaces to receive fill shall be scarified to a depth of at least six (6.0) inches, or as recommended in this report, whichever is greater, until the surface is free from ruts, hummocks or other uneven features which would tend to prevent uniform compaction by the equipment to be used.

5.1.2 After the area to receive fill has been cleared and scarified, it shall be moistened and compacted to a depth of at least six (6.0) inches in accordance with specifications for compacting fill material in paragraph 5.4, below.

5.2 Excavation:

5.2.1 Excavations shall be cut to elevations plus or minus 0.1 foot of the grades shown on the accepted plans.

5.2.2 When excavated materials are to be used in engineered fill, the excavation shall be made in a manner to produce as much mixing of the excavated materials as practicable.

5.2.3 When excavations are to backfilled, and where surfaces exposed by excavation are to support structures or concrete floor slabs, the exposed surfaces shall be scarified, moistened and compacted, as stated above for areas to receive fill. Over excavation below specified depths will not eliminate the requirement for exposed surface compaction.

5.3 Fill Materials:

5.3.1 Materials obtained from on-site excavations will be considered satisfactory for construction of on-site engineered fills unless otherwise stated in the Soils Report or Foundation Investigation. If unexpected pockets of poor or weak materials are encountered in excavations, and they cannot be upgraded by mixing with other materials or by other means, they may be rejected by the soils engineer for use in engineered fill.

Rocks larger than 12 inches in size in any dimension shall not be allowed in the proposed building area. If a large amount of rocks greater than 12 inches in size in any dimension is encountered a rock disposal area shall be located on the grading plan. Rocks shall be mixed with well graded soils to assure that the voids in these areas will fill properly.

5.3.2 When imported fill materials are necessary to bring the site up to planned grades, no material shall be imported prior to its approval and acceptance by the soils engineer.

5.3.3 The soils engineer shall be given notice of the proposed source of imported materials with adequate time allowance for his testing of the proposed materials. The time required for testing will vary with different types of materials, job conditions, and ultimate function of filled areas. Under best conditions the time requirement will not be less than 48 hours.

5.4 Placing, Spreading, and Compacting Fill Material:

5.4.1 The fill materials shall be placed in layers which, when compacted, shall not exceed six (6.0) inches in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to insure uniformity of material in each layer. Increased thickness of layers may be approved by the soils engineer when conditions warrant.

5.4.2 All fills shall be placed in level layers; layers shall be continuous over the area of any structural unit, and all portions of the fill shall be brought up simultaneously within the area of any structural unit. When imported material is used, it must be placed so that its thickness is as uniform as possible within the area of any structural unit.

5.4.3 When materials are to be excavated and replaced in a compacted condition, segmented, or leap-frogging of cut-fill operation within the area of any structural unit will not be permitted unless the method is specifically described by the soils engineer.

5.4.4 When the moisture content of fill material is below the lower limit specified by the Soils Engineer, water shall be added until the moisture content is as specified; and when it is above the upper limit specified, the material shall be aerated by blading or other satisfactory methods until the moisture content is as specified.

5.4.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted to not less than ninety (90) percent of maximum density in accordance with ASTM Density Test Method D1557. Compaction shall be by equipment of such design that it will be able to compact the fill to specified density. When the soils engineer specifies a specific type of compaction equipment to be used, such equipment shall be used as specified.

5.4.6 Compaction of each layer shall be continuous over its entire area and the equipment shall make sufficient trips to insure that the desired density has been obtained.

5.4.7 Field density tests shall be made by the soils engineer. The compaction of each layer of fill shall be subject to testing. Where sheepsfoot rollers are used, the soil may be disturbed to a depth of several inches. Density tests shall be taken in the compacted material below the disturbed surface. When tests indicate the density of any layer of fill or portion thereof is below

the required ninety (90) percent density, the particular layer or portion shall be re-worked until the required density has been obtained.

5.4.8 When the soils engineer specifies compaction to other standards or to percentages other than ninety (90) percent, such specification, with respect to the particular items shall supersede these specifications.

5.4.9 The fill operation shall be continued in six (6) inch compacted layers, as specified above, until the fill has been brought to within 0.1 foot, plus or minus of the finished slopes and grades, as shown on the accepted plans. The finished surface of fill areas shall be graded or bladed to a smooth and uniform surface and no loose material shall be left on the surface.

5.4.10 No fill materials shall be placed, spread, or compacted while it is frozen or thawing or during unfavorable weather conditions. When work is interrupted by weather conditions, fill operations shall not be resumed until the soils engineer indicates that moisture content and density of previously placed fill are satisfactory.

5.5 Observations and Testing:

The soils engineer shall be provided with a 48-hour advance notice, in order that he may be present at the site during all earthwork activities related to excavation, tree root removal, stripping, backfill, and compaction and filling of the site and to perform periodic compaction tests so that substantial conformance to these recommendations can be established.

APPENDIX B

FIELD INVESTIGATION

Sixteen (16) test borings were drilled at the subject site and terminated at a maximum depth of 51.5 feet below the existing ground surface. Borings were advanced using an eight (8.0) inch hollow-stem auger. One (1) CPT sounding was performed to a maximum depth of 85 feet. Test data and descriptions from these holes form the basis of the conclusions and recommendations contained in this report.

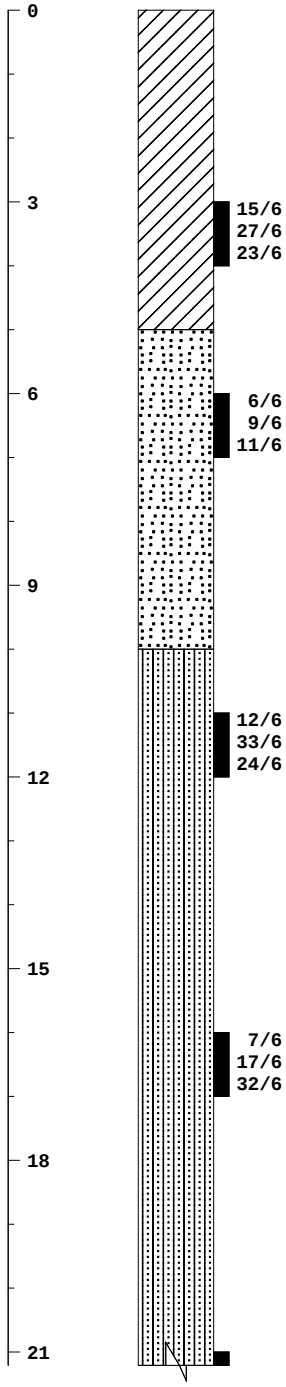
Undisturbed samples and disturbed bulk samples were obtained. Undisturbed samples were taken using either a 2-3/8” (inside diameter) split-barrel sampler or a 1-3/8” (inside diameter), 2” (outside diameter) Standard Penetration Sampler (SPT). Penetration resistance of undisturbed soils was obtained by driving the above-described sampler using a one-hundred-forty-pound hammer falling thirty inches (30"). Blow counts for each six inch (6") driven increment was recorded and are reported on the Test Borings Logs. In addition, bulk soil samples, selected as most representative of near surface soils encountered, were taken for laboratory testing.

As drilling progressed, earth materials encountered were logged and classified in accordance with the Unified Soils Classification System and presented graphically on Logs of Test Borings, Figures 2 through 17, along with the Legend. The CPT sounding results are also included. Approximate locations of test borings are shown on the Boring Location Map, Figure 1.

Boring Location Map
SEI File No. 26-20852
Figure 1

LOG OF TEST BORING
BORING B-1

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ : *N/A* **CAVING - ⬟ :** *N/A* **LOGGER:** *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		CL	SANDY CLAY; reddish brown, dry, low to medium plasticity.			
3	15/6 27/6 23/6		Hard.		120.8	5.8
6	6/6 9/6 11/6	SP	POORLY GRADED SAND; light reddish brown, dry, fine grained, traces of gravel. Medium dense.		121.5	1.3
9						
12	12/6 33/6 24/6	SM	SILTY SAND; light reddish brown, dry, fine grained. Dense.		116.4	1.9
15	7/6 17/6 32/6		Gravel, traces of clay.		121.5	1.2
18						
21						

Figure Number 2

LOG OF TEST BORING
BORING B-1

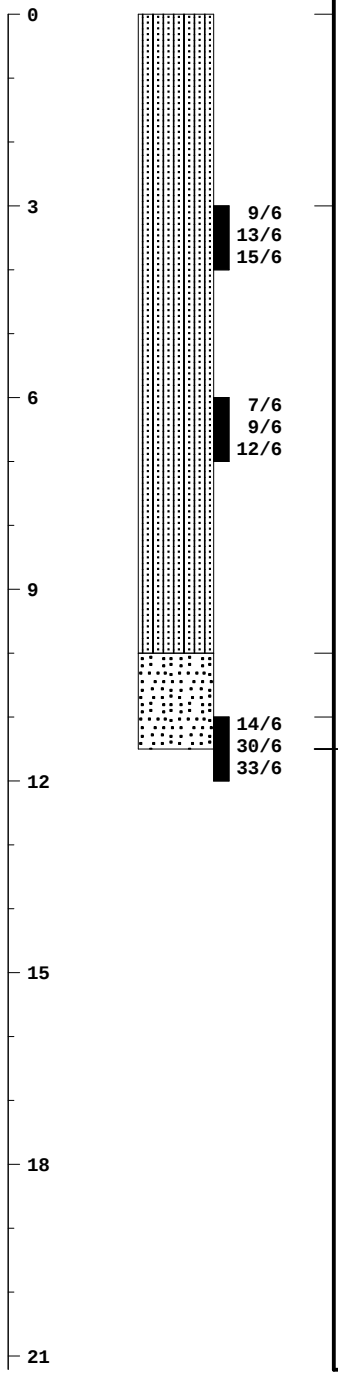
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ : *N/A* **CAVING - ⬢ :** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
	16/6 28/6 44/6		**Gravel.** **BOTTOM.**		123.5	0.9
24						
27						
30						
33						
36						
39						
42						

Figure Number 2

LOG OF TEST BORING
BORING B-2

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*

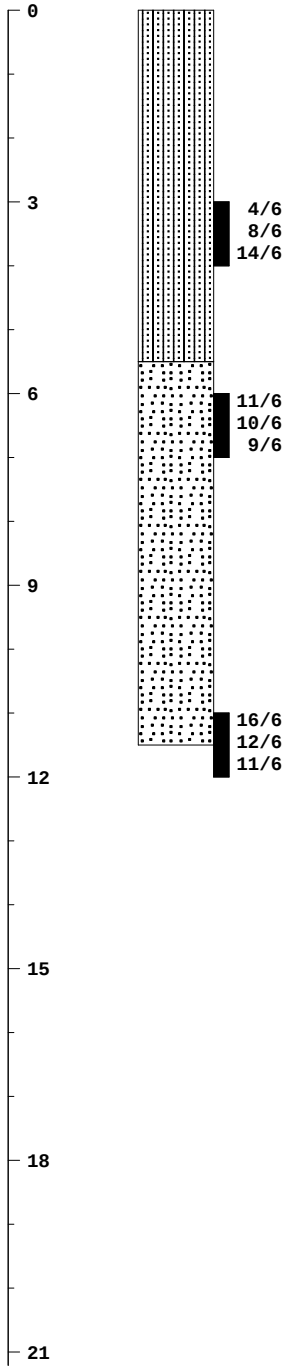


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light yellowish brown, dry to damp, fine to medium grained, cohesive.**			
3	9/6 13/6 15/6		**Medium dense.**		119.5	3.0
6	7/6 9/6 12/6				110.3	1.9
9		SP	**POORLY GRADED SAND; light yellowish brown, fine to coarse grained, fine gravel.**		120.7	1.4
12	14/6 30/6 33/6		**Dense.**			
			BOTTOM.			
15						
18						
21						

Figure Number 3

LOG OF TEST BORING
BORING B-3

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SM	**SILTY SAND; light yellowish brown, dry to damp, fine to medium grained.**			
			Medium dense.		118.5	3.7
		SP	**POORLY GRADED SAND; light yellowish brown, dry to damp, fine to coarse grained, fine gravel.**		120.2	2.3
			BOTTOM.		95.7	1.1

Figure Number 4

LOG OF TEST BORING
BORING B-4

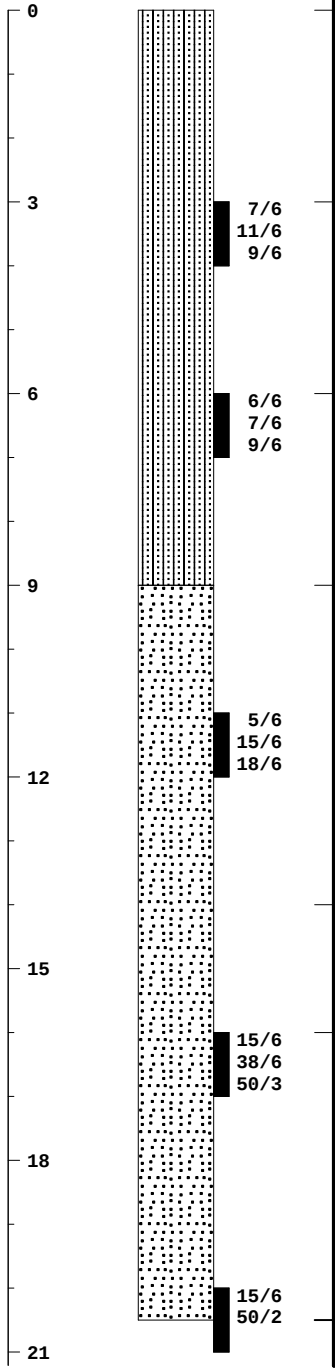
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ : *N/A* **CAVING - ▰ :** *N/A* **LOGGER:** *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3						
6						
9						
			BOTTOM.			
12						
15						
18						
21						

Figure Number 5

LOG OF TEST BORING
BORING B-5

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ⬟ **:** *N/A*
LOGGER: *LW/MV*

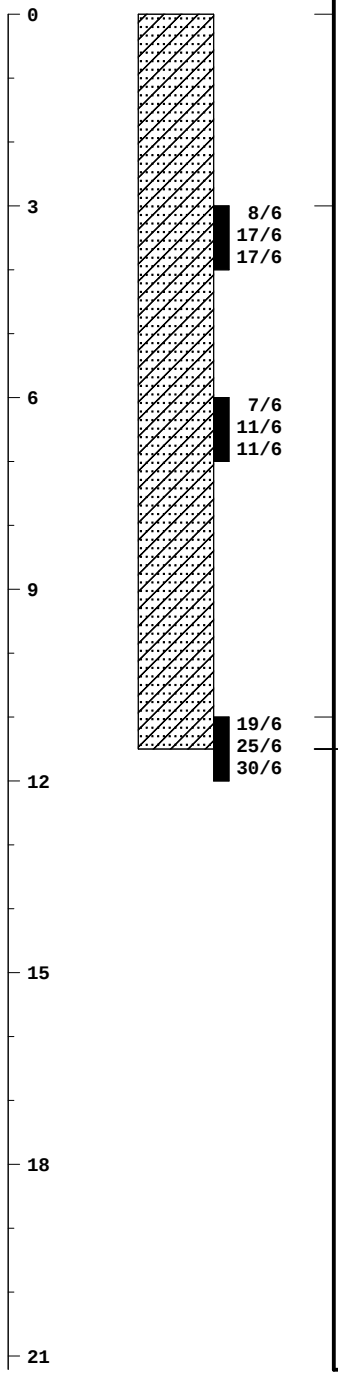


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	SILTY SAND; light yellowish brown, dry to damp, traces of clay, fine to coarse grained, cohesive.			
3	7/6 11/6 9/6		Medium dense.		116.1	3.4
6	6/6 7/6 9/6		Fine gravel.		117.5	2.4
9		SP	POORLY GRADED SAND; dry, fine to coarse grained, traces of fine gravel.			
12	5/6 15/6 18/6				116.0	1.8
			Gravel.			
15	15/6 38/6 50/3		Very dense, cobbles.		120.9	2.0
18						
21	15/6 50/2		BOTTOM.		124.7	0.7

Figure Number 6

LOG OF TEST BORING
BORING B-6

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ : *N/A* **CAVING - ▰ :** *N/A* **LOGGER:** *MW/LG*

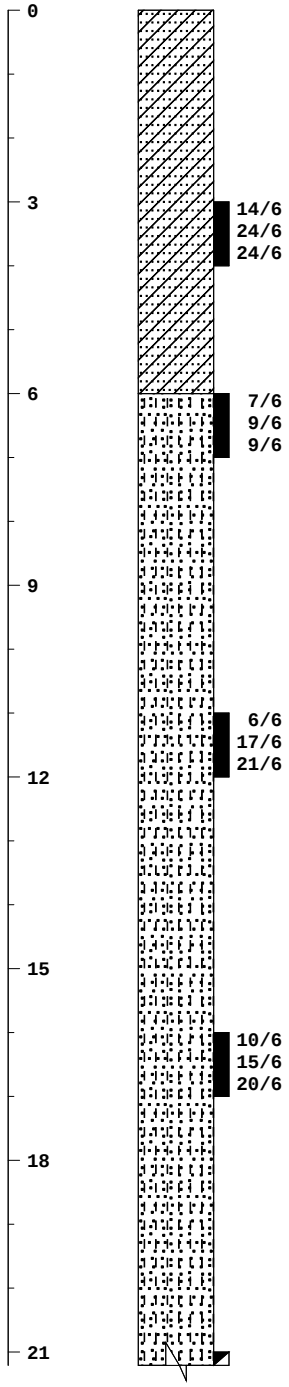


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SC	**CLAYEY SAND; light reddish brown, dry to damp, fine grained.**			
3	8/6 17/6 17/6		**Medium dense, gravel.**		122.6	3.9
6	7/6 11/6 11/6				117.2	1.3
9						
12	19/6 25/6 30/6		**Dense, traces of gravel. BOTTOM.**		118.6	1.8
15						
18						
21						

Figure Number 7

LOG OF TEST BORING
BORING B-7

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ⬢ **:** *N/A* **LOGGER:** *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SC	CLAYEY SAND; light reddish brown, dry, fine grained, traces of gravel.			
3	14/6 24/6 24/6		Dense, gravel.		126.0	4.6
6	7/6 9/6 9/6	SP-SM	POORLY GRADED SAND with low fines content; light brown, dry, trace of fine gravel/ organics, medium dense.		119.1	1.3
12	6/6 17/6 21/6				109.3	1.2
15	10/6 15/6 20/6		Gravel, cobbles.		111.9	0.8
18						
21						

Figure Number 8

LOG OF TEST BORING
BORING B-7

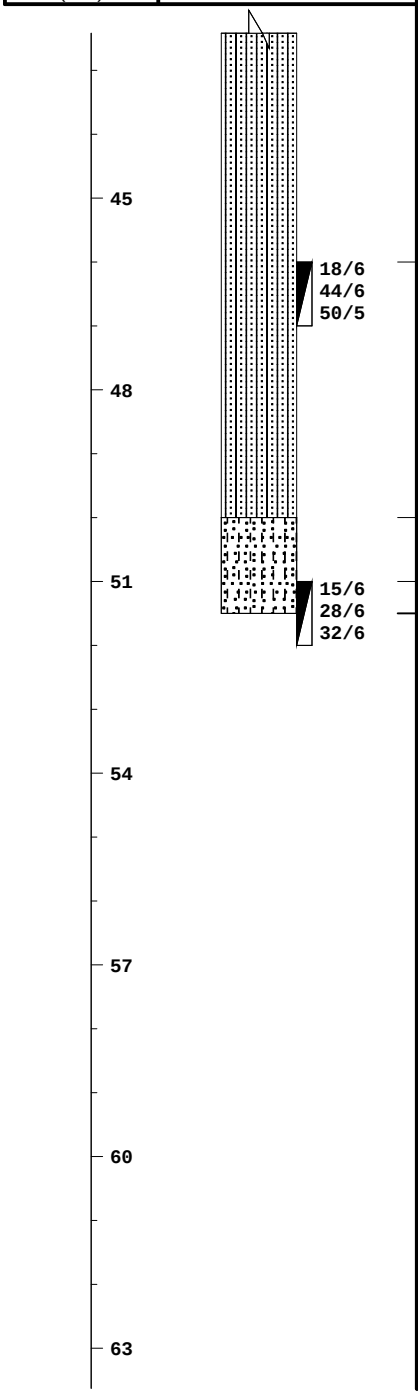
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
	15/6 30/6 40/6		**Dense.**			2.5
24						
	16/6 43/6 44/6	SC	**CLAYEY SAND; reddish brown, dry, fine grained very dense.**			5.2
27						
30						
	9/6 12/6 14/6		**Brown, medium dense.**			3.4
33						
36	13/6 22/6 26/6	SP-SM	**POORLY GRADED SAND with low fines content; brown, dry.**			1.4
39						
	11/6 18/6 27/6	SM	**SILTY SAND; brown, damp, dense.**			2.9
42						

Figure Number 8

LOG OF TEST BORING
BORING B-7

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

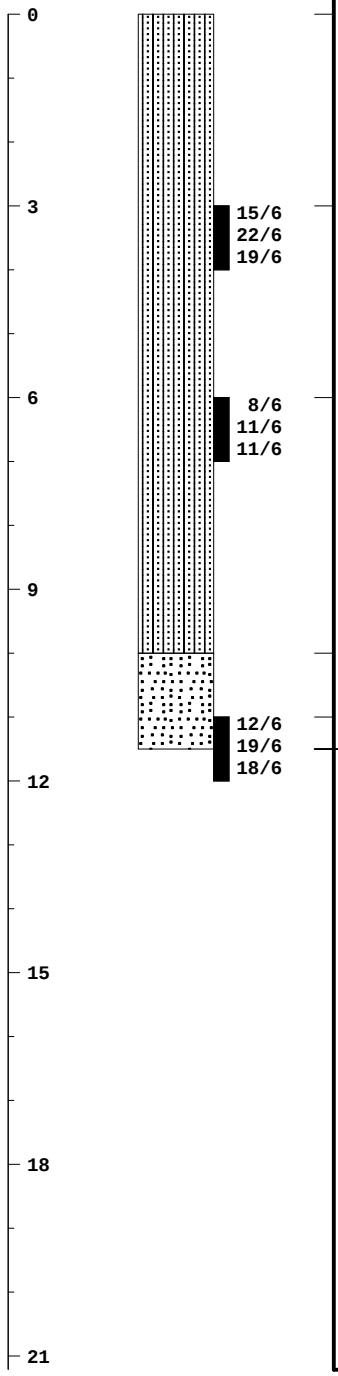


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
			Very dense.			3.9
		SP-SM	**POORLY GRADED SAND with low fines content; light yellowish brown, dry, fine grained.**			1.6
			Dense.			
			BOTTOM.			

Figure Number 8

LOG OF TEST BORING
BORING B-8

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

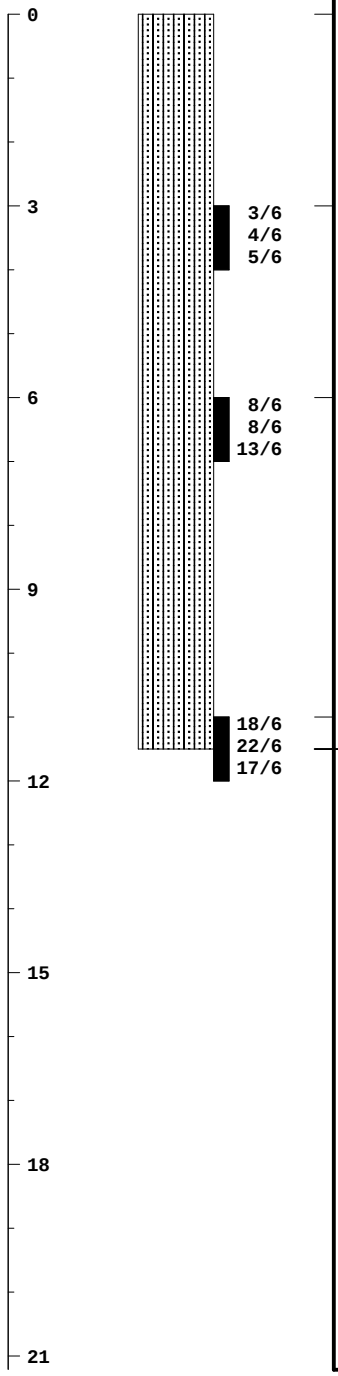


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; reddish brown, dry to damp, fine grained, traces of clay.**			
3	15/6 22/6 19/6		**Dense.**		124.3	3.4
6	8/6 11/6 11/6		**Medium dense.**		116.7	2.0
9		SP	**POORLY GRADED SAND; light reddish brown, dry, fine grained, traces of clay.**		113.5	0.7
12	12/6 19/6 18/6		**Dense.**			
			BOTTOM.			
15						
18						
21						

Figure Number 9

LOG OF TEST BORING
BORING B-9

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*

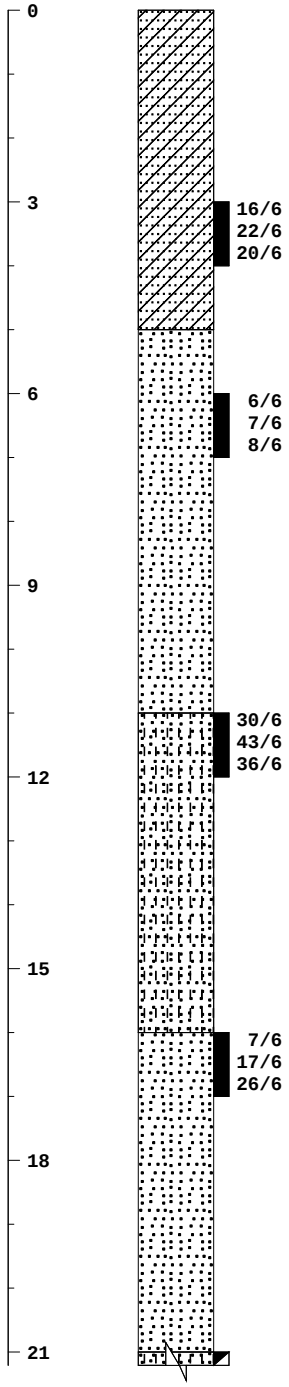


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light yellowish brown, dry, fine to medium grained, cohesive.**			
3	3/6 4/6 5/6		**Loose.**		114.8	3.3
6	8/6 8/6 13/6		**Medium dense, fine gravel.**		121.6	1.6
12	18/6 22/6 17/6		**Traces of fine gravel.** **BOTTOM.**		106.7	2.0

Figure Number 10

LOG OF TEST BORING
BORING B-10

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

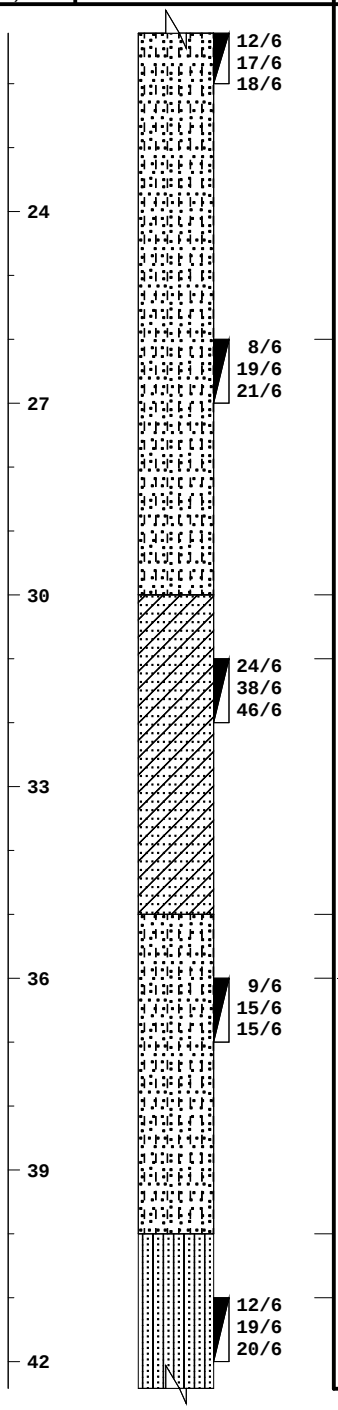


ELEVATION/ DEPTH (feet)	USCS	Description	Remarks	Density pcf	Moisture %
0	SC	CLAYEY SAND; light brown, dry, fine grained.			
3		Dense.		115.2	5.2
	SP	POORLY GRADED SAND; light yellowish brown, dry, fine grained.			
6		Loose.		120.6	0.8
9					
12	SP-SM	POORLY GRADED SAND with low fines content; brown dry, very dense.		120.6	1.8
15					
	SP	POORLY GRADED SAND; brown, dry, dense.		119.0	1.6
18					
21					

Figure Number 11

LOG OF TEST BORING
BORING B-10

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SP-SM	POORLY GRADED SAND with low fines content; brown, damp.			2.1
			Traces of gravel.			1.5
		SC	CLAYEY SAND; light brown, dry, medium plasticity. Hard, gravel.			4.2
		SP-SM	POORLY GRADED SAND with low fines content; light yellowish brown, dry, fine grained. Medium dense.			1.6
		SM	SILTY SAND; light yellowish brown, dry, fine grained. Dense.			2.5

Figure Number 11

LOG OF TEST BORING
BORING B-10

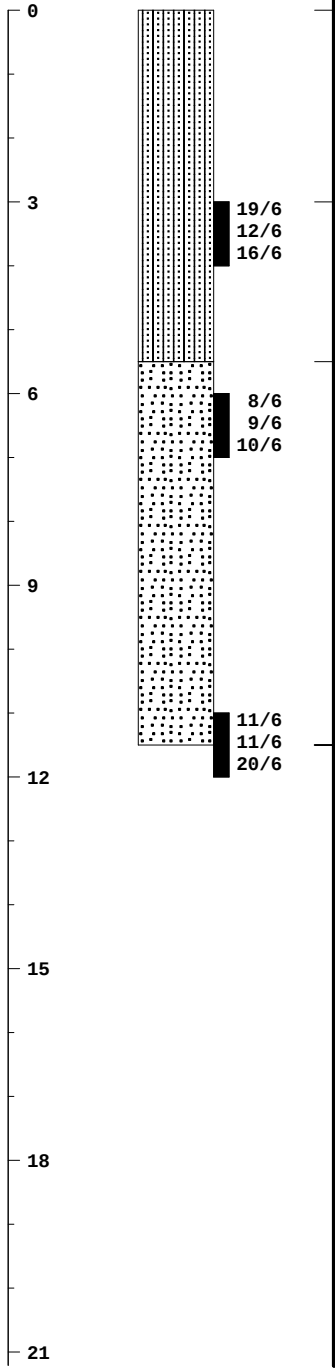
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
45	28/6 29/6 30/6		Very dense.			2.5
48						
51	18/6 26/6 34/6		BOTTOM.			2.7
54						
57						
60						
63						

Figure Number 11

LOG OF TEST BORING
BORING B-11

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ : *N/A* **CAVING - ▰ :** *N/A* **LOGGER:** *LW/MV*

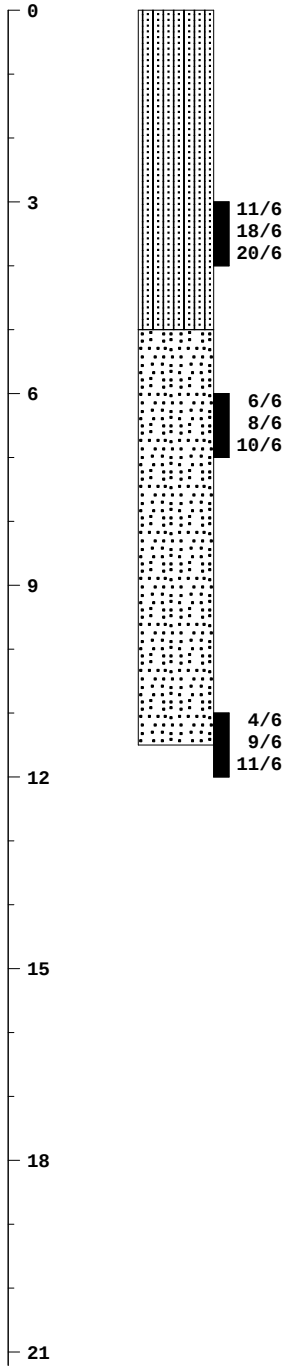


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SM	**SILTY SAND; yellowish brown, dry to damp, fine to medium grained.**			
			Medium dense.		121.1	2.6
		SP	**POORLY GRADED SAND; light yellowish brown, fine gravel.**		113.8	1.3
			BOTTOM.		112.6	0.8

Figure Number 12

LOG OF TEST BORING
BORING B-12

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

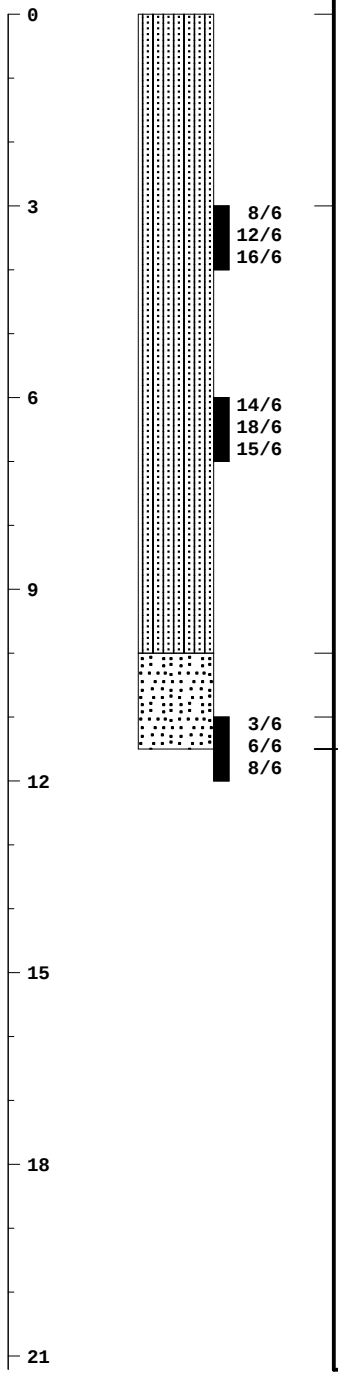


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3	11/6 18/6 20/6		**Dense.**		122.7	4.0
		SP	**POORLY GRADED SAND; light yellowish brown, dry, fine to medium grained, traces of gravel.**			
6	6/6 8/6 10/6		**Medium dense.**		110.8	0.8
9						
	4/6 9/6 11/6				115.6	1.0
12			**BOTTOM.**			
15						
18						
21						

Figure Number 13

LOG OF TEST BORING
BORING B-13

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

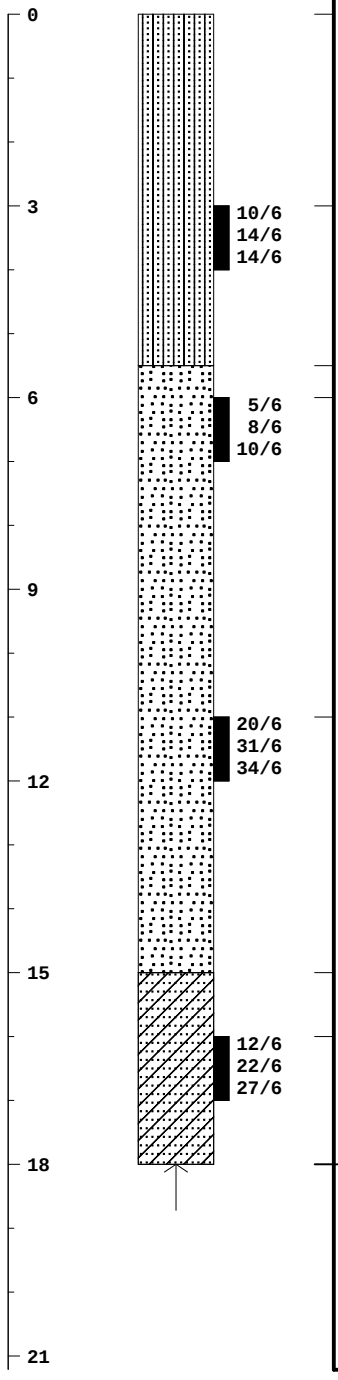


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3	8/6, 12/6, 16/6		**Medium dense.**		115.4	2.4
6	14/6, 18/6, 15/6				120.1	2.7
9		SP	**POORLY GRADED SAND; light yellowish brown, dry, fine to medium grained, gravel.**			
12	3/6, 6/6, 8/6		**Loose.**			0.5
			BOTTOM.			
15						
18						
21						

Figure Number 14

LOG OF TEST BORING
BORING B-14

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

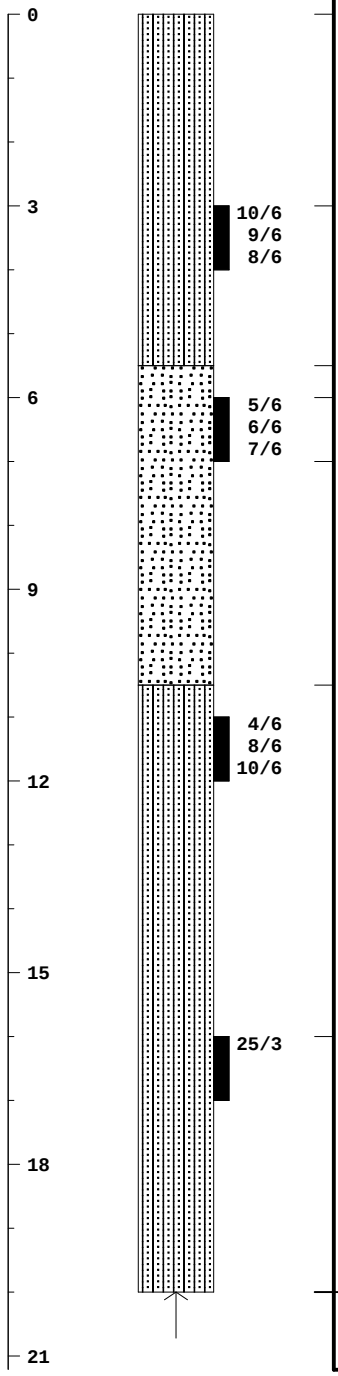


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	SILTY SAND; light reddish brown, dry, fine grained, traces of clay.			
3	10/6 14/6 14/6		Medium dense.		123.8	3.9
6	5/6 8/6 10/6	SP	POORLY GRADED SAND; light reddish brown, dry, fine to medium grained. Traces of gravel, traces of clay.		119.7	1.1
9						
12	20/6 31/6 34/6		Dense, gravel.		118.9	1.4
15	12/6 22/6 27/6	SC	CLAYEY SAND; light reddish brown, dry, fine to medium grained. Cobbles.		110.7	3.3
18			BOTTOM.	Refusal due to cobbles.		
21						

Figure Number 15

LOG OF TEST BORING
BORING B-15

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *07/01/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *07/01/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *07/01/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*

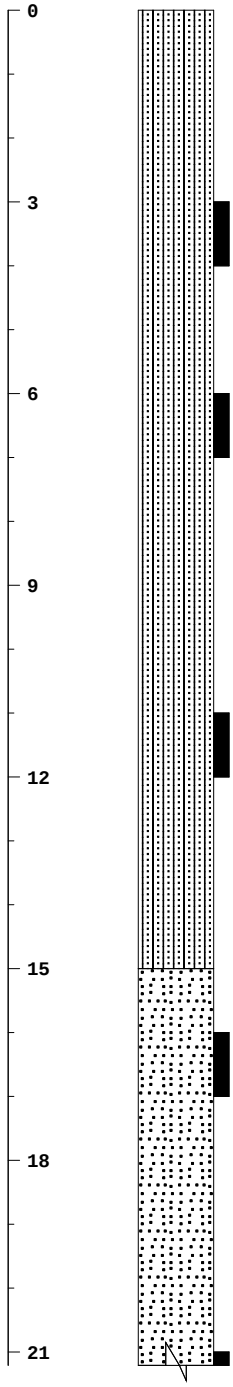


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SM	SILTY SAND; yellowish brown, dry to damp, fine to medium grained, cohesive.			
			Medium dense.		110.6	5.7
		SP	POORLY GRADED SAND; light brown, fine to coarse grained, traces of fine gravel.		120.8	0.8
			Loose.			
			Gravel.			
		SM	SILTY SAND; yellowish brown, damp, traces of clay, fine to coarse grained, fine gravel.		116.1	1.5
			Cobbles.		114.8	2.2
			BOTTOM.	Refusal due to gravel and cobbles.		

Figure Number 16

LOG OF TEST BORING
BORING B-16

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3	7/6 12/6 18/6		**Medium dense.**		121.9	2.5
6	9/6 10/6 10/6		**Traces of gravel.**		120.9	1.4
9						
12	4/6 8/6 12/6		**Fine to medium grained, gravel.**		113.7	1.1
15		SP	**POORLY GRADED SAND; light reddish brown, dry, fine to medium grained, gravel, traces of clay.**		116.2	1.4
18	14/6 21/6 26/6		**Dense.**			
21						

Figure Number 17

LOG OF TEST BORING
BORING B-16

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
	30/6 40/6 50/5		**BOTTOM.**		117.4	3.1
24						
27						
30						
33						
36						
39						
42						

Figure Number 17

KEY TO SYMBOLS

Symbol Description

Strata symbols

Low plasticity clay

Poorly graded sand

Silty sand

Clayey sand

Poorly graded sand with silt

Misc. Symbols

Boring continues

Drill rejection

Soil Samplers

California sampler

Standard penetration test

Notes:

1. Sixteen (16) exploratory borings were drilled between 06/26/2026 and 06/30/2026 using an 8-inch outside diameter hollow-stem auger.

2. No free groundwater was encountered to the maximum depth drilled of 51.5'.

3. Boring locations are shown on the Boring Location Map, Figure 1.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

5. Results of tests conducted on samples recovered are reported on the logs.

APPENDIX C

SOIL TEST DATA

SIEVE ANALYSES (ASTM D422 and/or ASTM D1140)

Grain size distributions for samples selected as most representative of sub-soils encountered in our test borings were determined by sieve analysis. Test results are shown in Figures A-1 through A-7.

IN-SITU DENSITY & MOISTURE RELATIONSHIPS (ASTM D2216 & D2937)

Moisture & density data for undisturbed native soils was obtained by use of a 2-3/8-inch (inside diameter) split-barrel sampler. Test results are given on the Logs of Test Borings, Figures 2 through 17.

CONSOLIDATION TESTS (ASTM D2435)

Compressibility of soils was determined on saturated, undisturbed samples of native materials. Consolidation Test Diagrams, Figures B-1 through B-4, graphically express the relationship of vertical strain vs. applied vertical (normal) load for earth materials selected as most representative of the soil strata within the anticipated zone of influence of foundation loads.

DIRECT SHEAR TESTS (ASTM D3080)

Quick-consolidated direct shear test was performed on an undisturbed, saturated sample of native earth materials. This test provides information on soil shear strength vs. normal load and is used to determine the angle of internal friction and cohesion of earth materials under essentially drained conditions. Test results are presented on Figures C-1 through C-3.

EXPANSION INDEX (ASTM D4829)

The Expansion Index test is designed to measure a basic index property of soil and in this respect is comparable to other index tests such as the Atterberg Limits. In formulating the test procedures, no attempt has been made to duplicate any particular moisture or loading conditions which may occur in the field. Rather, an attempt has been made to control all variables which influence the expansive characteristics of a particular soil and still retain a practical test for general engineering usage. Three samples of near surface soil were obtained and tested for expansiveness. Test results are presented on the Laboratory Testing Recap Table 1.

R-VALUE TESTS (CTM-301)

R-Value tests were performed to obtain flexible pavement design data. Test results are presented on Figures D-1 through D-8.

SOIL CORROSIVITY (SO4 / pH / Chlorides)

Tests for Soluble Sulfates (SO4), Soluble Chlorides (Cl), and pH values were performed on samples taken from the upper 0-5 feet to determine the corrosion potential of the soils. Corrosion prevention measures and the extent to which measures should be taken (if any) should be addressed with the corrosion engineer. Soluble Sulfates and Soluble Chlorides values were determined according to EPA 300.0M. The pH values were determined according to EPA 9045C. Results of all the constituent(s) are discussed in the Soil Corrosivity section.

R&L Capital

Geotechnical Engineering Services
RB Inyokern Data Center (CEI #1160-01)
35.650980, -117.809018 | Brown Rd & 178 Hwy, Kern County, CA

SOILS ENGINEERING, INC.

26-20852
July 14, 2026

TABLE 1

TEST LOCATION	USCS	% < # 200	CONSOLIDATION				DIRECT SHEAR		E.I.	MINIMUM RESISITIVITY	ATTERBERG LIMITS			R-VALUE @ 300 psi		MAXIMUM DENSITY	
			C_C	C_S	S.P. (psf)	HV %	C, (ksf)	F.A.			LL	PL	PI	R.V.	E.P. (psi)	MDD (pcf)	O.M.
B-2 @ 0-5'	SM	25							1								
B-4 @ 0-5'	SM	21							0								
B-7 @ 6'	SP-SM	5.8															
B-7 @ 11'	SP-SM	4.8															
B-7 @ 16'	SP-SM	9.4															
B-7 @ 21'	SP-SM	10.6															
B-7 @ 26'	SC	37															
B-7 @ 31'	SC	19															
B-7 @ 36'	SP-SM	9.9															
B-7 @ 41'	SM	16															
B-7 @ 46'	SM	25															
B-7 @ 51'	SP-SM	8.8															
B-8 @ 0-5'	SM	18							0								
B-8 @ 3'	SM						0.25	34.9									
B-8 @ 6'	SM		0.05	0		-2.8											
B-10 @ 6'	SP	4.1															
B-10 @ 11'	SP-SM	7.1															
B-10 @ 16'	SP	4.0															
B-10 @ 21'	SP-SM	10.0															
B-10 @ 26'	SP-SM	6.8															

CONSOLIDATION
Cc - Compression Index
Cs - Swell Index
S.P. (psf) - Swell Pressure
HV % - Heave Percentage / Collapse

E.I. - EXPANSION INDEX
ATTERBERG LIMITS
LL - Liquid Limit
PL - Plastic Limit
PI - Plasticity Index

DIRECT SHEAR
C (ksf) - Cohesion
F.A. - Friction Angle

RESISTANCE VALUE (R-VALUE)
RV - R-Value @ 300 psi
EP - Expansion Press @ 300 psi
MINIMUM RESISITIVITY - (ohm-cm)

MAXIMUM DENSITY
MDD (pcf) - Max Dry Density
O.M. - Optimum Moisture

R&L Capital

Geotechnical Engineering Services
RB Inyokern Data Center (CEI #1160-01)
35.650980, -117.809018 | Brown Rd & 178 Hwy, Kern County, CA

SOILS ENGINEERING, INC.

26-20852
July 14, 2026

TABLE 1

TEST LOCATION	USCS	% < # 200	CONSOLIDATION				DIRECT SHEAR		E.I.	MINIMUM RESISITIVITY	ATTERBERG LIMITS			R-VALUE @ 300 psi		MAXIMUM DENSITY	
			C_C	C_S	S.P. (psf)	HV %	C, (ksf)	F.A.			LL	PL	PI	R.V.	E.P. (psi)	MDD (pcf)	O.M.
B-10 @ 31'	SC	29															
B-10 @ 36'	SP-SM	7.1															
B-10 @ 41'	SM	17															
B-10 @ 46'	SM	12															
B-10 @ 51'	SM	15															
B-12 @ 0-5'	SM	27							0								
B-12 @ 3'	SM		0.08	0.01		-3.6											
B-13 @ 3'	SM						0.22	31.1									
B-13 @ 6'	SM		0.10	0.01		-2.8											
B-14 @ 0-5'	SM	29							0								
B-16 @ 0-5'	SM	27							3								
B-16 @ 3'	SM						0.22	36.4									
B-16 @ 6'	SM		0.06	0.01		-2.1											
R-1 @ 0-5'	SM	28												35	0		
R-2 @ 0-5'	SM	22												62	0		
R-3 @ 0-5'	SM	13												76	0.03		
R-4 @ 0-5'	SM	16												71	0		
R-5 @ 0-5'	SM	21												72	0		
R-6 @ 0-5'	SM	23												52	0		
R-7 @ 0-5'	SM	22												53	0		
R-8 @ 0-5'	SM	32												45	0		

CONSOLIDATION
Cc - Compression Index
Cs - Swell Index
S.P. (psf) - Swell Pressure
HV % - Heave Percentage / Collapse

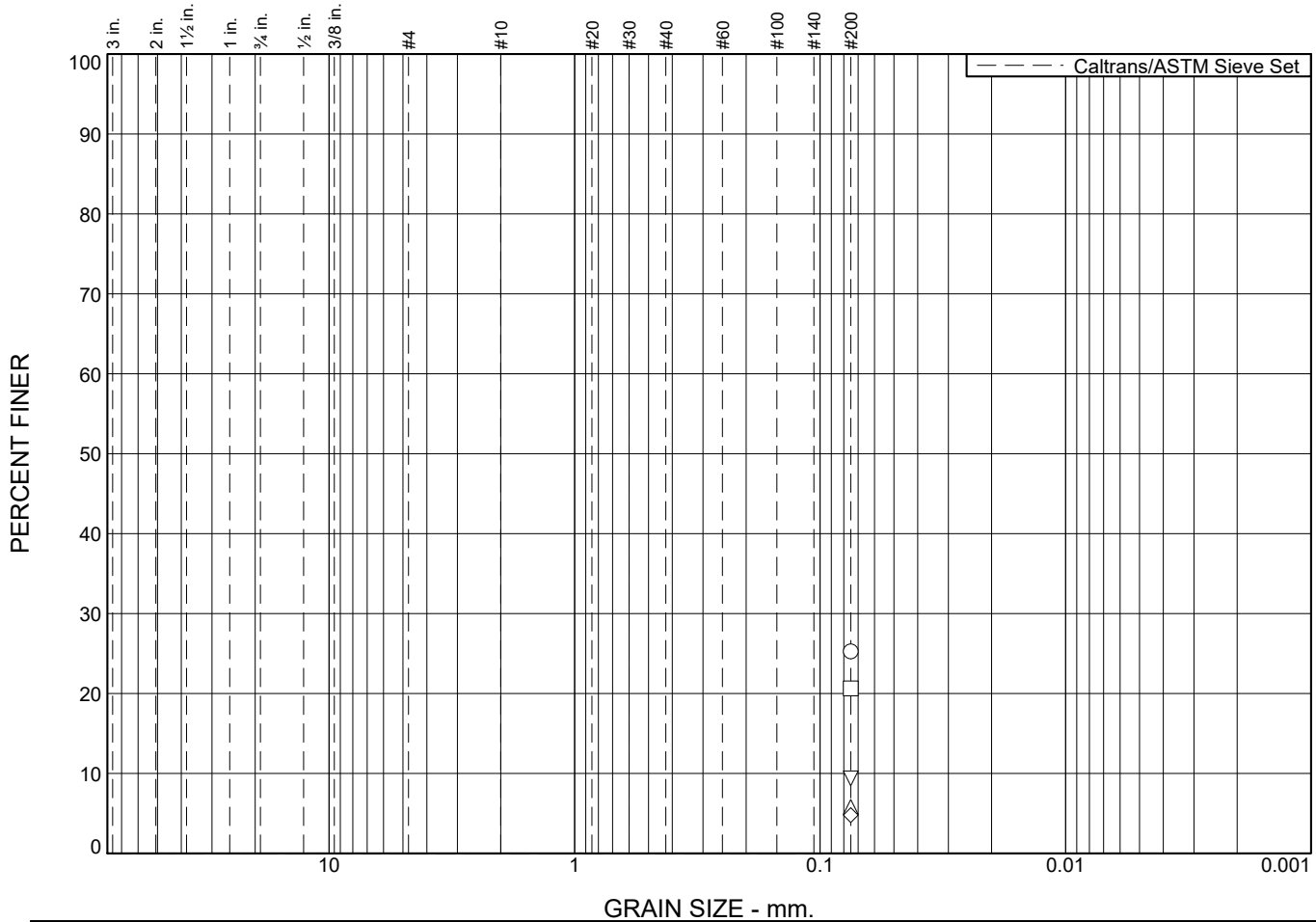
E.I. - EXPANSION INDEX
ATTERBERG LIMITS
LL - Liquid Limit
PL - Plastic Limit
PI - Plasticity Index

DIRECT SHEAR
C (ksf) - Cohesion
F.A. - Friction Angle

RESISTANCE VALUE (R-VALUE)
RV - R-Value @ 300 psi
EP - Expansion Press @ 300 psi
MINIMUM RESISITIVITY - (ohm-cm)

MAXIMUM DENSITY
MDD (pcf) - Max Dry Density
O.M. - Optimum Moisture

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							25.3	
□							20.6	
△							5.8	
◇							4.8	
▽							9.4	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○		B-2	0-5'	SILTY SAND	SM
□		B-4	0-5'	SILTY SAND	SM
△	B-7		6'	POORLY GRADED SAND	SP-SM
◇	B-7		11'	POORLY GRADED SAND	SP-SM
▽	B-7		16'	POORLY GRADED SAND	SP-SM

SOILS ENGINEERING, INC.

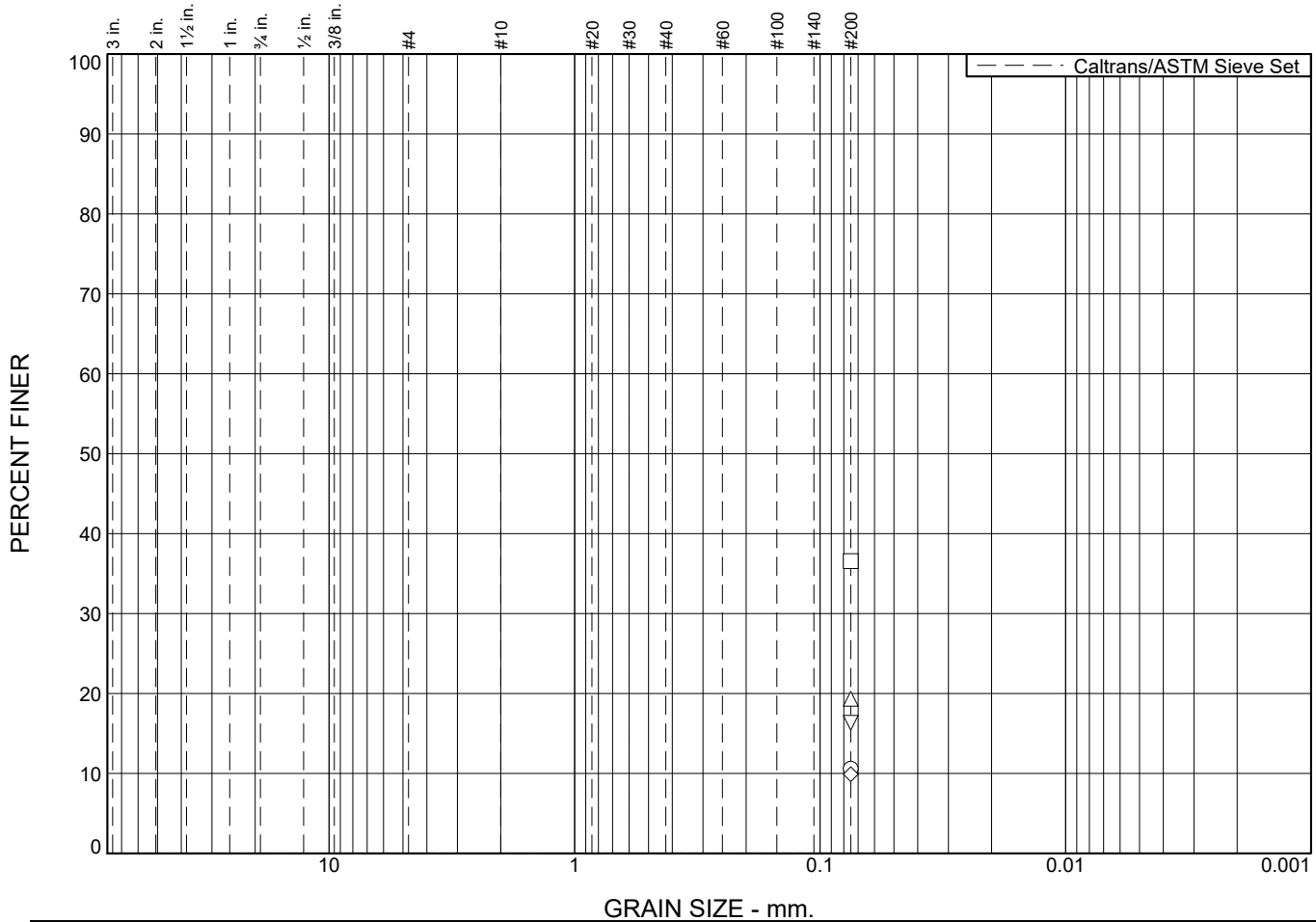
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-1

Tested By: CO **Checked By:** AL

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							10.6	
□							36.6	
△							19.3	
◇							9.9	
▽							16.3	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-7		21'	CLAYEY SAND	SP-SM
□	B-7		26'	CLAYEY SAND	SC
△	B-7		31'	CLAYEY SAND	SC
◇	B-7		36'	SILTY SAND	SP-SM
▽	B-7		41'	SILTY SAND	SM

SOILS ENGINEERING, INC.

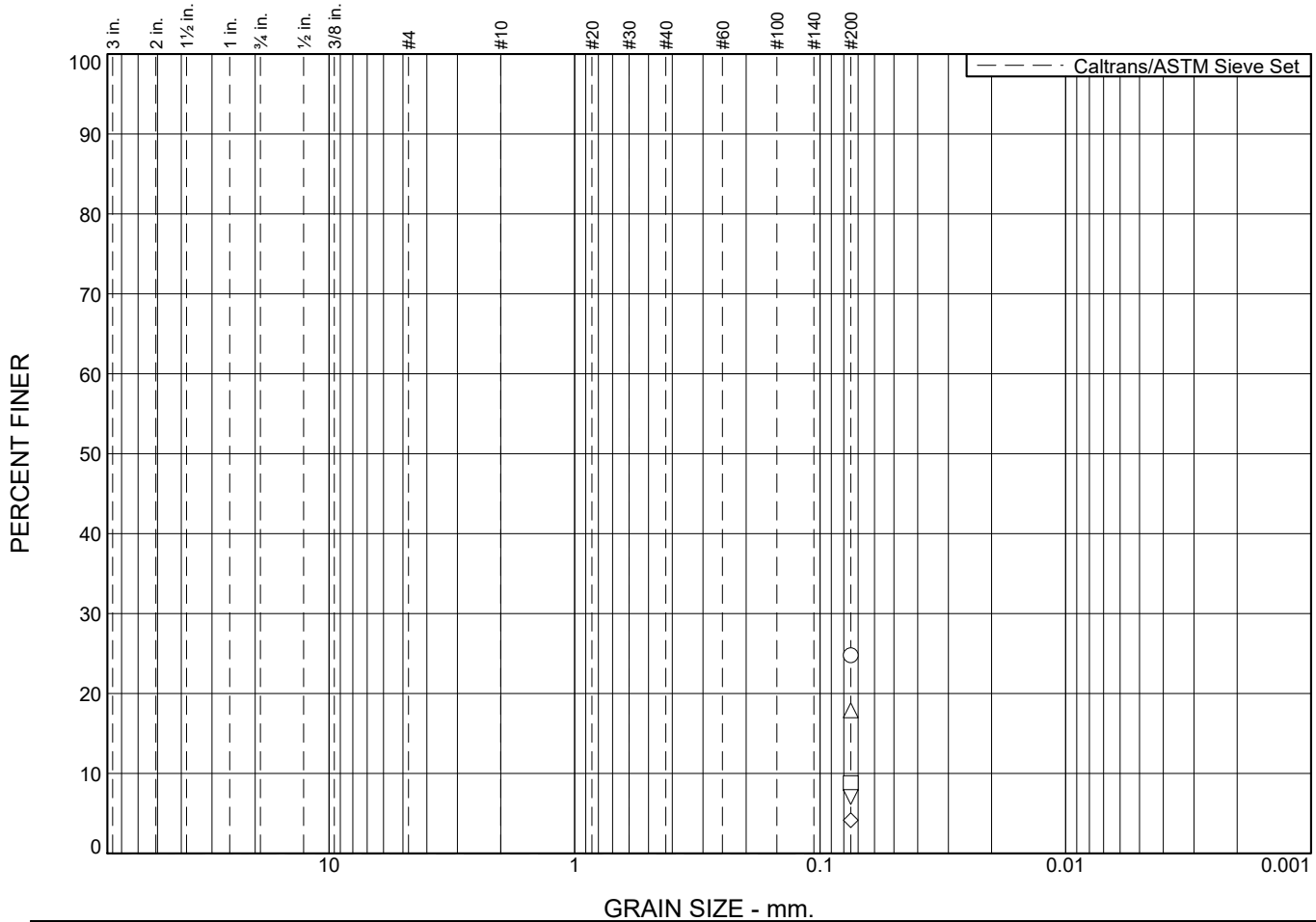
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-2

Tested By: CO **Checked By:** AL

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							24.8	
□							8.8	
△							17.9	
◇							4.1	
▽							7.1	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-7		46'	SILTY SAND	SM
□	B-7		51'	POORLY GRADED SAND	SP-SM
△		B-8	0-5'	SILTY SAND	SM
◇	B-10		6'	POORLY GRADED SAND, LOW-FINE CONTENT	SP
▽	B-10		11'	POORLY GRADED SAND	SP-SM

SOILS ENGINEERING, INC.

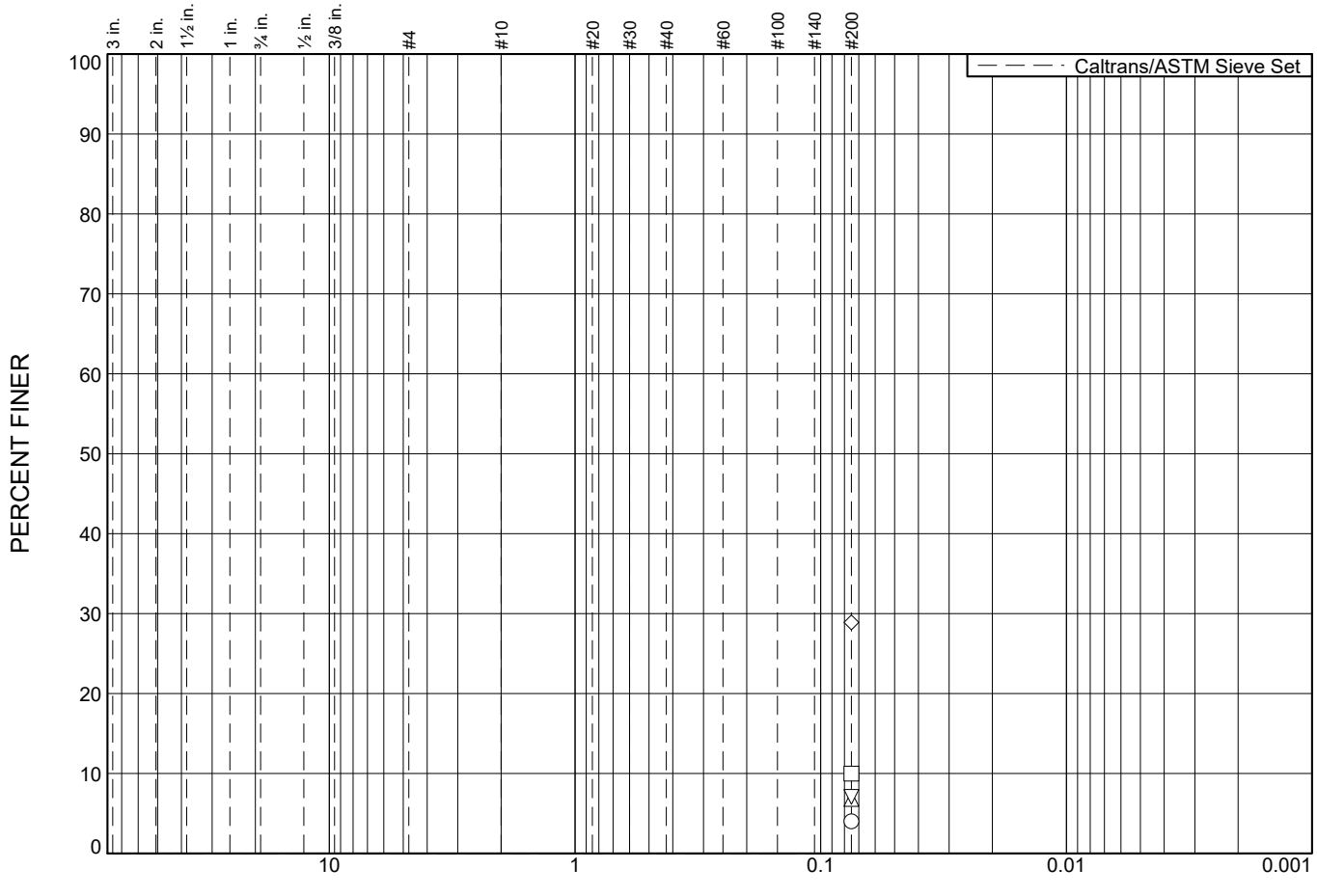
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-3

Tested By: CO **Checked By:** AL

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							4.0	
□							10.0	
△							6.8	
◇							28.9	
▽							7.1	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-10		16'	POORLY GRADED SAND, LOW FINE CONTENT	SP
□	B-10		21'	POORLY GRADED SAND	SP-SM
△	B-10		26'	POORLY GRADED SAND	SP-SM
◇	B-10		31'	CLAYEY SAND	SC
▽	B-10		36'	POORLY GRADED SAND	SP-SM

SOILS ENGINEERING, INC.

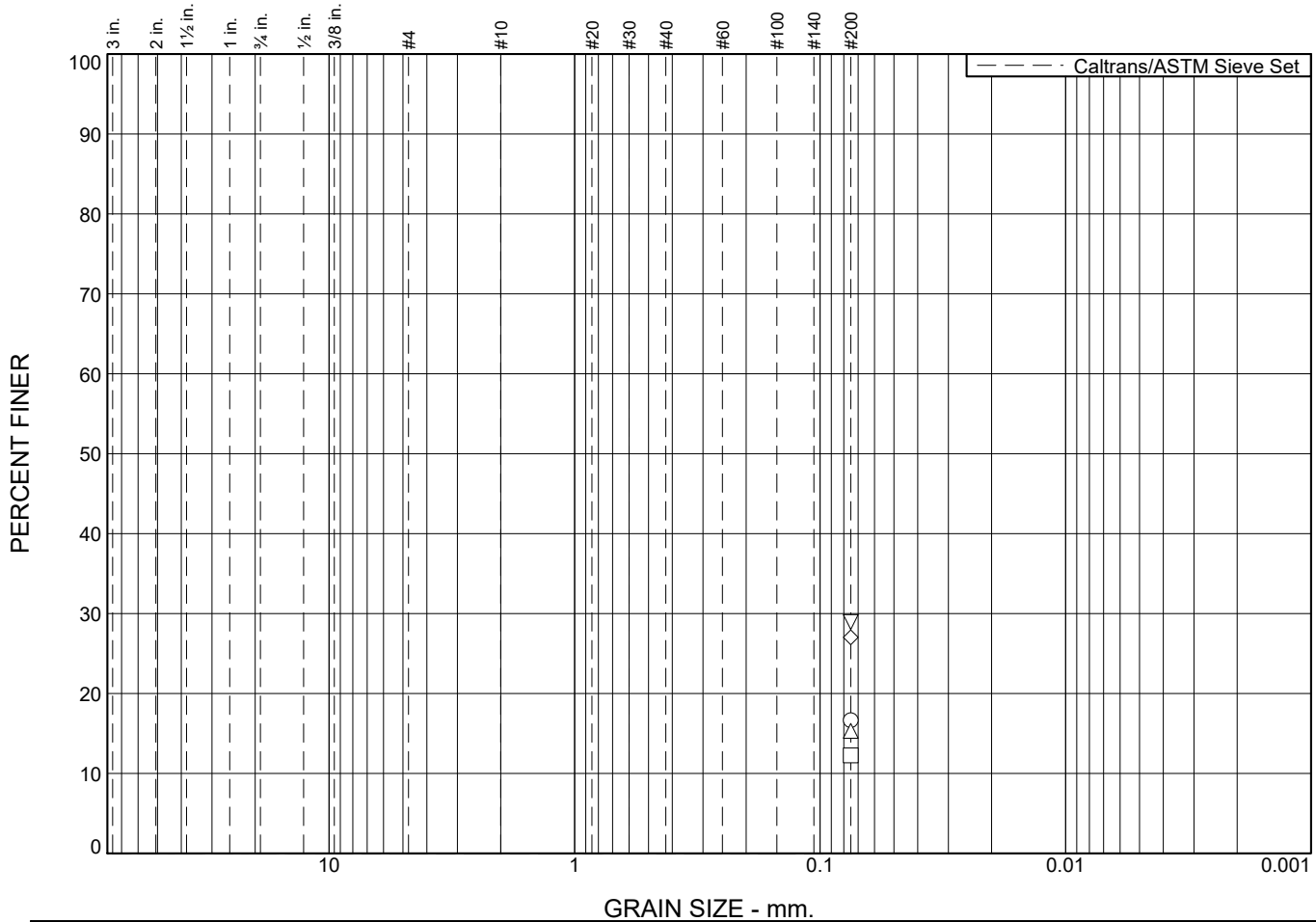
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-4

Tested By: CO **Checked By:** AL

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							17	
□							12	
△							15	
◇							27	
▽							29	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-10		41'	SILTY SAND	SM
□	B-10		46'	SILTY SAND	SM
△	B-10		51'	SILTY SAND	SM
◇		B-12	0-5'	SILTY SAND	SM
▽		B-14	0-5'	SILTY SAND	SM

SOILS ENGINEERING, INC.

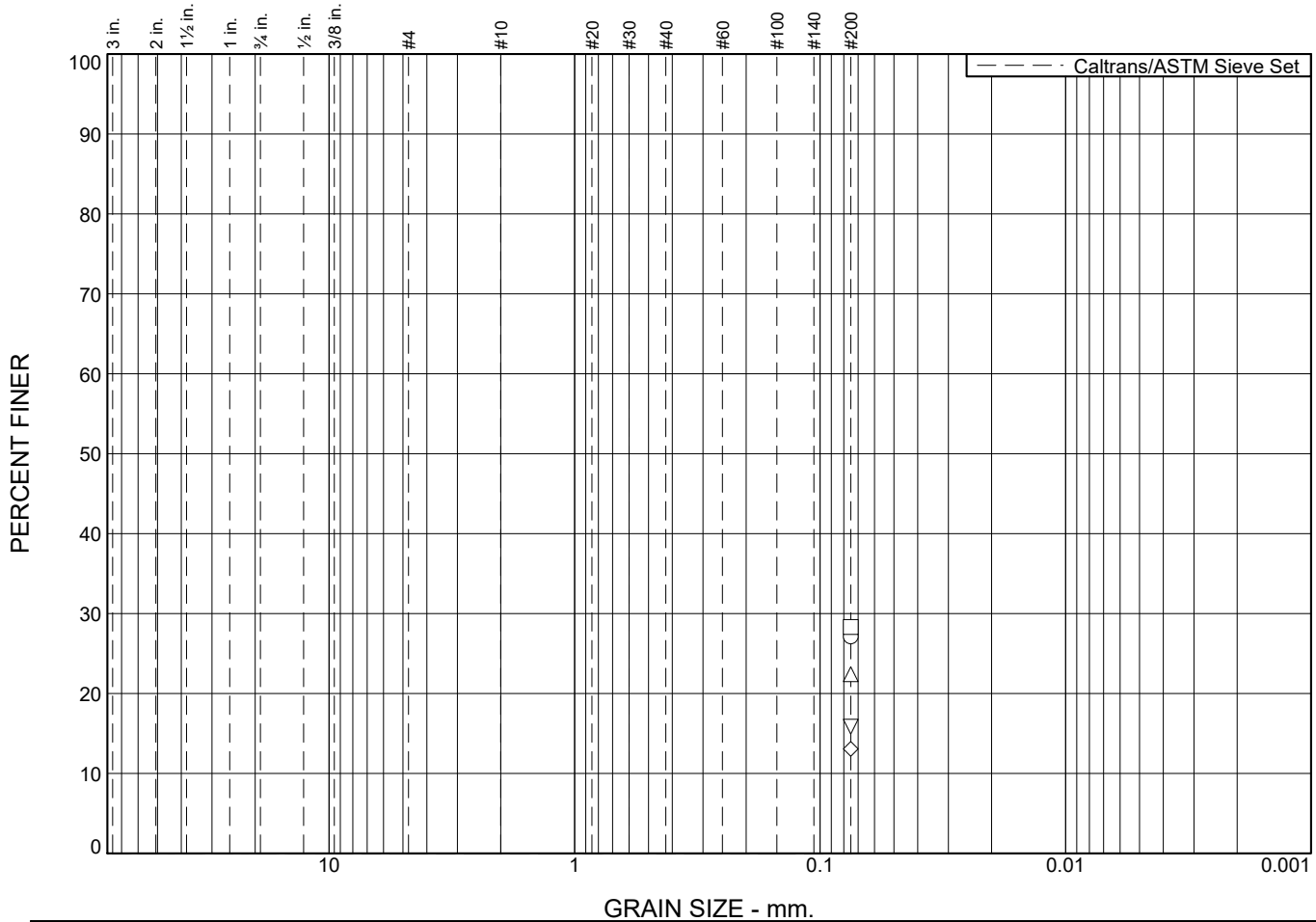
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-5

Tested By: CO **Checked By:** AL

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							27	
□							28	
△							22	
◇							13	
▽							16	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○		B-16	0-5'	SILTY SAND	SM
□		R-1	0-5'	SILTY SAND	SM
△		R-2	0-5'	SILTY SAND	SM
◇		R-3	0-5'	SILTY SAND	SM
▽		R-4	0-5'	SILTY SAND	SM

SOILS ENGINEERING, INC.

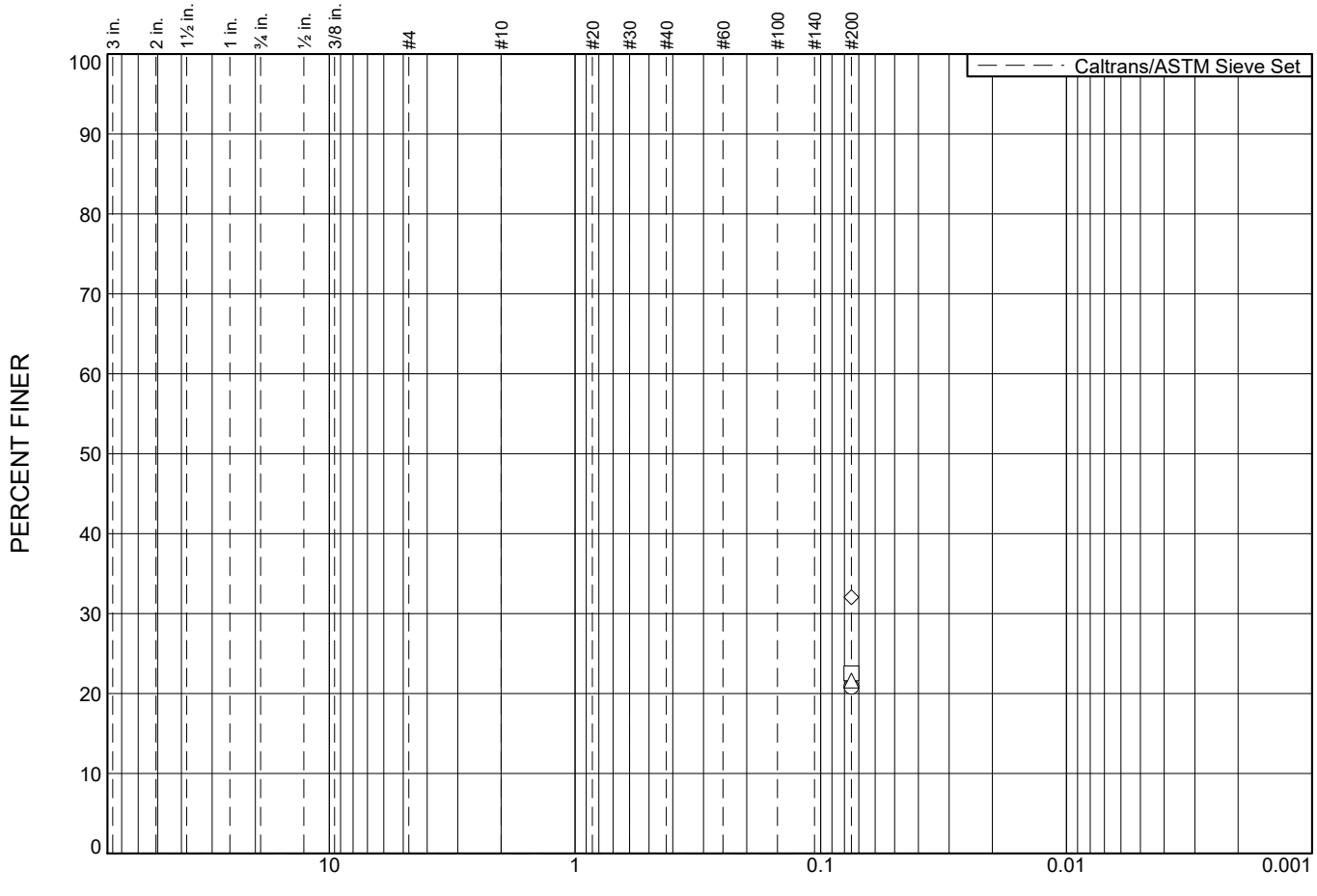
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-6

Tested By: ● CO ■ RC ▲ RC ◆ RC ▼ RC **Checked By:** AL

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							21	
□							23	
△							22	
◇							32	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○		R-5	0-5'	SILTY SAND	SM
□		R-6	0-5'	SILTY SAND	SM
△		R-7	0-5'	SILTY SAND	SM
◇		R-8	0-5'	SILTY SAND	SM

SOILS ENGINEERING, INC.

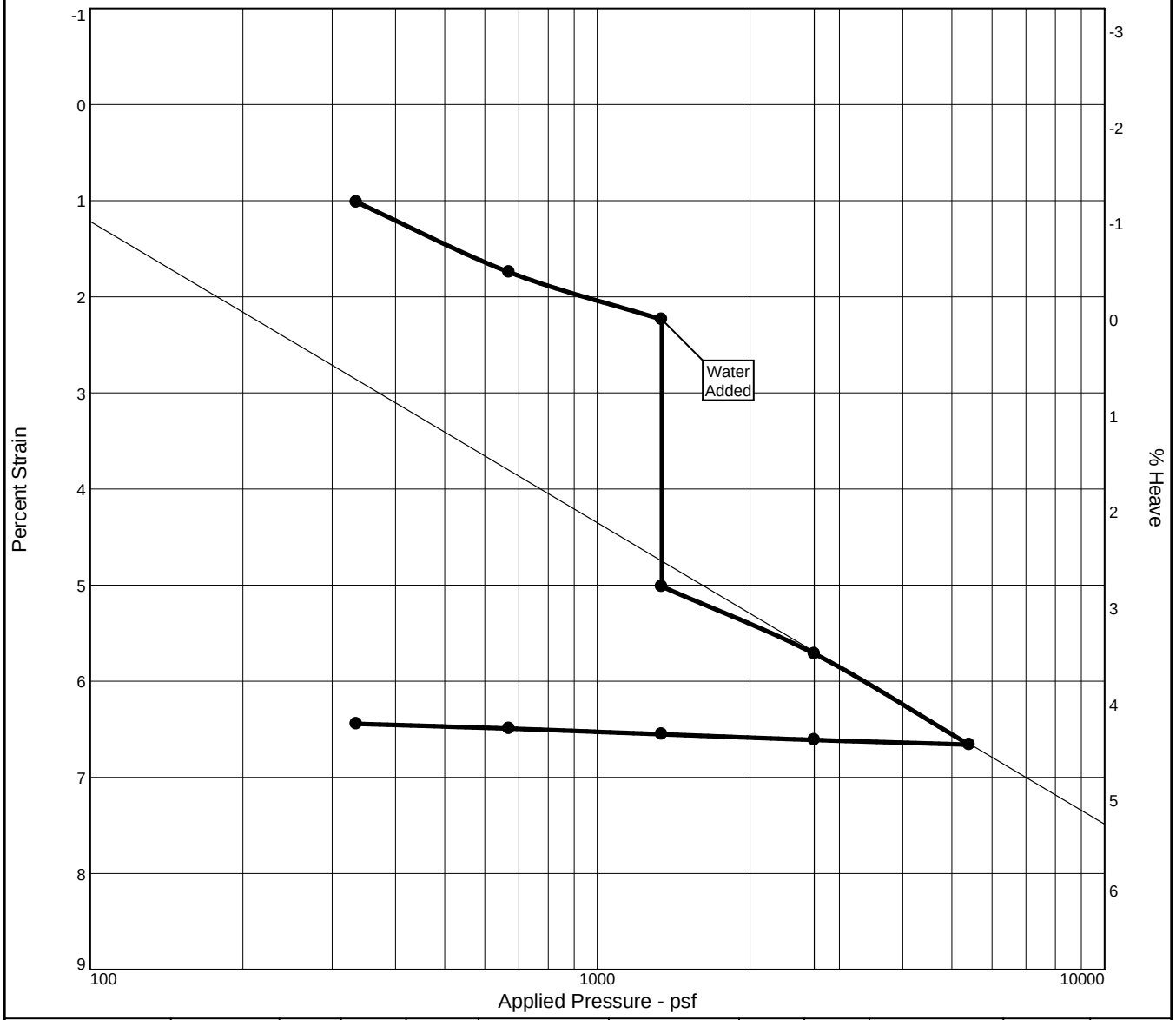
Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Project No.: 20852 **Figure** A-7

Tested By: RC **Checked By:** AL

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_s	Swell Press. (psf)	Heave %	e_o
Sat.	Moist.											
11.7 %	2.7 %	103.0	N/A	N/A	2.65	336	2749	0.05	0.00		-2.8	0.606

MATERIAL DESCRIPTION	USCS	AASHTO
SILTY SAND	SM	N/A

Project No. 20852 **Client:** R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-8 **Depth:** 6'

Remarks:
date tested:7-10-26

SOILS ENGINEERING, INC.

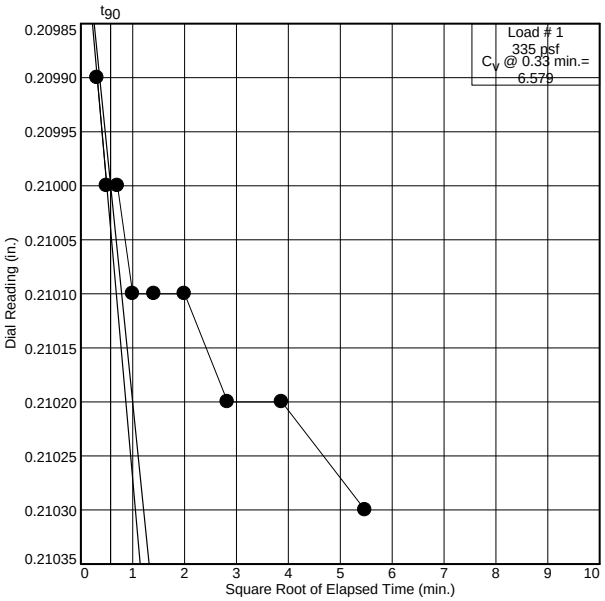
Figure B-1

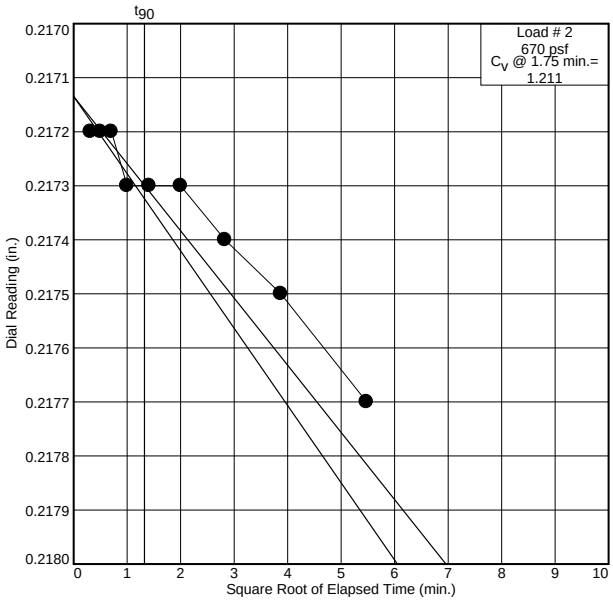
Tested By: CP **Checked By:** AL

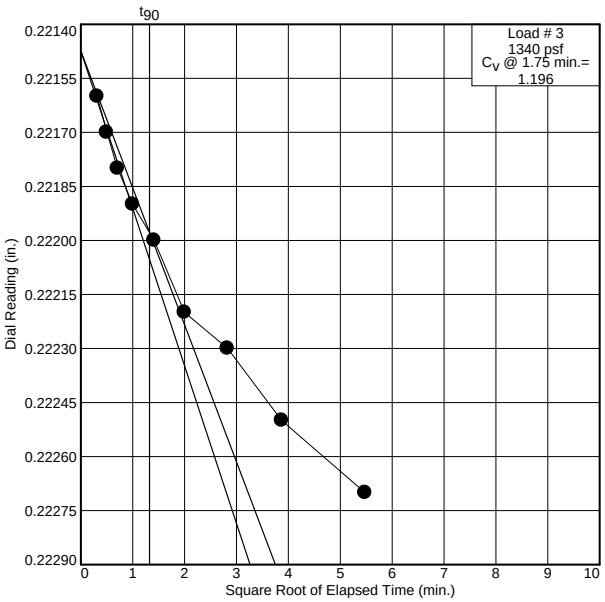
Dial Reading vs. Time

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-8 Depth: 6'







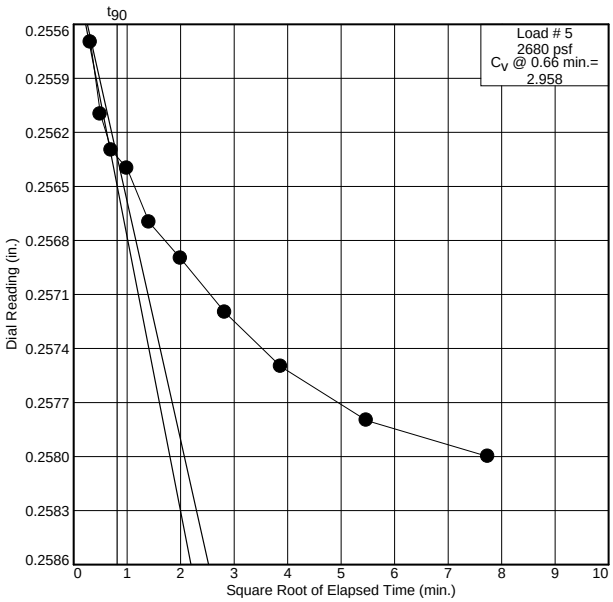


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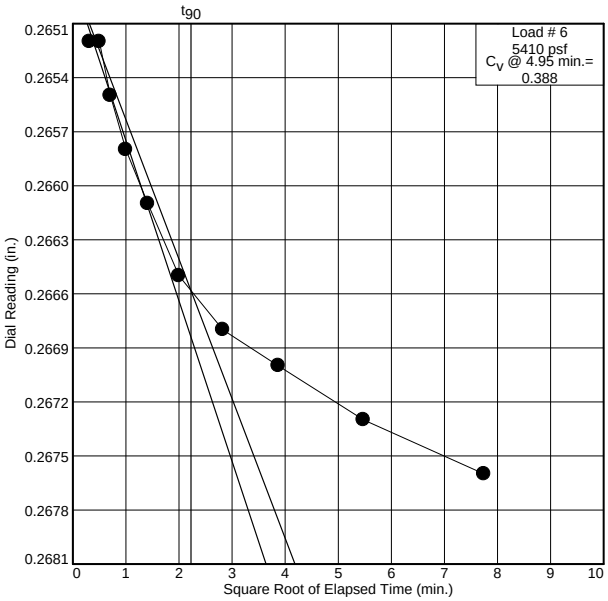
Figure B-1

Dial Reading vs. Time

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

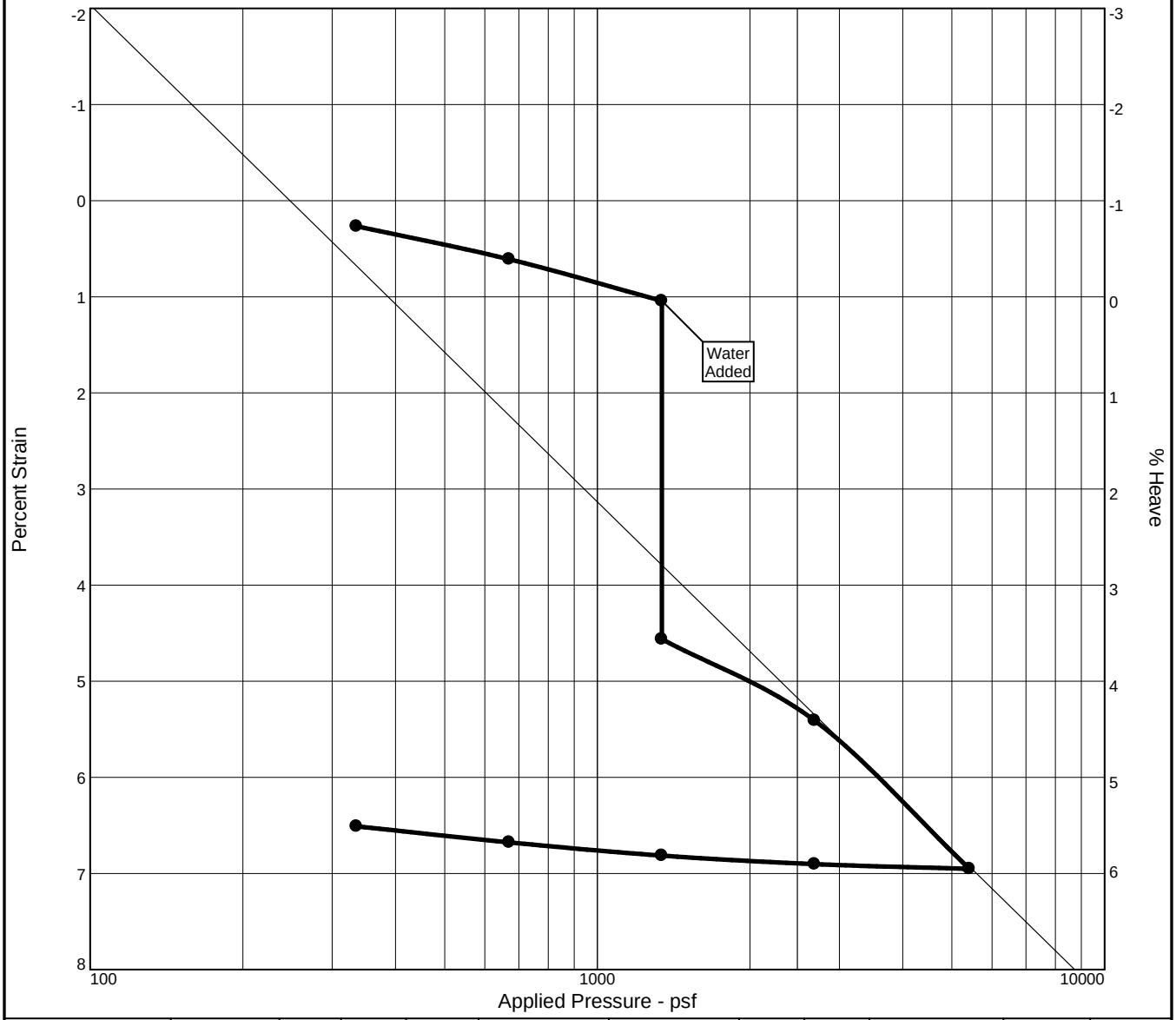
Source of Sample: B-8 Depth: 6'



SOILS ENGINEERING, INC.

Figure B-1

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_s	Swell Press. (psf)	Heave %	e_o
Sat.	Moist.											
19.2 %	4.0 %	106.6	N/A	N/A	2.65	336	2669	0.08	0.01		-3.6	0.551

MATERIAL DESCRIPTION	USCS	AASHTO
SILTY SAND	SM	N/A

Project No. 20852 **Client:** R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-12 **Depth:** 3'

Remarks:
date tested: 7-10-26

SOILS ENGINEERING, INC.

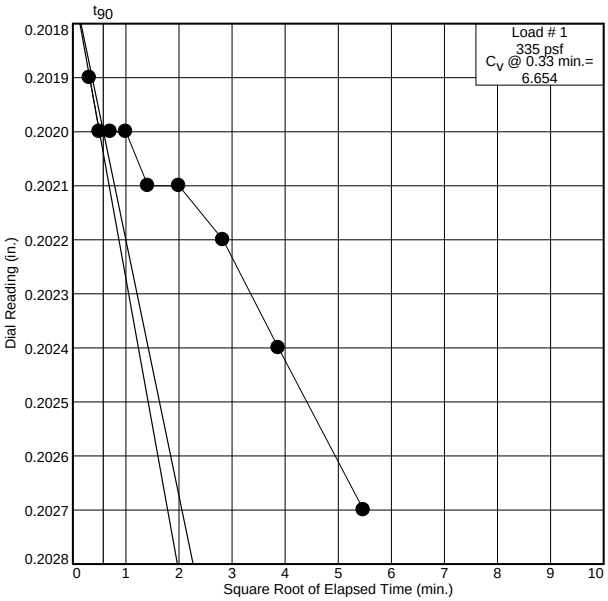
Figure B-2

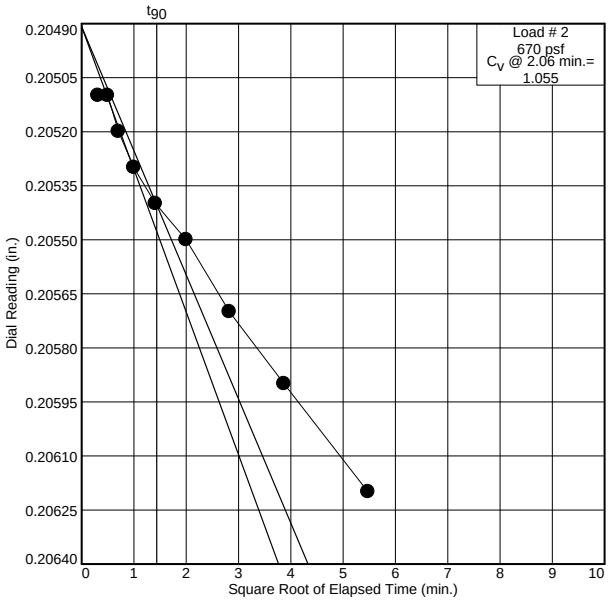
Tested By: DH **Checked By:** AL

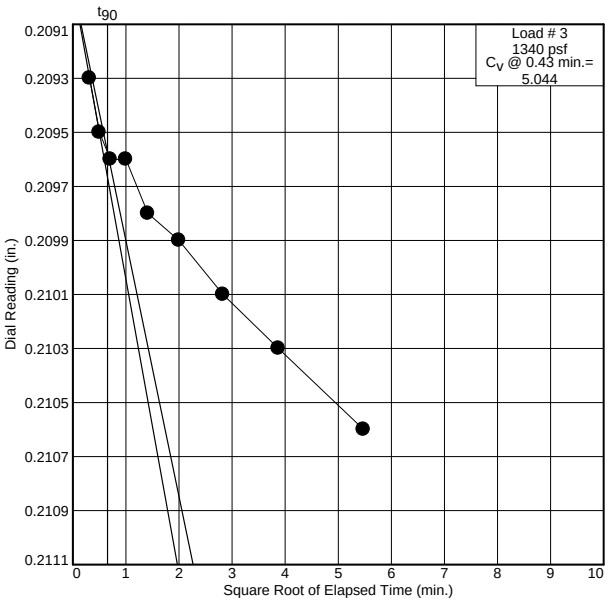
Dial Reading vs. Time

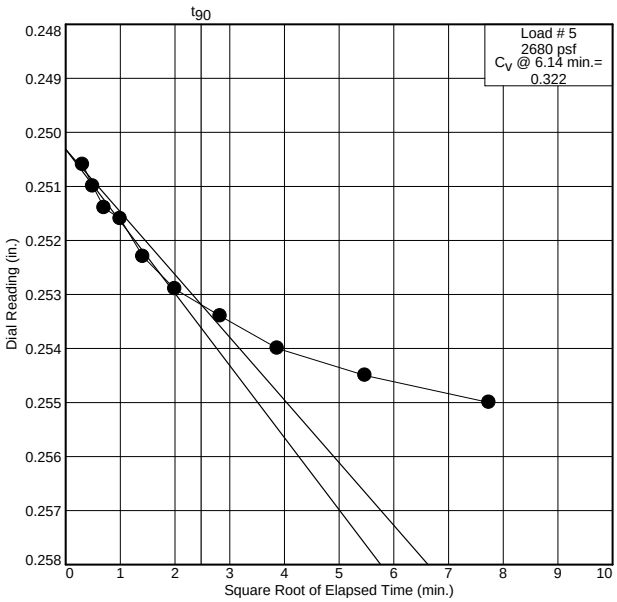
Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-12 Depth: 3'









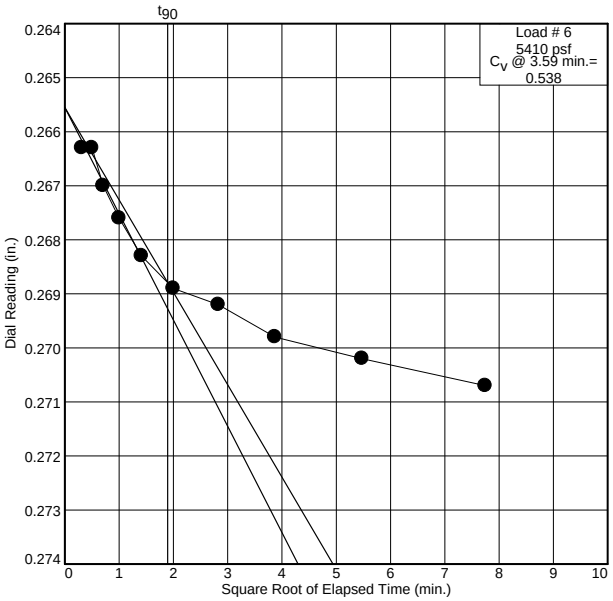
SOILS ENGINEERING, INC.

Figure B-2

Dial Reading vs. Time

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

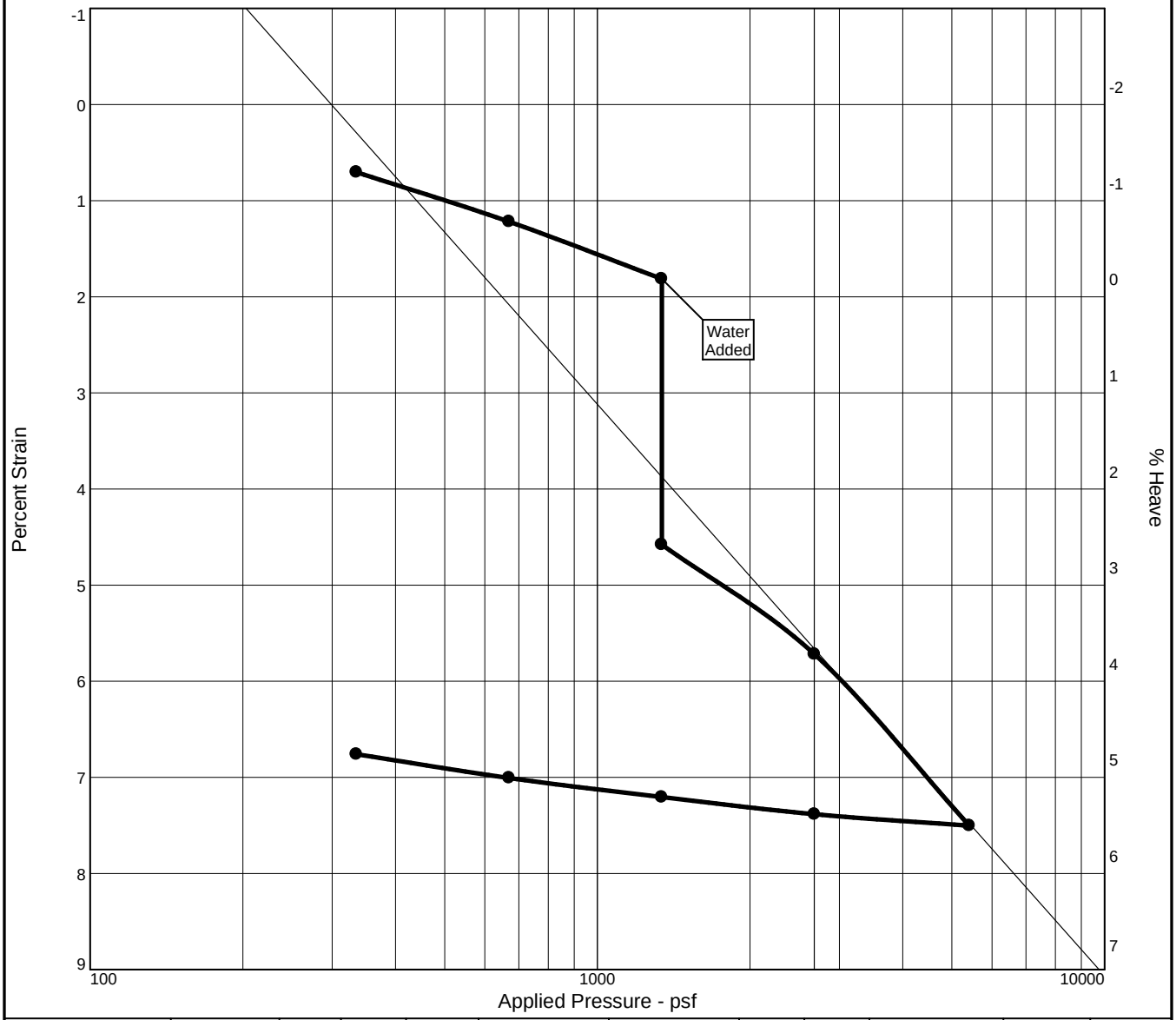
Source of Sample: B-12 Depth: 3'



SOILS ENGINEERING, INC.

Figure B-2

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_s	Swell Press. (psf)	Heave %	e_o
Sat.	Moist.											
30.7 %	8.5 %	95.3	N/A	N/A	2.65	336	2775	0.10	0.01		-2.8	0.733

MATERIAL DESCRIPTION	USCS	AASHTO
SILTY SAND	SM	N/A

Project No. 20852 **Client:** R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-13 **Depth:** 6'

Remarks:
date tested: 7-10-26

SOILS ENGINEERING, INC.

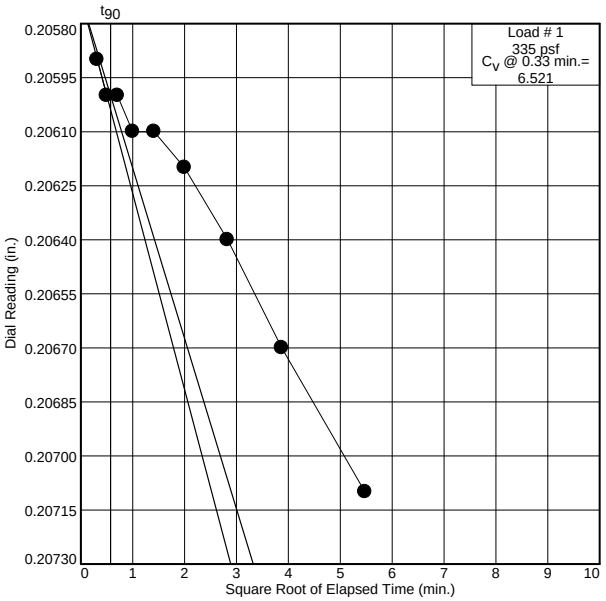
Figure B-3

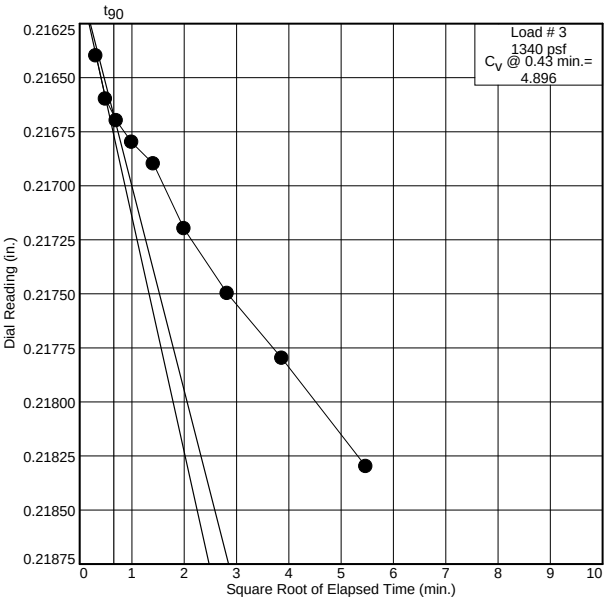
Tested By: CP **Checked By:** AL

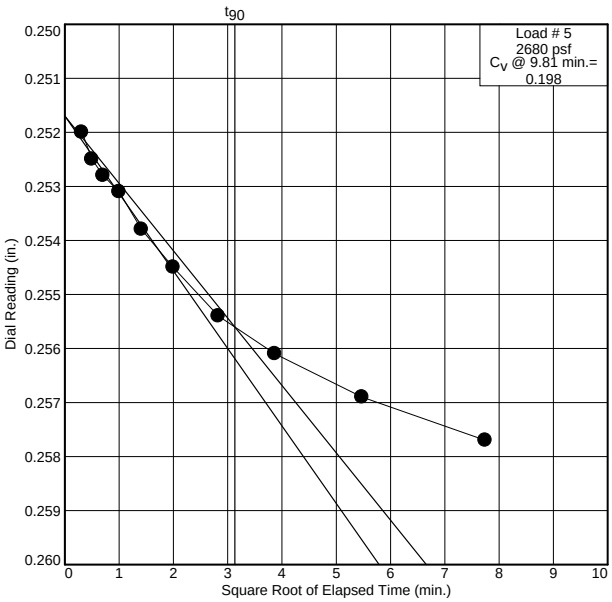
Dial Reading vs. Time

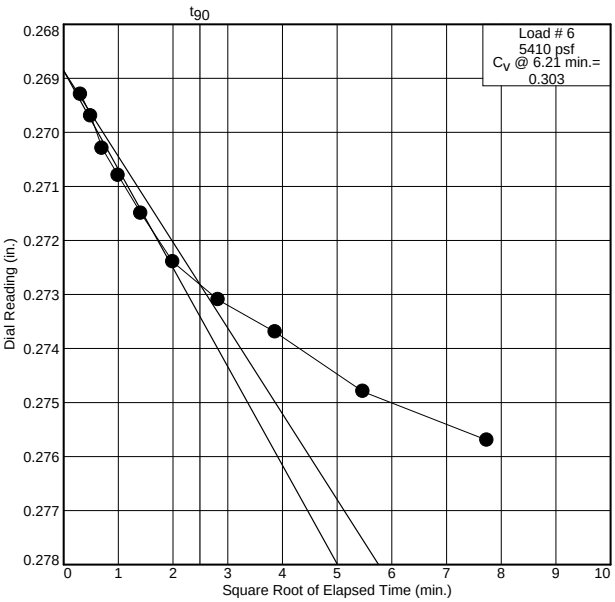
Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-13 Depth: 6'





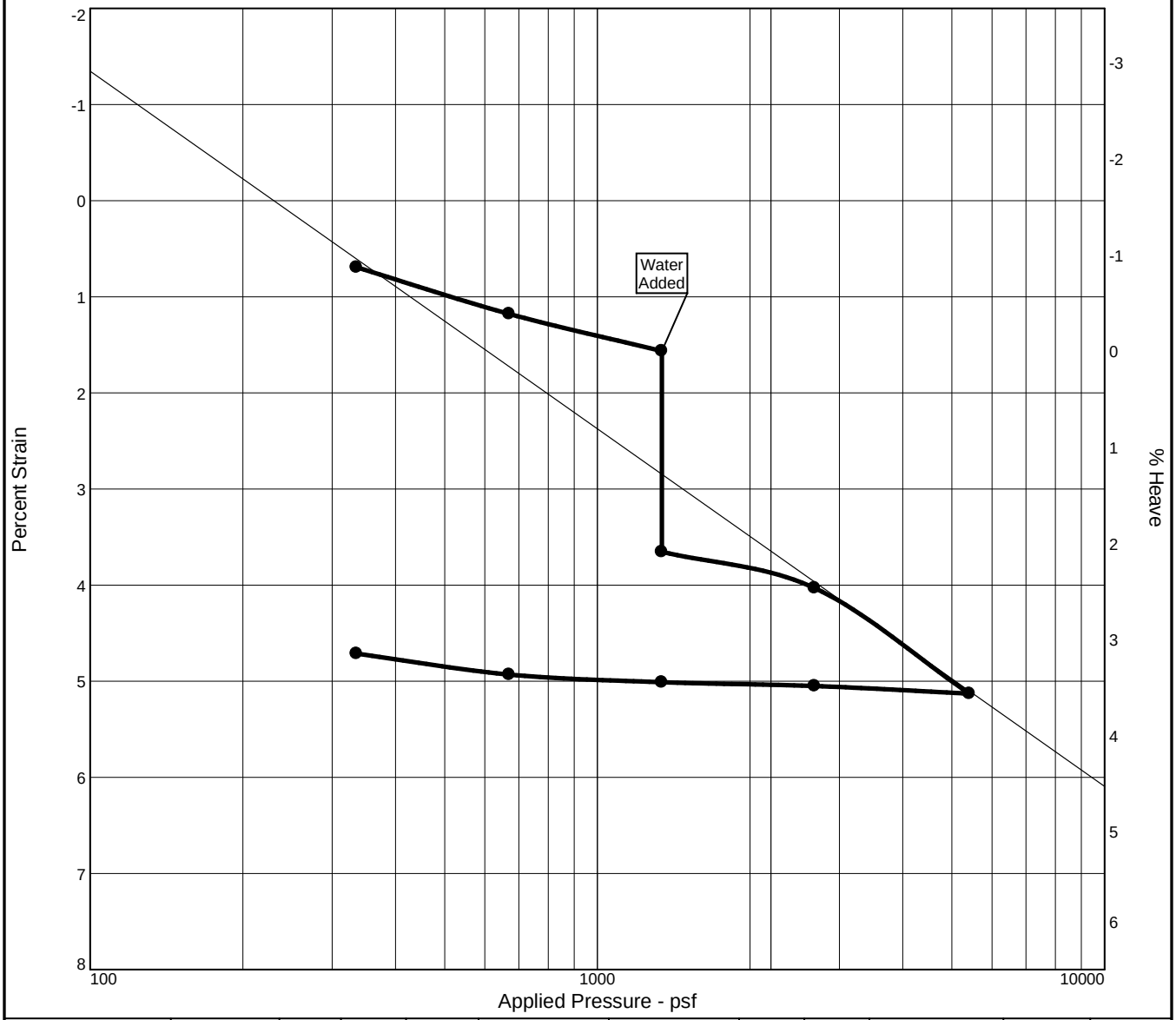




SOILS ENGINEERING, INC.

Figure B-3

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_s	Swell Press. (psf)	Heave %	e_o
Sat.	Moist.											
14.3 %	3.2 %	103.6	N/A	N/A	2.65	336	2600	0.06	0.01		-2.1	0.597

MATERIAL DESCRIPTION	USCS	AASHTO
SILTY SAND	SM	N/A

Project No. 20852 **Client:** R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-16 **Depth:** 6'

Remarks:
date tested: 7-10-26

SOILS ENGINEERING, INC.

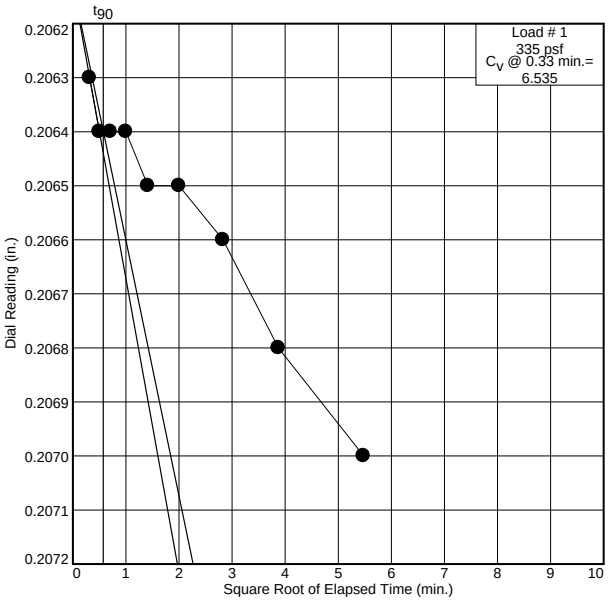
Figure B-4

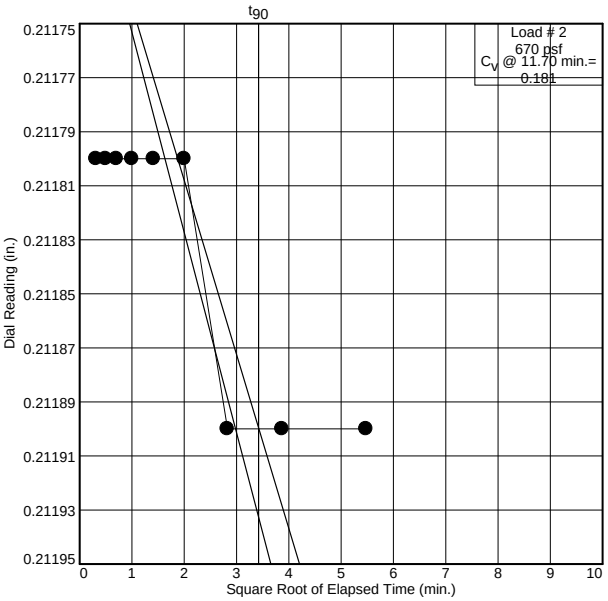
Tested By: CP **Checked By:** AL

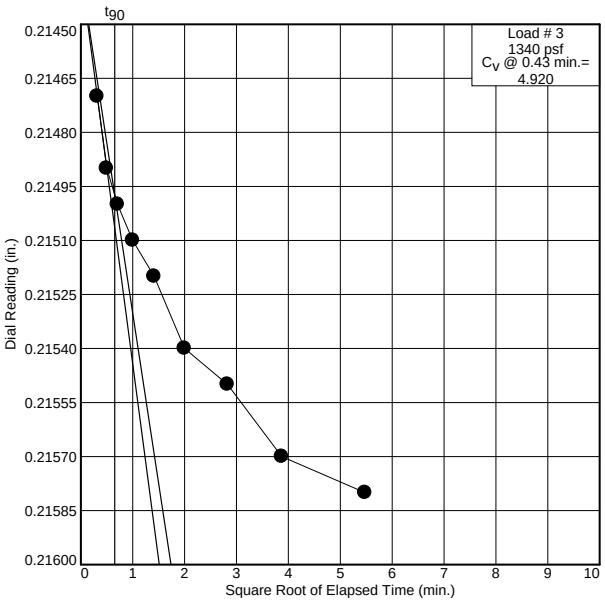
Dial Reading vs. Time

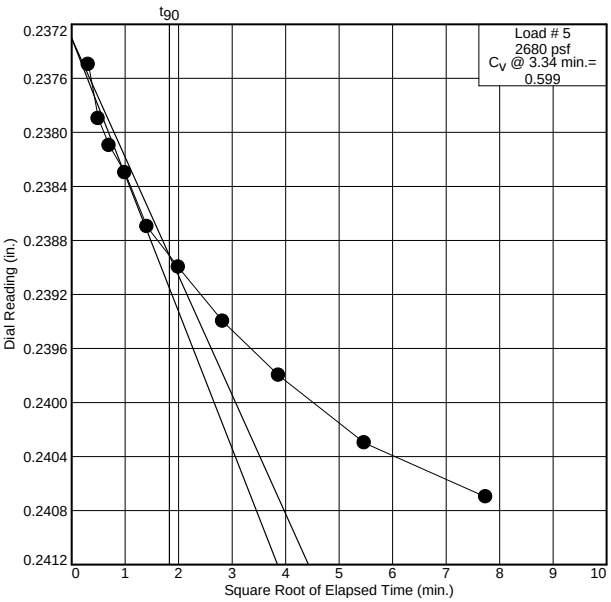
Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-16 Depth: 6'









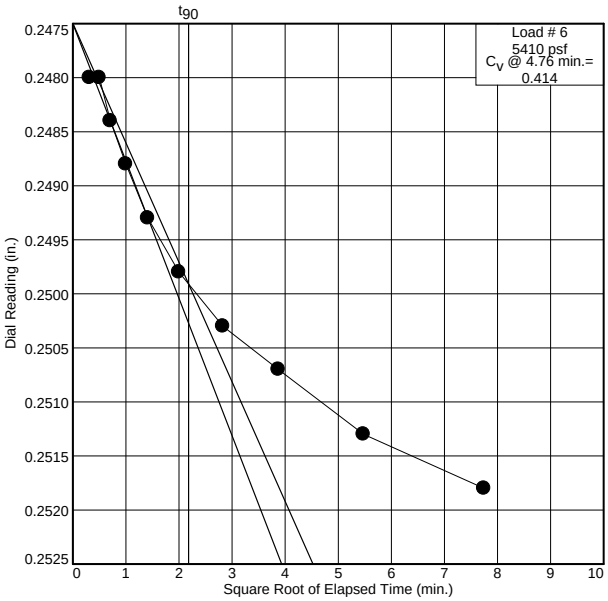
SOILS ENGINEERING, INC.

Figure B-4

Dial Reading vs. Time

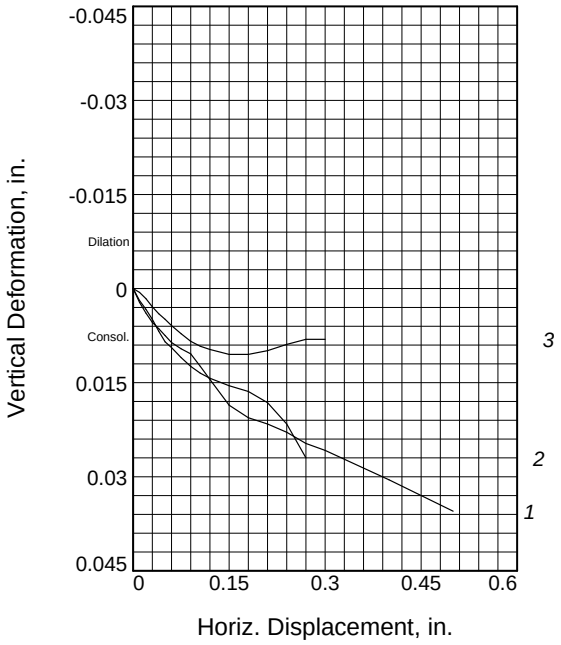
Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)

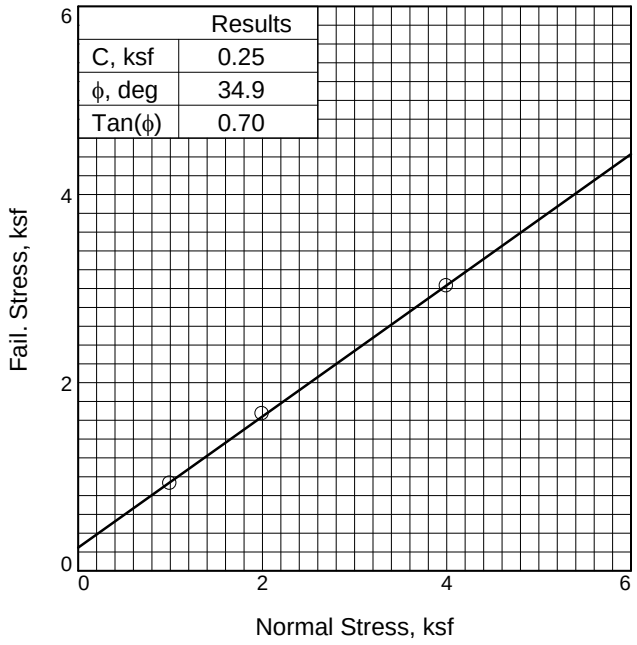
Source of Sample: B-16 Depth: 6'

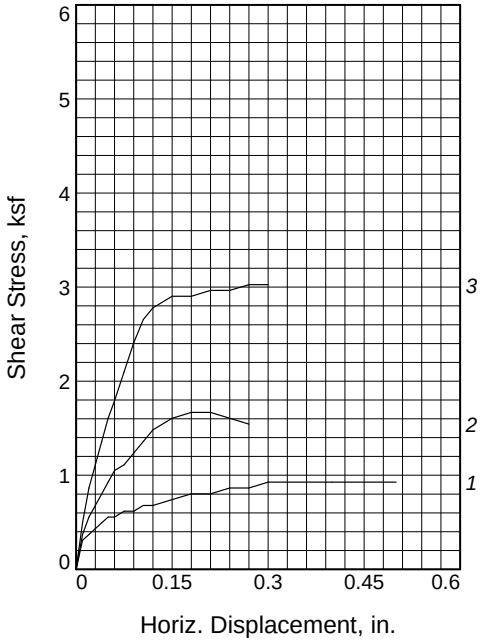


SOILS ENGINEERING, INC.

Figure B-4







Sample No.		1	2	3
Initial	Water Content, %	7.9	5.9	4.9
	Dry Density, pcf	104.6	108.7	108.2
	Saturation, %	35.9	29.7	24.7
	Void Ratio	0.5821	0.5220	0.5293
	Diameter, in.	2.38	2.38	2.38
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	15.9	14.8	13.7
	Dry Density, pcf	104.6	108.7	108.2
	Saturation, %	72.3	75.1	68.5
	Void Ratio	0.5821	0.5220	0.5293
	Diameter, in.	2.38	2.38	2.38
	Height, in.	1.00	1.00	1.00
Normal Stress, ksf		1.00	2.00	4.00
Fail. Stress, ksf		0.93	1.67	3.03
Displacement, in.		0.30	0.18	0.27
Ult. Stress, ksf				
Displacement, in.				
Strain rate, in./min.		N/A	N/A	N/A

Sample Type: 2.5" x 6" TUBE
Description: SILTY SAND

LL= N/A **PI=** N/A
Assumed Specific Gravity= 2.65
Remarks: date tested: 7-8-26

Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-8 **Depth:** 3'

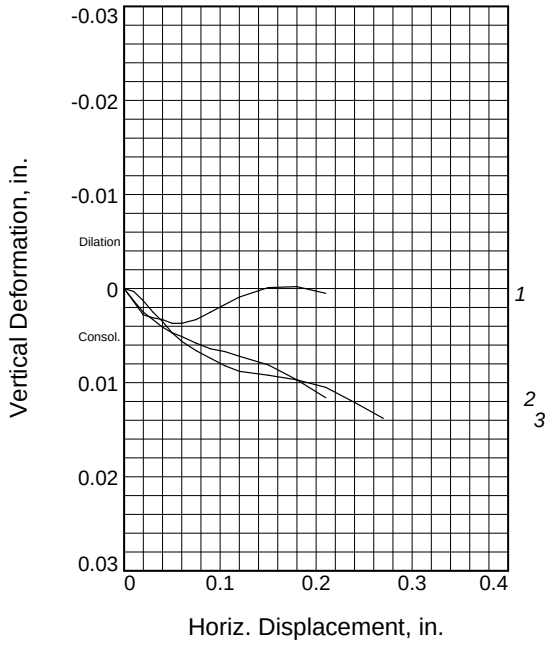
Proj. No.: 20852 **Date Sampled:** 6-29-26

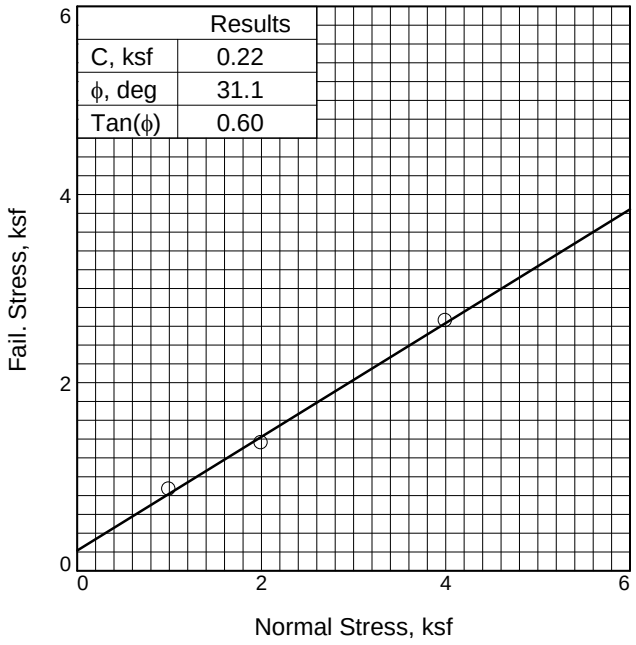
DIRECT SHEAR TEST REPORT

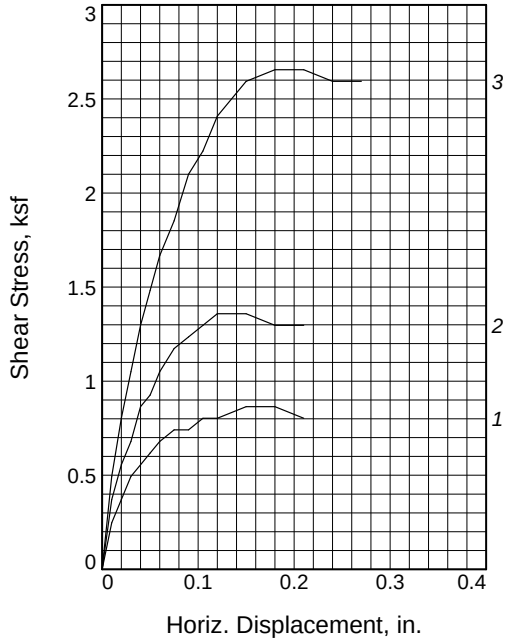
SOILS ENGINEERING, INC.

Figure C-1

Tested By: DH **Checked By:** AL







Sample No.		1	2	3
Initial	Water Content, %	5.3	5.9	4.7
	Dry Density, pcf	102.3	101.6	101.6
	Saturation, %	22.8	25.0	20.0
	Void Ratio	0.6167	0.6276	0.6290
	Diameter, in.	2.38	2.38	2.38
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	17.1	17.9	18.7
	Dry Density, pcf	102.3	101.6	101.6
	Saturation, %	73.3	75.4	78.8
	Void Ratio	0.6167	0.6276	0.6290
	Diameter, in.	2.38	2.38	2.38
	Height, in.	1.00	1.00	1.00
Normal Stress, ksf		1.00	2.00	4.00
Fail. Stress, ksf		0.86	1.36	2.66
Displacement, in.		0.15	0.12	0.18
Ult. Stress, ksf				
Displacement, in.				
Strain rate, in./min.		N/A	N/A	N/A

Sample Type: 2.5" x 6" TUBE
Description: SILTY SAND

LL= N/A **PI=** N/A
Assumed Specific Gravity= 2.65
Remarks: date tested: 7-9-26

Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-13 **Depth:** 3'

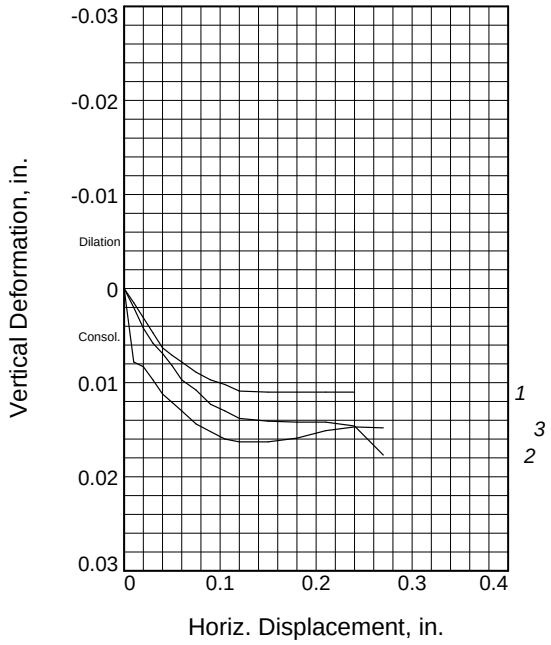
Proj. No.: 20852 **Date Sampled:** 6-29-26

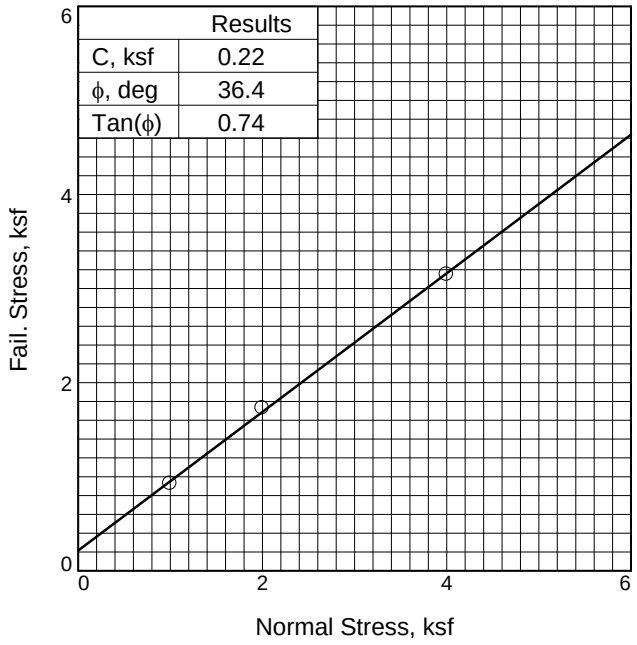
DIRECT SHEAR TEST REPORT

SOILS ENGINEERING, INC.

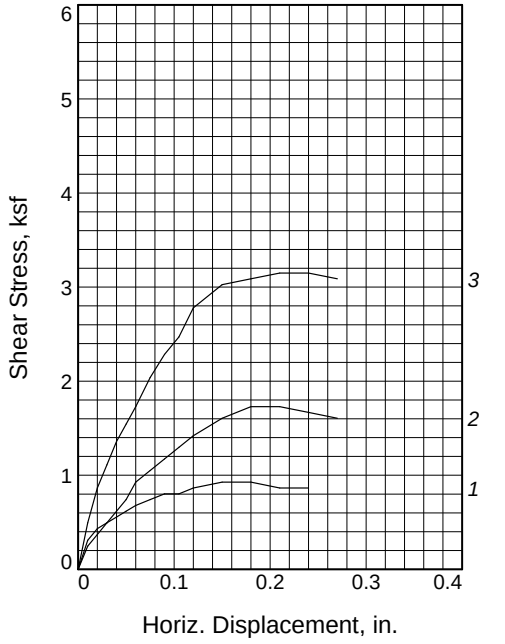
Figure C-2

Tested By: DH **Checked By:** AL





Results	
C, ksf	0.22
ϕ, deg	36.4
Tan(ϕ)	0.74



Sample No.		1	2	3
Initial	Water Content, %	5.7	6.4	5.3
	Dry Density, pcf	105.1	104.6	105.9
	Saturation, %	26.4	29.2	24.9
	Void Ratio	0.5743	0.5821	0.5628
	Diameter, in.	2.38	2.38	2.38
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	17.8	13.7	14.2
	Dry Density, pcf	105.1	104.6	105.9
	Saturation, %	81.9	62.5	66.9
	Void Ratio	0.5743	0.5821	0.5628
	Diameter, in.	2.38	2.38	2.38
	Height, in.	1.00	1.00	1.00
Normal Stress, ksf		1.00	2.00	4.00
Fail. Stress, ksf		0.93	1.73	3.15
Displacement, in.		0.15	0.18	0.21
Ult. Stress, ksf				
Displacement, in.				
Strain rate, in./min.		N/A	N/A	N/A

Sample Type: 2.5" x 6" TUBE
Description: SILTY SAND

LL= N/A **PI=** N/A
Assumed Specific Gravity= 2.65
Remarks: date tested: 7-9-26

Client: R&L Capital

Project: RB Inyokern Data Center (CEI #1160-01)

Source of Sample: B-16 **Depth:** 3'

Proj. No.: 20852 **Date Sampled:** 6-29-26

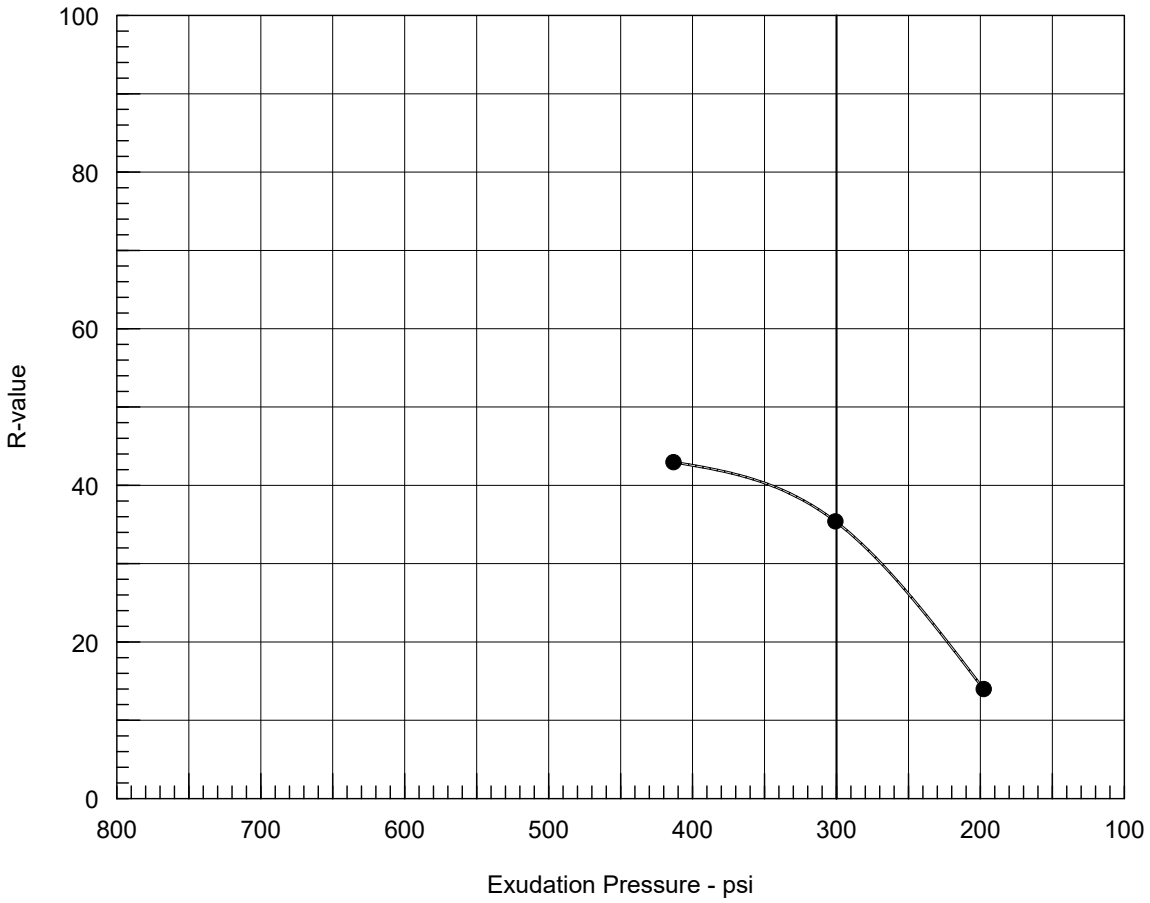
DIRECT SHEAR TEST REPORT

SOILS ENGINEERING, INC.

Figure C-3

Tested By: DH **Checked By:** AL

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	122.3	11.4	0.00	66	2.56	413	41	43
2	260	118.5	12.4	0.00	75	2.48	301	35	35
3	250	120.3	13.4	0.00	118	2.51	198	14	14

Test Results	Material Description
R-value at 300 psi exudation pressure = 35	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-1
Sample Number: R-1 **Depth:** 0-5'
Date: 7/15/2026

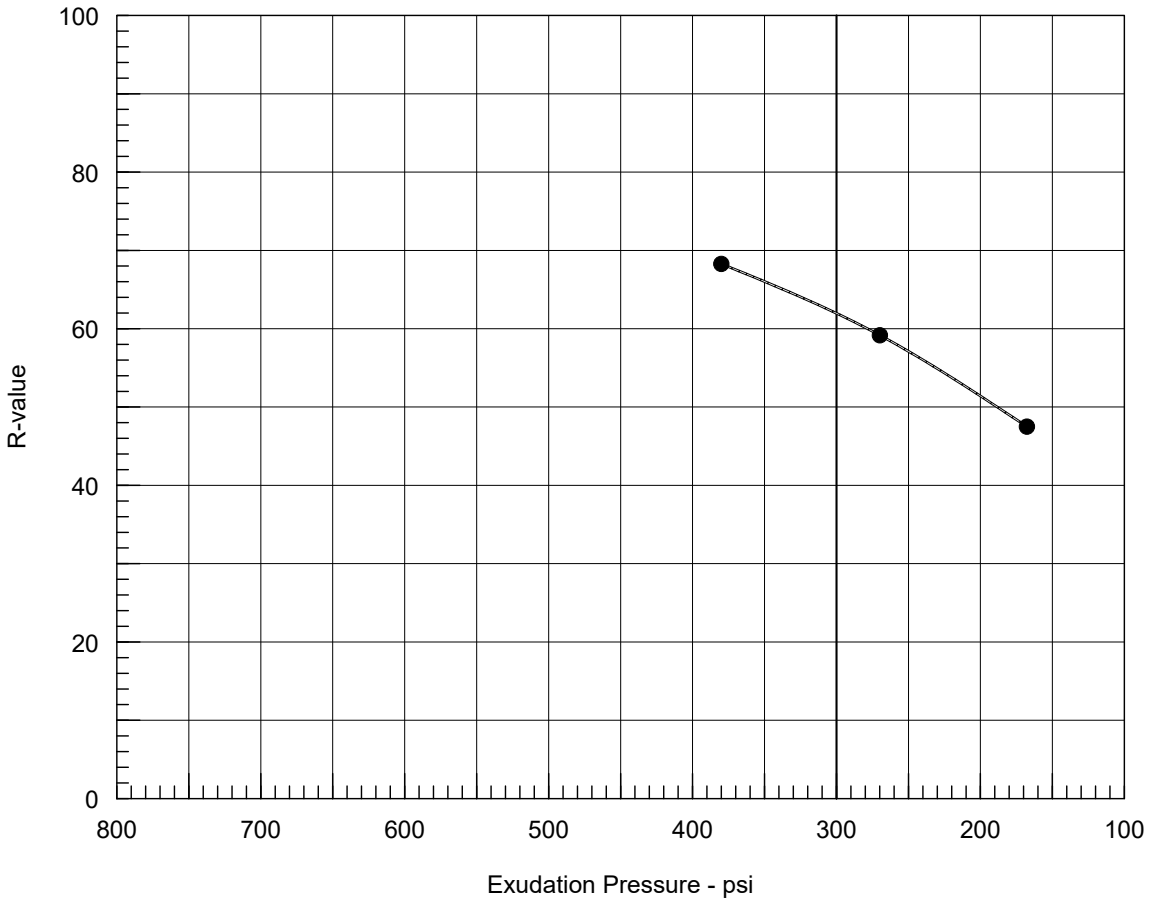
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-1

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	126.7	10.7	0.00	27	2.46	380	68	68
2	350	124.9	11.8	0.00	38	2.45	270	59	59
3	190	123.1	12.8	0.00	53	2.50	168	47	47

Test Results	Material Description
R-value at 300 psi exudation pressure = 62	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-2
Sample Number: R-2 **Depth:** 0-5'
Date: 7/15/2026

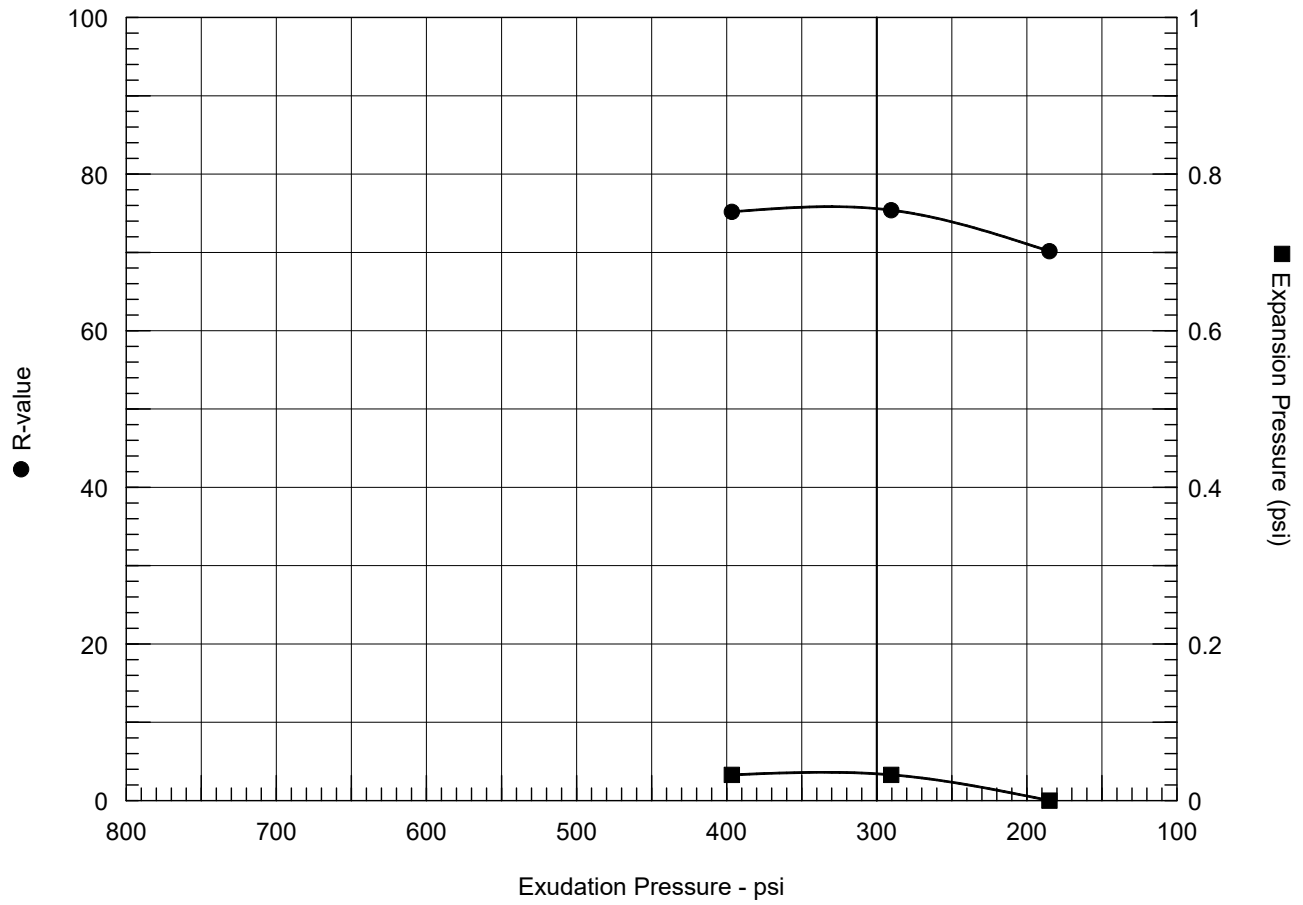
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-2

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	127.6	6.8	0.03	18	2.50	397	75	75
2	350	127.7	7.8	0.03	20	2.56	290	74	75
3	350	126.6	8.8	0.00	24	2.48	185	70	70

Test Results	Material Description
R-value at 300 psi exudation pressure = 76 **Exp. pressure at 300 psi exudation pressure =** 0.03 psi	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-3
Sample Number: R-3 **Depth:** 0-5'
Date: 7/15/2026

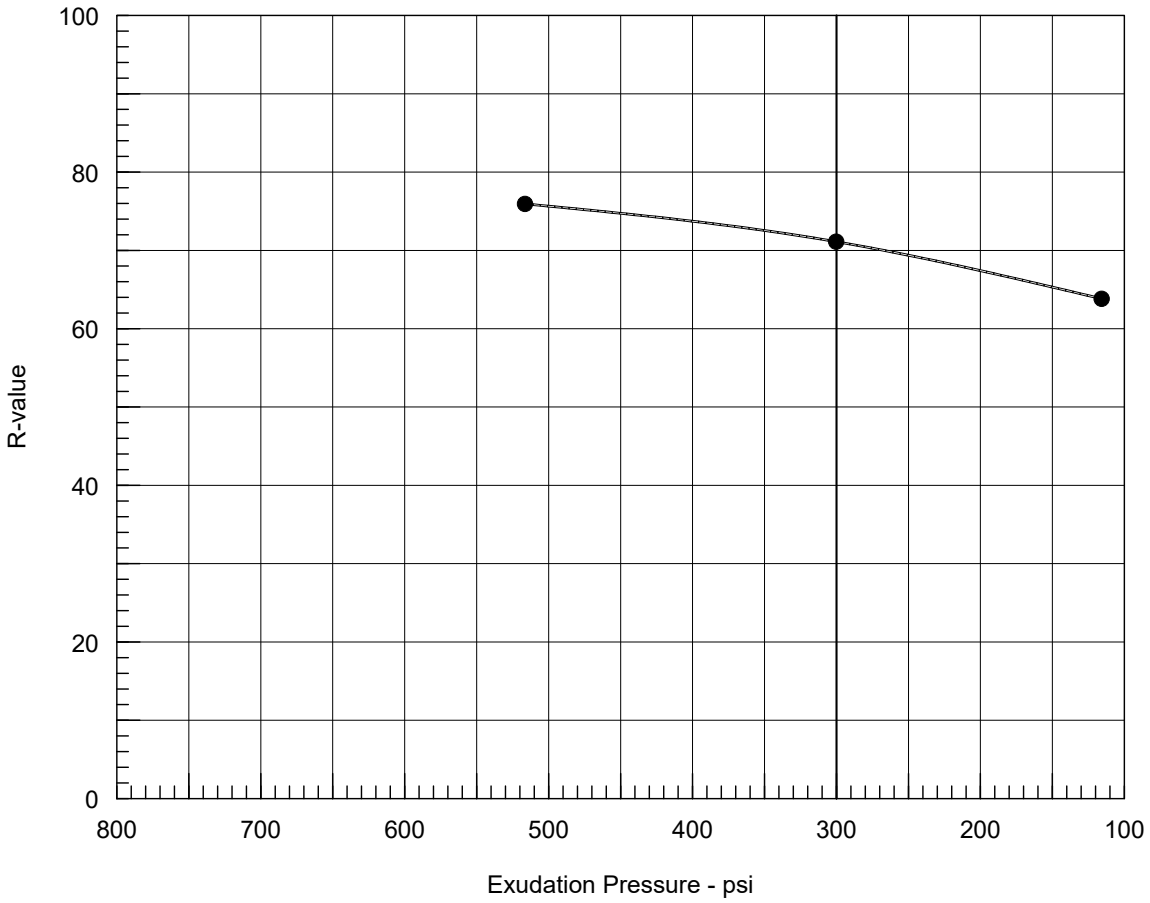
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-3

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	120.4	10.6	0.00	20	2.56	516	75	76
2	350	118.2	11.6	0.00	26	2.60	300	69	71
3	240	118.7	12.6	0.00	34	2.61	116	61	64

Test Results	Material Description
R-value at 300 psi exudation pressure = 71	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-4
Sample Number: R-4 **Depth:** 0-5'
Date: 7/15/2026

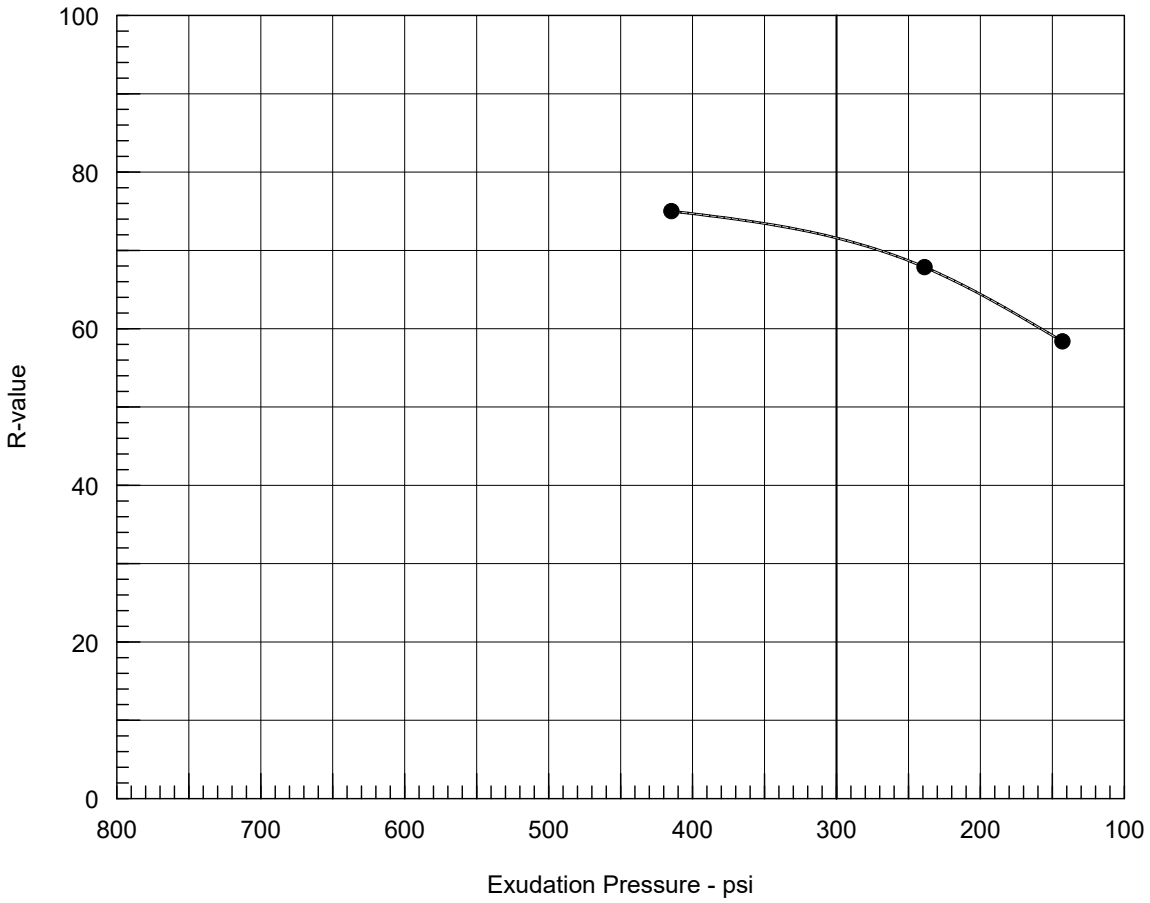
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-4

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	126.1	9.8	0.00	20	2.46	415	75	75
2	350	124.2	10.8	0.00	28	2.50	239	68	68
3	350	123.0	11.9	0.00	38	2.46	143	58	58

Test Results	Material Description
R-value at 300 psi exudation pressure = 72	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-5
Sample Number: R-5 **Depth:** 0-5'
Date: 7/15/2026

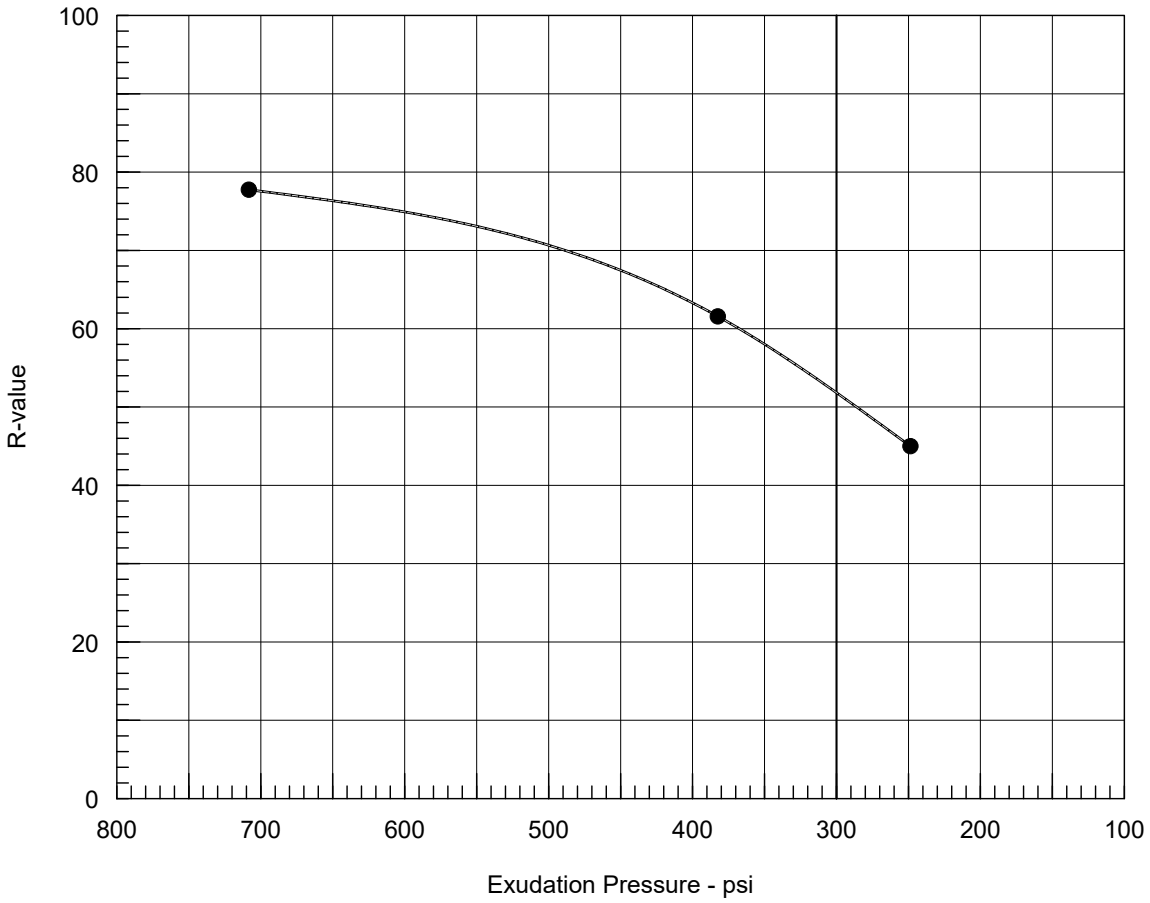
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-5

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	127.7	9.9	0.00	17	2.47	708	78	78
2	350	123.3	11.9	0.00	35	2.48	382	62	62
3	210	122.1	13.0	0.00	58	2.57	249	43	45

Test Results	Material Description
R-value at 300 psi exudation pressure = 52	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-6
Sample Number: R-6 **Depth:** 0-5'
Date: 7/15/2026

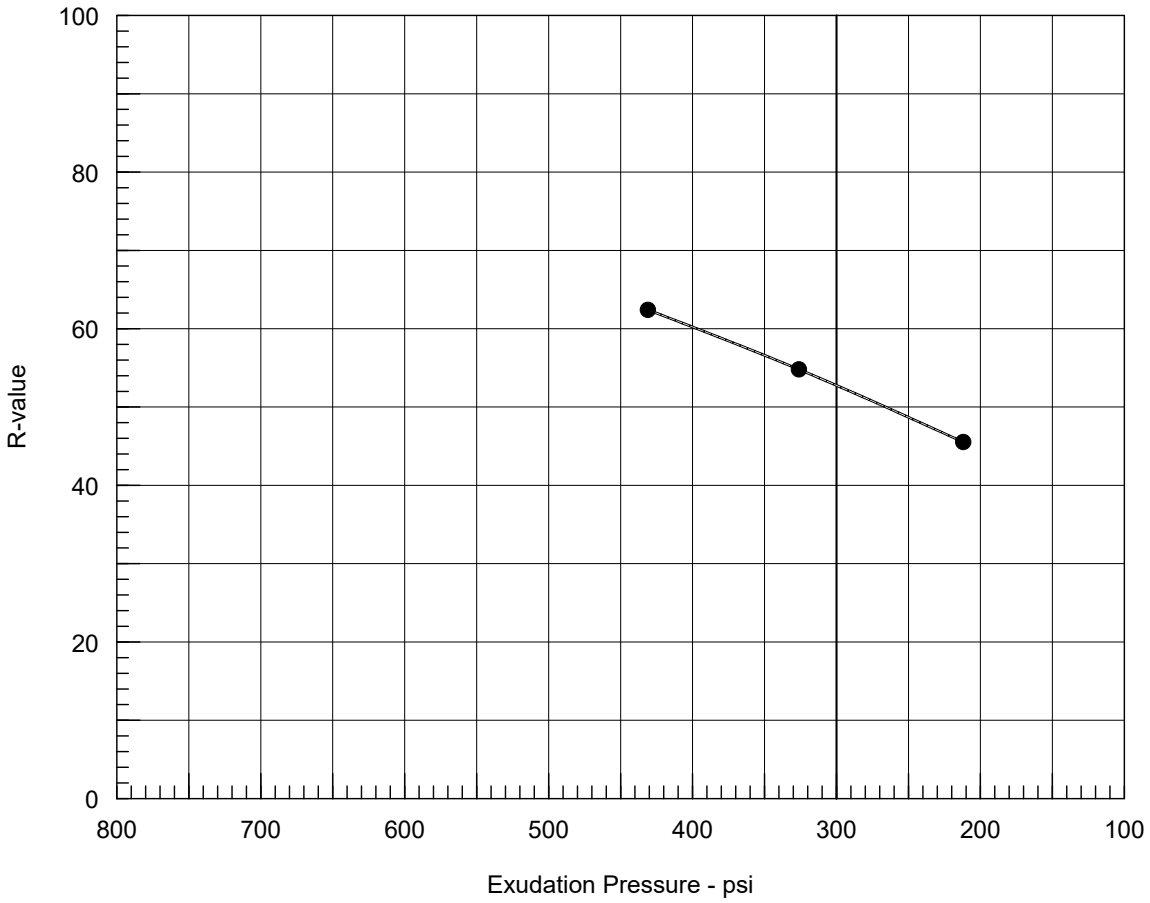
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-6

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	127.9	10.2	0.00	30	2.37	431	65	62
2	350	126.3	11.3	0.00	38	2.33	326	59	55
3	165	123.6	12.3	0.00	54	2.48	212	46	46

Test Results	Material Description
R-value at 300 psi exudation pressure = 53	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-7
Sample Number: R-7 **Depth:** 0-5'
Date: 7/15/2026

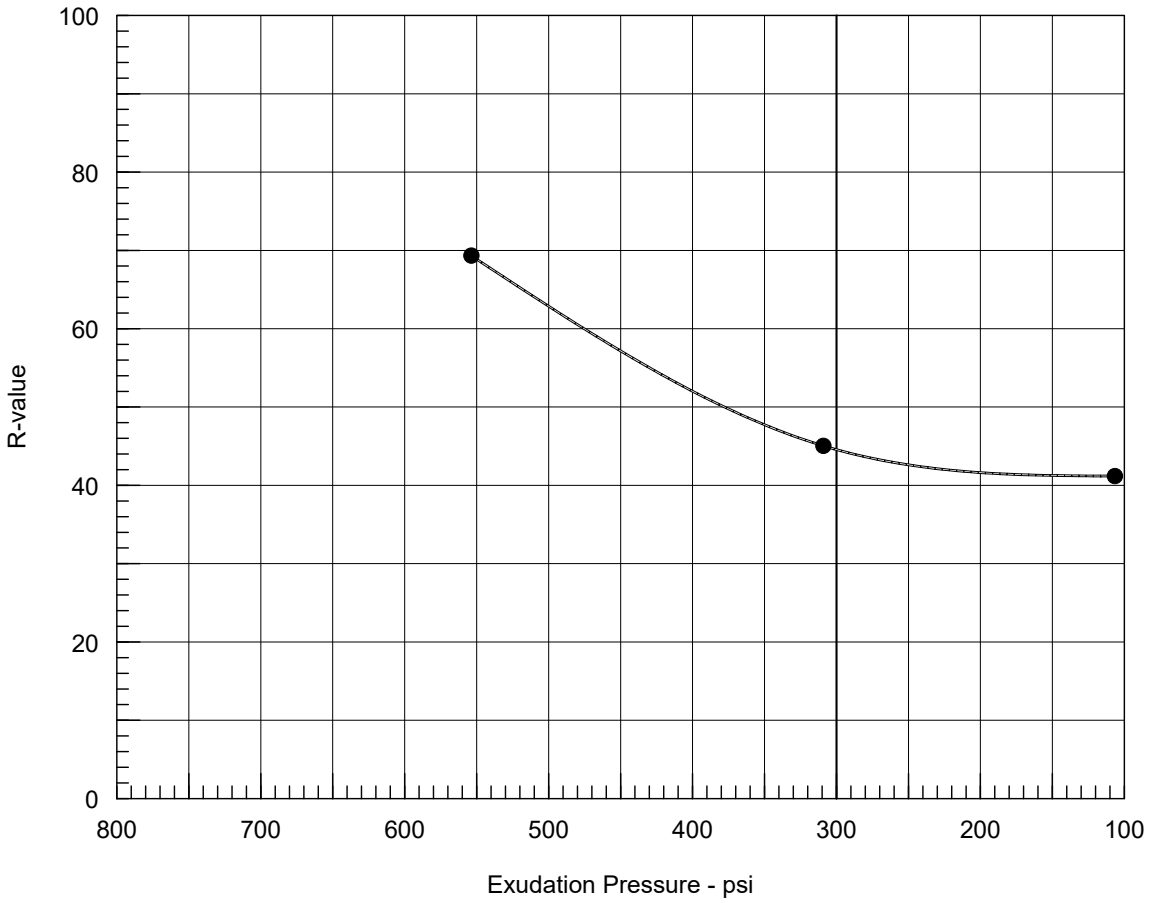
Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-7

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	128.5	8.8	0.00	26	2.50	554	69	69
2	350	123.9	10.8	0.00	53	2.39	309	48	45
3	100	122.0	11.9	0.00	61	2.44	107	43	41

Test Results	Material Description
R-value at 300 psi exudation pressure = 45	SILTY SAND

Project No.: 20852
Project: RB Inyokern Data Center (CEI #1160-01)
Location: R-8
Sample Number: R-8 **Depth:** 0-5'
Date: 7/15/2026

Tested by: RC
Checked by: AL
Remarks:
date tested: 7-6-26

R-VALUE TEST REPORT

SOILS ENGINEERING, INC.

Figure D-8

APPENDIX D

SEISMIC INVESTIGATION & GEOLOGICAL HAZARD STUDY

SEISMIC DESIGN INFORMATION
USGS Design Map Summary and Detail Report

EQFAULT
Version 3.00

California Fault Map

GEOLOGICAL HAZARD STUDY

For:

RB Inyokern Data Center (CEI #1160-01)

NE of Brown Road and State Route 178

In

Inyokern, CA

Prepared For:

R & L Capital
P.O. Box 907
Trona, CA 93592
Attn: Robbie Barker

Prepared By:

Soils Engineering, Inc.
4400 Yeager Way
Bakersfield, CA 93313

File No. 26-20852

July 2026

Soils Engineering Inc.

July 20, 2026 File No. 26-20852

R & L Capital
P.O. Box 907
Trona, CA 93592

Attn: Robbie Barker

Subject: Geological Hazard Study
RB Inyokern Data Center (CEI#1160-01)
NE of Brown Road and State Rout 178
Inyokern, California

Robbie Barker:

In accordance with your request and authorization, Soils Engineering, Inc. (SEI) has performed a Geological Hazards Study for the above described subject property in Inyokern, California (site). This study was conducted in compliance with the California Code of Regulations, Title 24, Chapters 16, 18 and 33 of the 2025 California Building Code and the California Department of Education.

Our Geological Hazards Assessment indicates that there is a low probability for liquefaction to occur during a major earthquake at the site and that the maximum peak ground acceleration at the site would be 0.878g for a 7.3 magnitude earthquake on the So. Sierra Nevada Fault approximately 6.1 kilometers away. The computer-modeling program Eqsearchwin estimated that a ground motion of 0.170g occurred at the site from a 6.1 magnitude earthquake on the Airport Lake Fault Zone on September 20, 1995. The proposed structures should be built to withstand this magnitude of an earthquake and ground motions.

The site-specific design acceleration values to be utilized for the proposed improvements should be 1.27g for short periods (S_{Ds}) and 0.79g for the 1 second period (S_{D1}). The seismic design category is a CD for both short and 1-second periods per the 2025 CBC.

In the event of a major earthquake, there is a very low potential for rock falls or landslides to impact the site. The site is located within flood Zone A, which indicates areas that are subject to inundation by the 1-percent annual flood (100-year flood) and have no detailed base flood elevations. Appropriate flood mitigation measures are recommended. The site is not located within a potential tsunami hazard zone. After the proposed over-excavation and re-compaction of the top 4' of soil, an estimated amount of total dynamic settlement that would occur at this site during a major earthquake is approximately 0.96" (B-7) and 0.95" (B-10) and the estimated amount of differential settlement is 0.01" over a span of 535 feet, utilizing a very conservative depth to groundwater of 100'. These estimated settlements appear to be appropriate for a Data Center with no mitigation required.

4400 YEAGER WAY
Bakersfield, CA 93313-2019
Phone: 661-831-5100
Fax: 661-831-2111
info@soilsengineering.com
www.soilsengineering.com

No high-pressure natural gas pipelines or active high-pressure petroleum pipelines appear to be present within 1500' of the site that would be a threat to the site.

The nearest oil wells (dry holes) ever drilled are far enough away from the site that it is not likely that any significant subsurface oilfield related gases (hydrogen sulfide, methane etc.) are present beneath the site.

No further geological assessment or mitigation is recommended at this time, beyond the over-excavation and replacement with engineered fill of the near surface soil that is recommended by the Geotechnical Engineer.

It appears that the Data Center's potential environmental impacts in accordance with Appendix G Section VII Geology and Soils CEQA Environmental Checklist is between "No impact" to "Less Than Significant With Mitigation Incorporated". Further geotechnical evaluation is recommended in the above section E and to provide a definitive evaluation of the Site's environmental impact.

The accompanying report is an instrument of service of ***Soils Engineering, Inc.*** The report summarizes our findings and relates our opinions with respect to the potential for geological hazards to affect the site. Note that our findings and opinions are based on information that we obtained on given dates, through records review, site review, and related activities. It is possible that other information exists or subsequently has become known, just as it is possible for conditions we observed to have changed after our observation.

Soils Engineering, Inc. will be pleased to provide more information in this regard. Please call us for assistance at (661) 831-5100.

Sincerely,
SOILS ENGINEERING, INC.

CERTIFIED ENGINEERING GEOLOGIST
ROBERT J. BECKER
No. 2238
REN 2/28/27
STATE OF CALIFORNIA

Robert J. Becker, P.G. 5076, C.E.G. 2238
Expires 2/28/27

REGISTERED PROFESSIONAL ENGINEER
ON MAN LAU
No. GE2644
Exp. 12-31-27
GEOTECHNICAL
STATE OF CALIFORNIA

On Man Lau, GE 2644
Expires 12-31-2027

Table of Contents

Geological Hazard Study

ATTACHMENTS

I. LIST OF ILLUSTRATIONS

GEOLOGICAL HAZARD STUDY
For
RB Inyokern Data Center (CEI#1160-01)

Northeast of Brown Road and State Route 178
in

Inyokern, California
July 2026

1.0 Introduction

Soils Engineering, Inc. (SEI) has conducted a Geological Hazards Study for the Proposed RB Inyokern Data Center Project, located northeast of the intersection of Brown Road and State Route 178 (Site) in Inyokern, California (see Location Map, Plate 1) totaling approximately 50 acres within a portion of a total of the four following parcels: 084-010-43, 084-010-44, 084-010-45, and 084-010-48. The site location coordinates are approximately 35.650980º North, latitude, and -117.809018º West, longitude. The following is an Executive Summary of the investigation conducted in June and July 2026. A site reconnaissance, consisting of a walkthrough of the property and evaluation of surrounding geologic features, was conducted by SEI personnel in June 2026. The project area is mainly located in the northern three main parcels (-43, -44, -45) and extends (proposed utility easement) into the southeastern parcel (-48). The existing site conditions mainly include native vacant land with seasonal vegetation along with some dirt access roads. The proposed improvements include various generators, batteries, chillers, access roads and other related infrastructure (see Site Plans attached in attachment B for further detail of proposed improvements). The site is bordered primarily by a mix of commercial and residential properties to the west; commercial properties, including a Chevron service station and Gateway Hardware, and vacant native land to the south; vacant native land to the east; and vacant native land and a solar farm to the north.

2.0 Geology and Hydrology

2.1 Geologic Setting

The site is located within the Basin and Range geomorphic province, east of the Sierra Nevada and north of the Mojave Desert geomorphic provinces. The Basin and Range geomorphic province in which generally features fault bounded sub-parallel mountain ranges (horsts) separated by basins (grabens) as denoted from CGS-Note-36. The site has generally flat relief with a slight downward slope to the north. The project site rests on Pleistocene-Holocene nonmarine alluvial fan deposits (Qal) within the southwestern portion of the Indian Wells Valley. See the attached Geologic Map (Plate 2A), as interpreted from on-site soil borings and the Trona Sheet of the Geologic Map of California (Smith, Department of Conservation Division of Mines and Geology (CDMG), 1964) and the 2010 Geologic Map of California (CDMG). Near surface soils within the zone of

influence of future developments consist of interbedded alluvium consisting of silts, silty sands, clayey sands, clay, gravels, and poorly graded sand layers within the valleys (grabens) deposited by local drainages from nearby mountain ranges.

Active faults within 50 miles of the site include the So. Sierra Nevada Fault, approximately 6.1 kilometers to the west; the Little Lake Fault, approximately 14.3 kilometers to the east; the Garlock (East) Fault, approximately 25.7 kilometers to the southeast; the Blackwater Fault, approximately 42.2 kilometers to the southeast; the Tank Canyon Fault, approximately 44.4 kilometers to the east; the Garlock (West) Fault, approximately 46.0 kilometers to the southwest; and the Lenwood-Lockhart-Old Woman Springs Fault, approximately 48.1 kilometers to the south-southeast. Additional regional faults include the Gravel Hills-Harper Lake Fault, approximately 54.4 kilometers to the southeast; the Owens Valley Fault, approximately 62.2 kilometers to the north-northwest; the Panamint Valley Fault, approximately 62.4 kilometers to the northeast; the White Wolf Fault, approximately 63.1 kilometers to the southwest; and the Helendale–S. Lockhardt Fault, approximately 71.2 kilometers to the south-southeast. Other local faults shown near the site include the Indian Wells Valley Fault, approximately 2.9 kilometers to the west; the Rademacher Hills Fault, approximately 2.53 kilometers to the east; and the Ridgecrest Fault, approximately 11.6 kilometers to the northeast. The site is not located within an Alquist-Priolo Special Studies Zone (Plate 5B). Local faults near the site are shown on the Seismic Hazard Atlas maps for the Inyokern NE/4 15’ Quadrangle (Plate 3). Nearby active faults are also shown on the 2010 Fault Activity Map of California (CDMG, 2010) for the general site area (Plate 5A) and on the EQFault California Fault Map (Plate 5).

2.2 Surface Lithology

Earth materials identified in the seventeen (17) onsite soil borings (B-1 to B-16, CPT-01 conducted in June and July 2026, consisted generally of intervals of Silty Sand (SM), Clayey Sand (SC), Sandy Clay/Clay (CL), Poorly Graded Sand (SP) and Sand with Silt (SP-SM) within the top 85’ below the ground surface (bgs). Gravelly soil along with zones with cobbles were present in some borings. Refusal due to cobbles was encountered at approximately 18’ bgs in B-14 and at 20’ bgs in B-15. Refusal from the CPT-01 was encountered at 85’ due to very tight soils. These soils are classified as SM, SC, CL, SP, and SP-SM respectively, in the Unified Soils Classification System. See attached boring logs and CPT data included in Attachment B for more detail along with Plate 2B showing a cross-section A to A’ between B-7 and B-10 borings.

2.3 Hydrology

Unconfined Aquifer - No groundwater was encountered in any of the soil borings (B-1 to B-16 & CPT-01) to the total depth explored of 85’. The depth to the unconfined aquifer as shown on maps prepared by the Kern County Water Agency (KCWA), and data available on the California Department of Water Resources Water Data Library Station map indicate current depth to water within a mile of the site ranges between 240.8’ to 256.1’ in 2026. Historical depth to water data (Department of Water Resources (DWR) database and KCWA maps) indicates that the depth to groundwater has been below 190’ since at least

the 1940s within 1-mile of the site. The highest depth of water in the DWR water wells shown was 192' in 1973 in a well north of the site. See Plate 4 for a current & historical depth to water map utilizing DWR data.

Perched Water, Ground Water or Seepage – No shallow ground water nearby the site is shown on historical Kern County Water Agency groundwater maps going back to 1982. The highest depth of water in the DWR water wells shown was 192' in 1973 in a well north of the site. There is no shallow water within 1-mile as shown on the Seismic Hazard Atlas Map (Plate 3) and the Flooding and Shallow Groundwater Map (Figure 14) attached in Attachment B.

3.0 Seismic and Fault Hazards

3.1 Seismic History

There have been a number of historic earthquakes that may have affected the Inyokern area. The following is a short summary of the major known events:

- 3/26/1872 - Owens Valley Earthquake- Owens Valley Fault, Estimated Magnitude 7.80+, 16 feet of horizontal slippage, vertical scarp over 6.5 feet, a visible scarp at least 60 to 100 mile area, widespread damage, 27 people dead

- 7/21/1952 - Arvin/Tehachapi - White Wolf Fault, Magnitude 7.7, extensive damage to buildings and highways.

- 7/4-5/2019 - Ridgecrest Earthquake– Salt Wells Valley Fault & Paxton Ranch Fault, Magnitude 6.4 & 7.1, extensive damage to buildings, roads, and utilities.

- 8/22/1952 - Bakersfield Quake (Aftershock of Arvin/Tehachapi) - 8 miles ESE of Bakersfield, Magnitude 5.8. Closest aftershock to Bakersfield causing extensive damage to already weakened buildings. Multiple surface fissures were created from the 1952 earthquakes.

SEI utilized the software program EQSEARCHWIN version 3.0 (Thomas F. Blake) to evaluate historical earthquakes in the area of the site over the last 200 years. The Earthquake Epicenter Map (Plate 3A) shows earthquake magnitudes and the epicentral distance from the site. The majority of the seismic activity in the area of the site has been along the Eastern California Fault Zone and the Owens Valley Fault. The closest earthquake of at least 5.0 magnitude to the site was 13.9 kilometers away, at a magnitude of 5.3 in March 1946. The largest magnitude earthquake within 100 miles was 7.8 on the Owens Valley Fault in 1872. The largest estimated site acceleration is 0.170 g from a 6.10 magnitude earthquake on the Airport Lake Fault Zone in 1995. The EQSEARCHWIN estimation of Peak Acceleration from California Earthquake Catalogs Table, Earthquake Recurrence Curve, Earthquake Epicenter Map and a graph of the Number of Earthquakes (N) above Magnitude (M) are presented in Attachment A.

3.2 Seismic Evaluation

The site is located within the Inyokern NE/4 15' Quadrangle in the Northwest 1/4 of Section 29, Township 26 South, Range 39 East and is not located in an Alquist-Priolo special studies zone as shown on Plate 5B. Local faults and general geology are shown on the Inyokern NE/4 15' Quadrangle Seismic Hazard Atlas Map prepared for the Kern County Council of Governments (Plate 3). Based on the EQFault version 3.0 computer-modeling program, the nearest major active faults are the So. Sierra Nevada Fault, approximately 6.1 kilometers west of the site; the Little Lake Fault, approximately 14.3 kilometers east; the Garlock (East) Fault, approximately 25.7 kilometers southeast; the Blackwater Fault, approximately 42.2 kilometers southeast; the Tank Canyon Fault, approximately 44.4 kilometers east; the Garlock (West) Fault, approximately 46.0 kilometers southwest; the Lenwood-Lockhart-Old Woman Springs Fault, approximately 48.1 kilometers south-southeast; the Gravel Hills-Harper Lake Fault, approximately 54.4 kilometers southeast; the Owens Valley Fault, approximately 62.2 kilometers north-northwest; the Panamint Valley Fault, approximately 62.4 kilometers northeast; the White Wolf Fault, approximately 63.1 kilometers southwest; and the Helendale–S. Lockhardt Fault, approximately 71.2 kilometers south-southeast. Regional faults relative to the site are shown on Plate 5A, based on the 2010 Fault Activity Map of California (CDMG, 2010).

3.3 Seismic Design

The seismic design values are presented in the table below based on the 2025 California Building Code (CBC). An estimated shear wave velocity (Vs30) was calculated utilizing 85 feet CPT shear wave velocity data and on-site SPT equivalent blowcounts to a depth of 51.5 feet correlated to a shear wave velocity per ASCE 7-22 § C20.3. The estimated Vs30 was then utilized to determine a Site Class and alternate Site Classes based on the results of Vs30 x 1.3 and Vs30/1.3 per 2025 CBC § 1613.2.2 and ASCE 7-22 § 20.2-20.3.

SEISMIC DESIGN CRITERIA		**VALUE**	**SOURCE**
Risk Category		**IV**	2025 CBC Table 1604.5 or 1604*A*.5
Site Class		***CD**	2025 CBC § 1613.2.2 or 1613*A*.2.2; ASCE 7-22 Table. 20.2-1; Site Specific Soils Report, Estimation of Shear Wave Velocity per ASCE 7-22 § 20.3.
Mapped MCE_R Spectral Response Acceleration, short period	**S_S**	**1.69g**	SEAOC-OSHPD software;
Mapped MCE_R Spectral Response Acceleration, at 1-sec. Period	**S_1**	**0.48g**	SEAOC-OSHPD software;
MCE_R Spectral Response Acceleration, short period	**S_{MS}**	**1.9**	SEAOC- OSHPD software;
MCE_R Spectral Response Acceleration, 1-sec. period	**S_{M1}**	**1.19**	SEAOC- OSHPD software;
Design Spectral Response Acceleration, short period, 2/3 S_{MS}	**S_{DS}**	**1.27**	SEAOC- OSHPD software;

SEISMIC DESIGN CRITERIA		VALUE	SOURCE
Design Spectral Response Acceleration, 1-sec. period, 2/3 S_{MI}	**S_{D1}**	**0.79**	SEAOC- OSHPD software;
Peak Ground Acceleration (PGA) for Geometric-Mean Max. Considered Earthquake (MCE_G)	**PGA_M**	**0.75g**	SEAOC- OSHPD software; ASCE 7-22 § 11.8.3.2
Seismic Design Category (SDC)		**D**	2025 CBC § 1613.2 or 2025 CBC § 1613*A*.2
*Site class to be determined using measured shear wave velocity (V_s). If V_s is not measured and the boring(s) is to a minimum of 50 feet, then the Vs30 can be estimated based on a correlation of the SPT equivalent blowcounts per ASCE 7-22 Table C20.3-1. The estimated V_s30 was then utilized to determine a Site Class and alternate Site Classes based on the results of V_s30x1.3 and V_s30/1.3 per ASCE 7-22 Section 20.2-20.3.			
MCE_R = Maximum Considered Earthquake (risk targeted) MCE_G = Maximum Considered Earthquake (geometric mean)			

3.4 Seismology & Calculation of Earthquake Ground Motion

Because the site is not located within or directly adjacent to a mapped Alquist-Priolo (AP) Earthquake Zone, is not a Seismic Design Category E or F and is not required by ASCE 7 §11.4.7, a site-specific ground motion analysis was not conducted for this site. The above seismic design information will be utilized for this project.

3.5 Possible Earthquake Effects

A number of active faults are located within a 50-mile radius of the subject site. To evaluate the affect a major earthquake might have on the site, the computer modeling programs EQFaultwin vers. 3.0 (Thomas Blake) and FRISKSPWIN vers. 4.0 (Thomas Blake) were utilized. Site-specific parameters were entered and the programs computed the maximum peak site ground accelerations resulting from an earthquake. Because ground accelerations are based largely on fault distance and magnitude, we have focused our analysis on those faults which are close to the site, or that have large maximum credible magnitudes, or a combination of the two. The result of this analysis is presented below in Table A.

This analysis estimates that a maximum peak ground acceleration of 0.878g would be felt at the site as a result of a maximum earthquake of magnitude 7.3 on the So. Sierra Nevada Fault approximately 6.1 kilometers away. See attached Deterministic Site Parameters for a full listing of computed values for faults within a 100-mile radius of the site in Attachment A. Also attached is a California Fault Map showing nearby faults in relationship to the site (Plate 5).

Utilizing the USGS Earthquake Hazard Toolbox the disaggregation PGA ground motion for the Site was calculated to be 0.5537g g for a 5% chance every 975 years of exceedance. See Attachment A for this calculation results page.

TABLE A

FAULT	Approximate Distance (Km)	Maximum Earthquake Magnitude (Mw)	Maximum Peak Ground Acceleration	Estimated Site Intensity (MM)
So. Sierra Nevada	**6.1**	7.3	**0.878**	**XI**
Little Lake	14.3	6.9	0.266	IX
Garlock (East)	25.7	7.5	0.240	IX
Blackwater	42.2	7.1	0.134	VIII
Tank Canyon	44.4	6.4	0.108	VII
Garlock (West)	46.0	7.3	0.139	VIII
Lenwood-Lockhart-Old Woman Springs	48.1	7.5	0.149	VIII
Gravel Hills – Harper Lake	54.4	7.1	0.110	VII
Owens Lake	62.2	**7.6**	0.129	VIII
Panamint Valley	62.4	7.4	0.116	VII
White Wolf	63.1	7.3	0.132	VIII
Helendale-Lockhardt	71.2	7.2	0.099	VII

3.6 Potential For Ground Rupture, Ground Shaking, Ground Failure

Ground rupture may occur along a fault trace in a major earthquake. It is unlikely that ground rupture could occur at this site since it is not located within 500 feet of a suspected active fault. Some ground shaking is likely at this site in the event of a major earthquake on one of the nearby faults. Based on the predicted maximum horizontal accelerations at the site and the soil types identified in this investigation ground failure is highly unlikely at this site.

3.7 Potential for Earthquake-Induced Flooding and Tsunami Zone

The potential for earthquake-induced flooding at the site appears to be low since groundwater has been historically over 190’ below the ground surface. The site is located outside of the tsunami potential zone as shown on the Tsunami Zone Map in Attachment B. Therefore, the threat of a Tsunami impacting the subject site is minimal.

The site will have a detailed Emergency Response Plan which includes protocols for responses to earthquakes, flooding, fire and other hazards.

3.8 Liquefaction Potential

No groundwater was encountered in any of the soil borings in the 17 geotechnical soil borings conducted on-site to depths as great as 85' bgs. The unconfined aquifer is not shown to be less than 100 feet below ground surface at the site based on current and historical information from the Kern County Water Agency and the Kern County Safety Element. Historical depth to water data by the DWR and presented on the Water Data Library Station The shallowest depth to water on a nearby well within 1-mile of the subject property is 192' in 1973 (DWR) located north of the site. SPT blowcounts in the two (2) SEI soil borings, B-7 and B-10, ranged from 10 to 94 blowcounts per foot to a depth of 51'. The lithology encountered in the subsurface includes multiple silty sand, clayey sand, poorly graded sand, and sand with silt layers in the borings. A liquefaction analysis was performed on the deep borings B-7 and B-10 utilizing the program LiquefyPro (version 5.10). Site-specific information was used in this analysis including; SPT blowcounts per foot, grain-size analysis, wet weight densities, the moment magnitude earthquake and the PGA for the MCEg earthquake motion (0.5537g) and a very conservative depth to water of 100'. See attached LiquefyPro data in Attachment B and boring logs and cross-sections for more detail.

3.9 *Slope Stability*

The site is located in an area with <0.5 percent slopes across the site. No bedrock outcrops are present within 1/2 mile of the site. No evidence of historic landslides or creep was observed in this area. There is a very low potential for rockfalls or landslides to impact the site in the event of a major earthquake. Overall the site appears to be stable.

3.10 *Settlement*

The LiquefyPro program estimated the amount of dynamic settlement that would occur at this site during a major earthquake as calculated to be approximately 0.96" (B-7) and 0.95" (B-10) based on the lithology encountered, engineered fill in the top 4', the SPT blowcounts recorded during sampling and the settlement analysis conducted on the deeper borings. The estimated amount of total differential settlement is 0.01" over a span of 535' between B-7 and B-10 according to the program LiquefyPro. The amount of differential settlement appears to be appropriate for this project with no mitigation beyond the proposed improvement beneath the structures recommended by the Geotechnical Engineer. Accordingly, the foundations and other structural elements should be designed to sustain the differential settlements as described above. See attached liquefaction analysis sheets and graphs in Attachment B for these calculation results.

3.11 Expansive Soil and Hydrocollapse Potential

Based on the lithology encountered in the top 10 feet in the soil borings, it appears unlikely that highly expansive surface soils will be present at this site. Expansive Index tests results ranged from 0 (B-4@0-5', B-8@0-5', B-12@0-5', and B-14@0-5') to 3 (B-16@0-5'), which indicates a very low expansion potential. A consolidation tests at the site had results ranging between -2.1% (B-16@6') to -3.6% (B-12@3'). See Lab Result Table in Attachment B for more detail.

The Kern County Safety Element includes a discussion on land subsidence potential in Kern County. The main causes of land subsidence are Tectonic Subsidence, Oil & Gas Fluid Extraction, Groundwater Withdrawal and Hydrocompaction of Moisture Deficient Alluvial Deposits. Figure 15 in the Safety Element shows the areas of significant subsidence. The site is not located within an area where historic land subsidence has occurred and is outside of areas of hydrocompaction as shown on attached Plate 7. The site does not reside in an oil field so oil field activities (oil withdrawal) will have minimal impact on the site. Based on this information it appears that regional subsidence should not be an issue at this site requiring any special mitigation or requirements.

4.0 Erosion & Loss of Topsoil & Flood Zone

Soil erosion occurs primarily when soil is exposed to winds, flowing water, and in some cases due to human activities (farming, clearcutting, etc.). The potential for wind erosion is possible if soil is barren with minimal vegetation. During major storm events, flooding can occur causing flood scouring. The site is located within flood Zone A, which indicates areas that are subject to inundation by the 1-percent annual flood (100-year flood) and have no detailed base flood elevations provided according to the Flood Insurance Rate Map covering the site area (see Attachment B for map). Additionally, the site is shown to be located within a flood hazard zone as shown on Figure 14 (Flooding and Shallow Groundwater Map in Attachment B). During site development (grading activities) soil disturbance can additionally expose the soil to the elements facilitating erosion. Appropriate site design, implementation of BMPs, SWPPP, and Erosion Control Plans, flood mitigation measures, and other erosional mitigation measures will significantly reduce erosion and loss of the topsoil within the site.

The site will have a detailed Emergency Response Plan which includes protocols for responses to earthquakes, flooding, fire and other hazards.

5.0 High-Pressure Pipelines & Hazardous Materials

5.1 High-Pressure Pipelines

Based on the Inyokern Quadrangle topographic map, conversations with local utility companies, and the National Pipeline Mapping System, there appears to be no high-pressure natural gas or petroleum pipelines within 1500' of the site.

5.2 Hazardous Materials

The site is not within an active oil or gas field as no oil wells are present near the site. It is unlikely that the oilfield activities have impacted the subsurface soil or soil gas beneath the subject site with chemical of concern (methane, H2S, etc.). See Plate 6 for the site location in reference to the nearest oil and gas wells.

6.0 California Environmental Quality Act (CEQA) Checklist

CEQA requires that state and local agencies disclose and evaluate the significant environmental impacts of proposed projects and adopt all feasible mitigation measures to reduce or eliminate those impacts. Appendix G Section VII Geology and Soils CEQA Environmental Checklist identifies a project as having a potentially significant impact if:

A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map?* This appears to be "Less Than Significant" as shown on the above Sections 2.1, 3.2, 3.4 and 3.6.
   ii) *Strong Seismic Ground Shaking?* This appears to be "Less Than Significant With Mitigation Incorporated" as shown on the above subsections 3.1, 3.3, 3.5 and 3.6 and SEI's Geotechnical Report (2026) for the site and design structures per current California Building Code.
   iii) *Seismic-related ground failure, including liquefaction?* This appears to be "Less Than Significant Impact" as shown on the above section 3.0 and its subsections 3.1 to 3.11.
   iv) *Landslides?* This appears to be "No Impact" as shown on the above subsection 3.9.
B. Result in substantial soil erosion or the loss of topsoil? This appears to be "Less Than Significant With Mitigation Incorporated" as shown above on section 4.0 and SEI's Geotechnical Report (2026) for the site.
C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? This appears to be "Less Than Significant Impact" to "Less Than Significant With Mitigation Incorporated" as shown above on Section 3.0 and its subsections 3.1 to 3.11 and SEI's Geotechnical Report (2026) for the site.
D. Be located on expansive soil creating substantial direct or indirect risks to life or property? This appears to be "No Impact" as shown on subsection 3.11 and SEI's Geotechnical Report (2026) for the site.
E. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? At this point in time, the SEI's Geotechnical Report (2026) did not evaluate the site for the suitability for the use of septic tanks or alternative wastewater disposal systems for the disposal of wastewater. If and when an Onsite Wastewater Treatment System is designed, it should comply with Kern County Onsite Systems Manual.
F. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? It appears to be "No Impact" based on paleontological maps (Paleobiology Public

Database).

It appears that the Data Center's potential environmental impacts in accordance with Appendix G Section VII Geology and Soils CEQA Environmental Checklist is between "No impact" to "Less Than Significant With Mitigation Incorporated". Further geotechnical evaluation is recommended in the above section E to provide a definitive evaluation of the Site's environmental impact.

6.0 Conclusions & Recommendations

Our Geological Hazards Assessment indicates that there is a low probability for liquefaction to occur during a major earthquake at the site and that the maximum peak ground acceleration at the site would be 0.878g for a 7.3 magnitude earthquake on the So. Sierra Nevada Fault approximately 6.1 kilometers away. The computer-modeling program Eqsearchwin estimated that a ground motion of 0.170g occurred at the site from a 6.1 magnitude earthquake on the Airport Lake Fault Zone on September 20, 1995. The proposed structures should be built to withstand this magnitude of an earthquake and ground motions.

The site-specific design acceleration values to be utilized for the proposed improvements should be 1.27g for short periods (S_{Ds}) and 0.79g for the 1 second period (S_{D1}). The seismic design category is a CD for both short and 1-second periods per the 2025 CBC.

In the event of a major earthquake, there is a very low potential for rock falls or landslides to impact the site. The site is located within flood Zone A, which indicates areas that are subject to inundation by the 1-percent annual flood (100-year flood) and have no detailed base flood elevations. Appropriate flood mitigation measures are recommended. The site is not located within a potential tsunami hazard zone. After the proposed over-excavation and re-compaction of the top 4' of soil, an estimated amount of total dynamic settlement that would occur at this site during a major earthquake is approximately 0.96" (B-7) and 0.95" (B-10) and the estimated amount of differential settlement is 0.01" over a span of 535 feet, utilizing a very conservative depth to groundwater of 100'. These estimated settlements appear to be appropriate for a Data Center with no mitigation required.

No high-pressure natural gas pipelines or active high-pressure petroleum pipelines appear to be present within 1500' of the site that would be a threat to the site.

The nearest oil wells (dry holes) ever drilled are far enough away from the site that it is not likely that any significant subsurface oilfield related gases (hydrogen sulfide, methane etc.) are present beneath the site.

No further geological assessment or mitigation is recommended at this time, beyond the over-excavation and replacement with engineered fill of the near surface soil that is recommended by the Geotechnical Engineer.

It appears that the Data Center's potential environmental impacts in accordance with Appendix G

Section VII Geology and Soils CEQA Environmental Checklist is between “No impact” to “Less Than Significant With Mitigation Incorporated”. Further geotechnical evaluation is recommended in the above section E and to provide a definitive evaluation of the Site’s environmental impact.

7.0 Attachments

7.1 Location Map- Plate 1, "Location Map" shows the location of the site with relationship to roads and land features**.**

7.2 Plot Plan - Plate 2, "PLOT PLAN" shows the location and lot configuration of the property.

7.2.1 Plate 2A, Geologic Map shows the site geology related to local topography, streets and nearby surficial features.

7.2.2 Plate 2B, Geologic Cross-Section A to A’, shows the subsurface lithology encountered in some of the soil borings at the site.

7.3 Seismic Hazard Atlas Map- Plate 3, Shows local geology and faults within the Inyokern NE/4 15’ Quadrangle near the site.

7.3.1 Earthquake Epicenter Map - Plate 3A, Shows the site location on an earthquake epicenter map of historical earthquakes with magnitudes >5.0, from the Eqsearchwin computer modeling program.

7.4 Current & Historical Depth To Groundwater Map - Plate 4, Shows the site location in relation to a Depth To Water Map of the regional area presented on the Water Data Library Station Map.

7.5 Fault Location Map- Plate 5, Shows the site in relation to the nearest active faults within 100 miles based on the EQFault program.

7.5.1 Plate 5A shows the Regional Faults based on the Fault Activity Map of California 2010.

7.5.2 Alquist-Priolo Special Studies Zone Map - Plate 5B, Shows AP Zones near the site.

7.6 CalGEM Oil Well Map - Plate 6, Shows the site in relation to the nearest oil wells drilled near the site.

7.7 Plate 7, Regional Land Subsidence Map – Shows the site location on a Map that presents the areas of known regional subsidence and hydrocompaction in the Kern County area.

7.8 Attachment A - Deterministic Site Parameters - EQFAULTWIN data determined for the site for faults within 100 miles. EQSEARCHWIN data concerning the distance and magnitude of earthquakes within 100 miles of the site is attached. SEAOC/OSHPD seismic design data and USGS Unified hazard Tool Hazard Curve & Deaggregation data and plot is attached. Shearwave Velocity Calculation Spreadsheets and CPT-01 Shearwave Data.

7.9 Attachment B - Presents the Boring Logs, the Flood Insurance Rate Map, Flooding and Shallow Groundwater Map (Figure 14), Tsunami Hazard Areas Map, LiquefyPro plots and calculation sheets for liquefaction and settlement and the Lab Result Table.

8.0 References

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- Department of Water Resources, SGMA Data Viewer Groundwater Levels Map https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels
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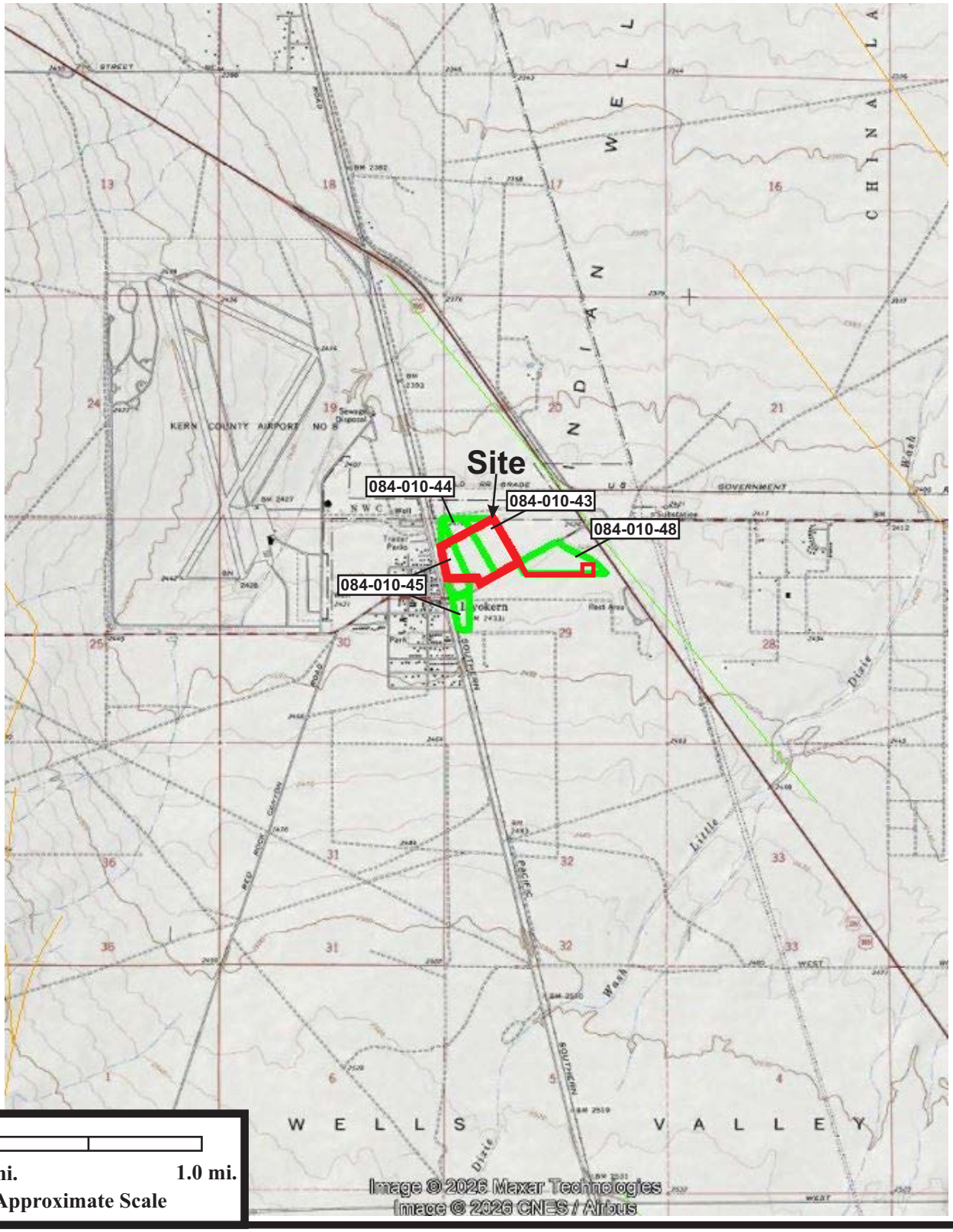
- Association of Environmental Professionals, California Environmental Quality Act Statute & Guidelines, 2026
- National Pipeline Mapping System: https://pvnpms.phmsa.dot.gov/PublicViewer/
- Paleobiology Database: https://paleobiodb.org/navigator/



0 mi. 1.0 mi.
Approximate Scale

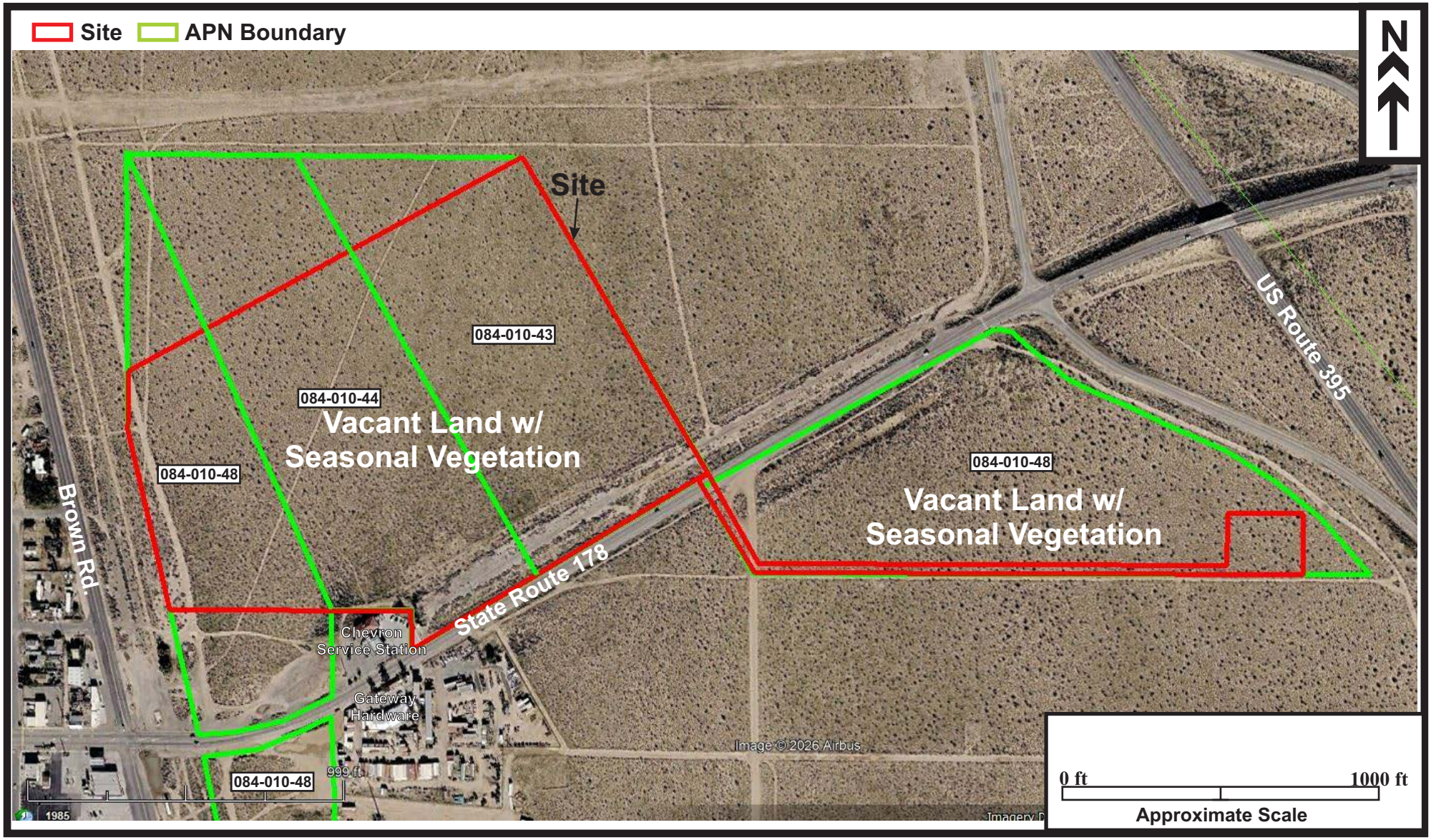
SOILS ENGINEERING, INC.
4400 Yeager Way
Bakersfield, CA 93313
(661) 831 - 5100

DATE: 7/26
PROJECT: #20852

RB Inyokern Data Center (CEI#1160-01)
NE of Brown Rd. & SR 178,
Inyokern, Kern County, CA

Location Map

PLATE
1



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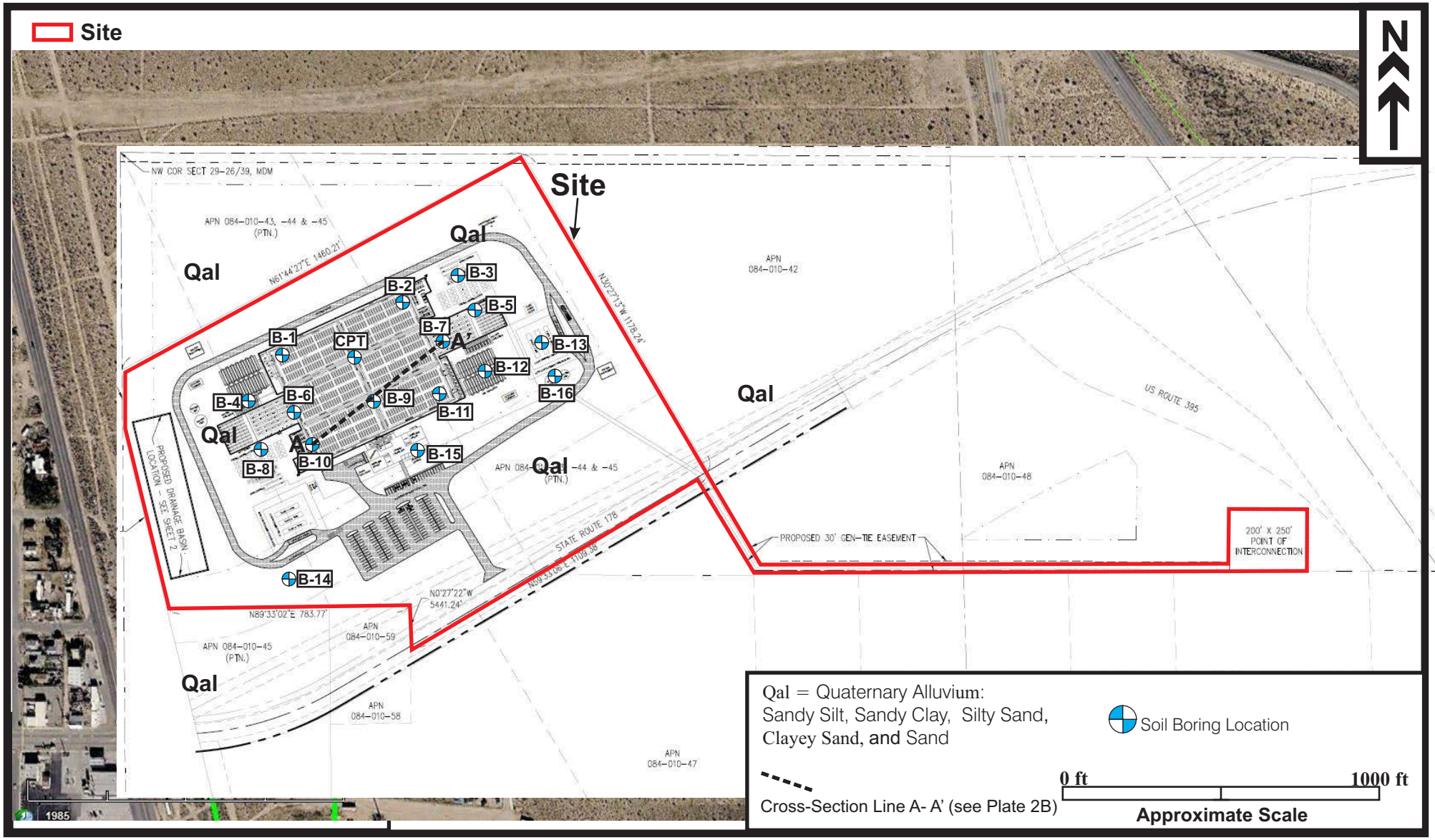
Plot Plan

PLATE
2



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DATE: 7/26
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RB Inyokern Data Center (CEI#1160-01)
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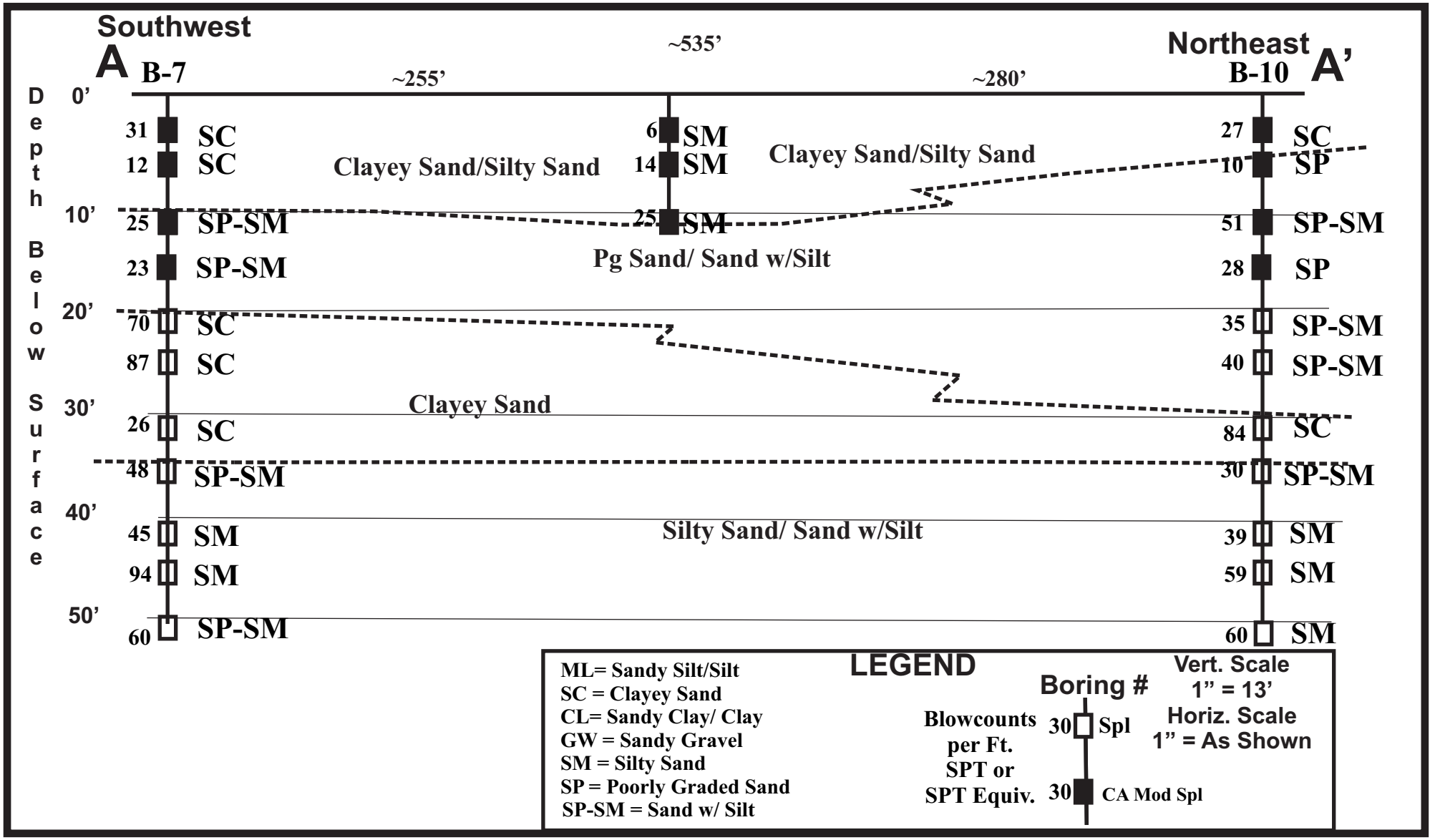
Inyokern, Kern County, CA

BORING LOCATION/GEOLOGIC MAP

PLATE
2A



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RB Inyokern Data Center (CEI#1160-01)
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Inyokern, Kern County, CA

Geologic Cross-section A' to A

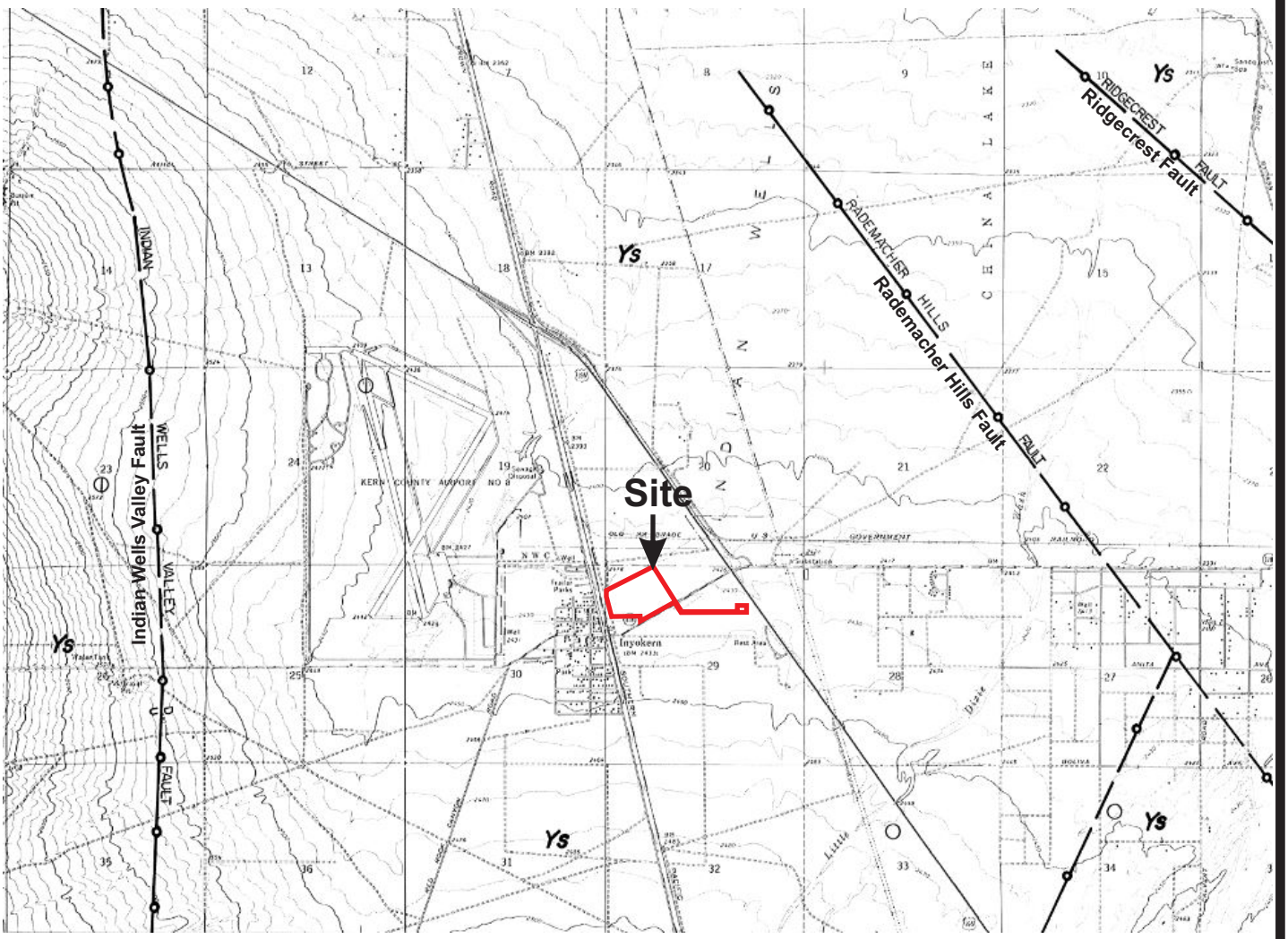
PLATE
2B

ROCK TYPES:

Younger Sediments (Pleistocene and younger)	Ys
Older Sediments (Pliocene and Older)	Os
Crystalline Rocks (Igneous and Metamorphic)	Cr

ROCK STRUCTURE:

- Zone of Faulting
- Surface Faulting
- Faults Showing Creep
- Faults that displace Younger Sediments or show other evidence of recent movement
- Surface Faults Inferred - exact location unknown
- Subsurface Faults
- Subsurface Faults Inferred - exact location unknown
- Contacts other than Fault Contacts
  - Observed
  - Inferred
- Uncertain Contacts ?



SOURCE: Inyokern NE/4 15' Quadrangle,
Seismic Hazard Atlas Map, Kern County Council of Govt.

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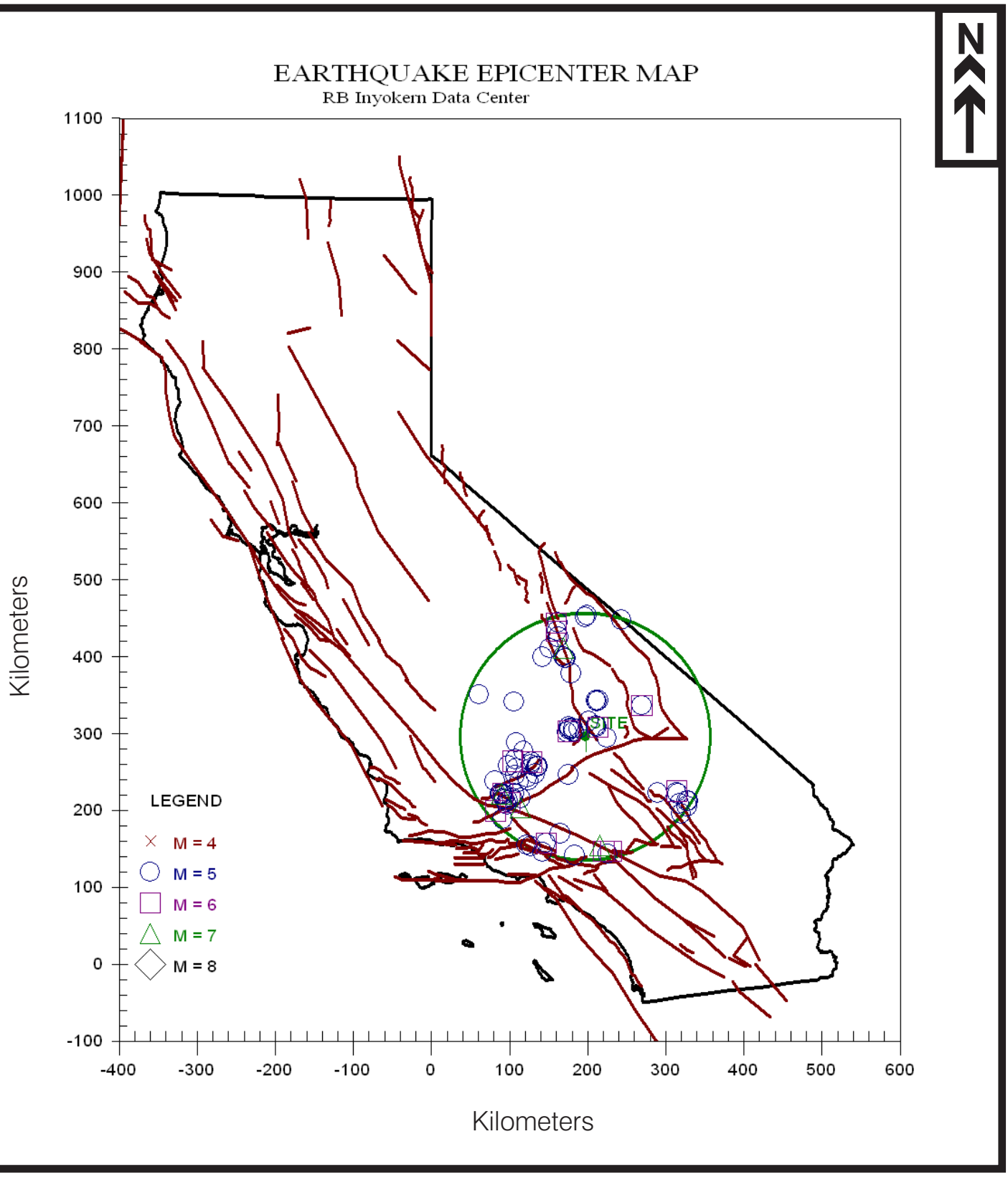
(661) 831-5100

DATE: 7/26
PROJECT: #20852

RB Inyokern Data Center (CEI#1160-01)
NE of Brown Rd. & SR 178,
Inyokern, Kern County, CA

Seismic Hazard Zone Atlas Map

PLATE 3



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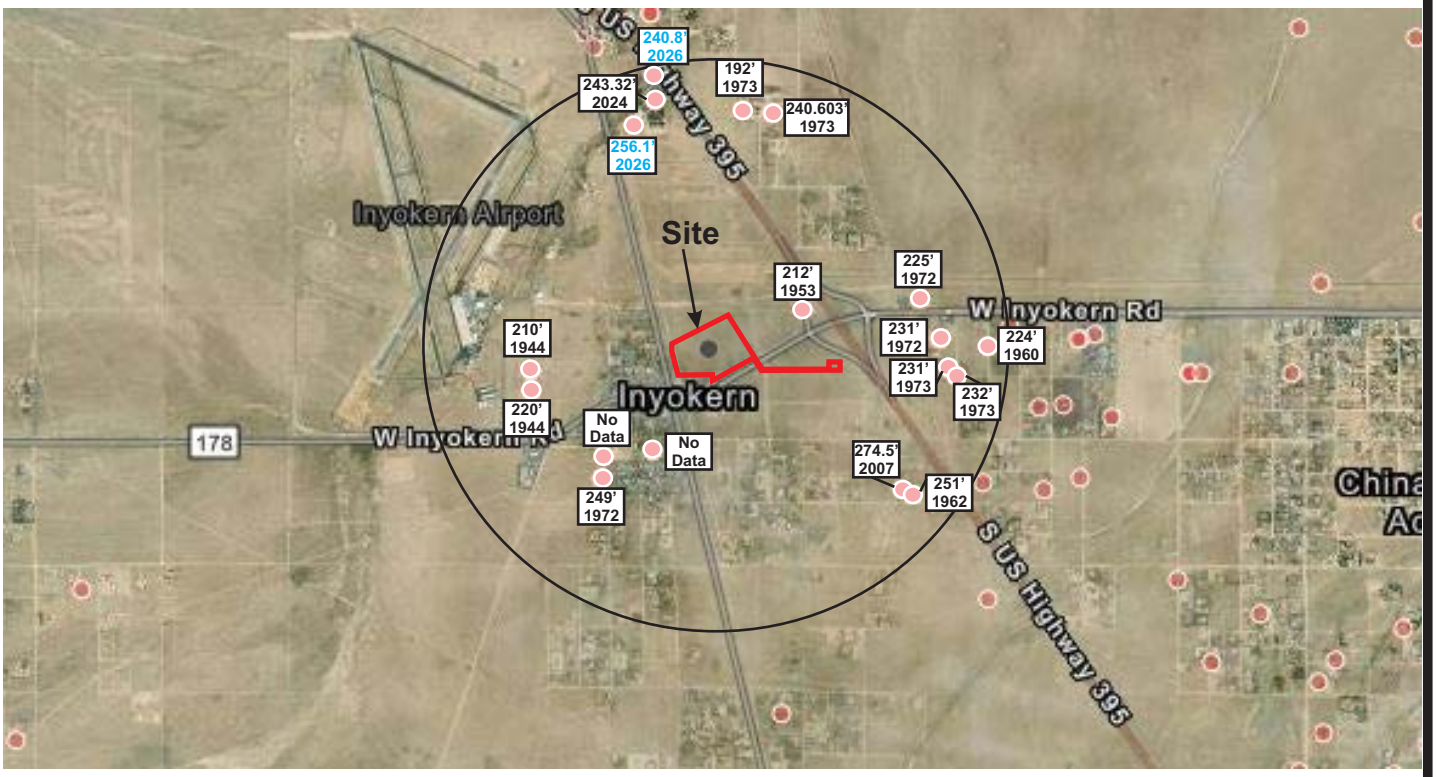
DATE: 7/26
PROJECT: #20852

RB Inyokern Data Center (CEI#1160-01)
NE of Brown Rd. & SR 178,
Inyokern, Kern County, CA

Earthquake Epicenter Map

PLATE

3A



Water Well

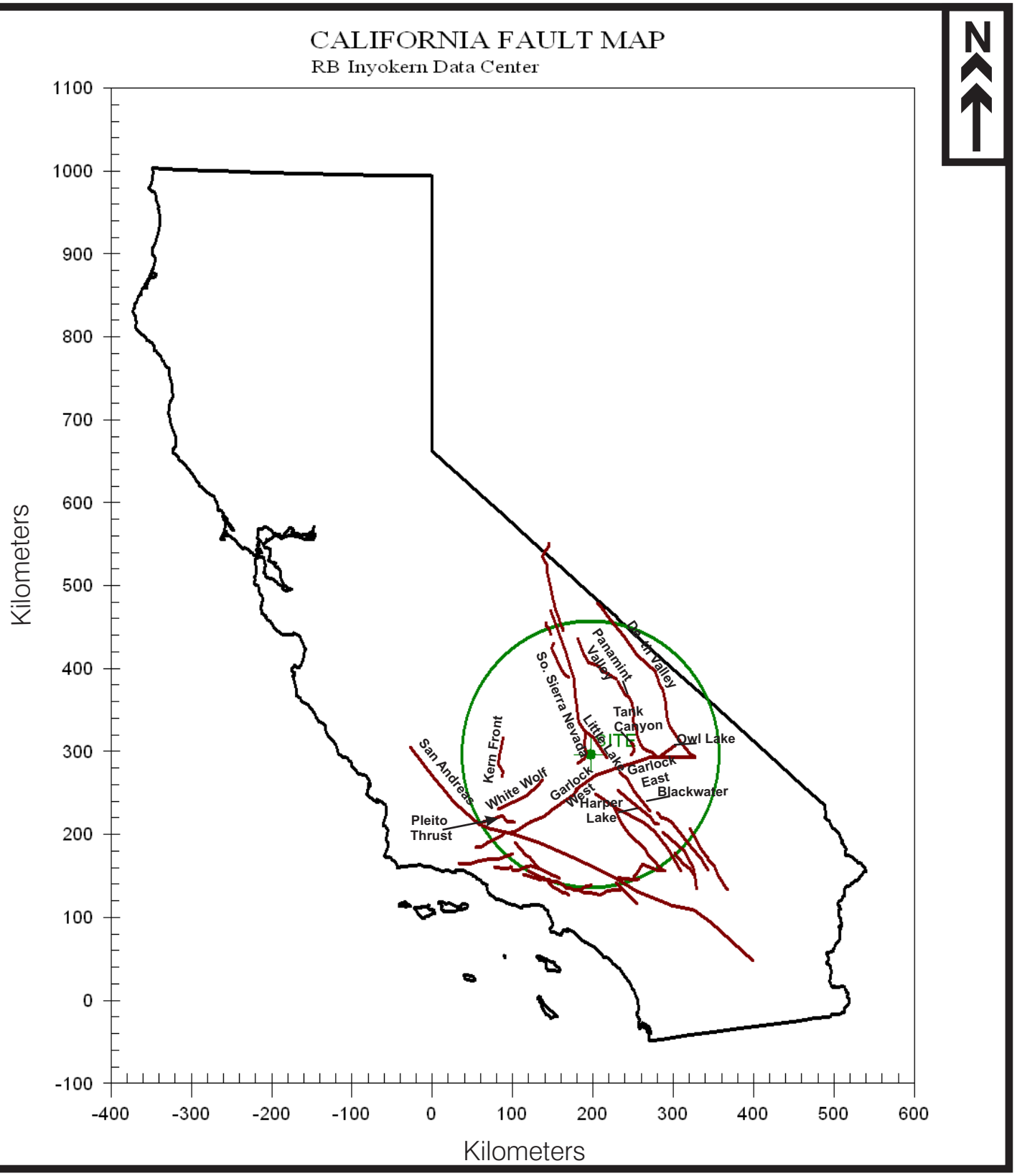
#' =Current Depth to Water Reading (year)

#' = Historical High Depth to Water Reading (year)

0 Approx. Scale 1.0 mile

CA DWR, Water Data Library Station Map

SOILS ENGINEERING, INC. 4400 Yeager Way Bakersfield, CA 93313 (661) 831-5100 DATE: 7/26 PROJECT: #20852	RB Inyokern Data Center (CEI#1160-01) NE of Brown Rd. & SR 178, Inyokern, Kern County, CA Current & Historical Depth To Water Map	PLATE 4



SOILS ENGINEERING, INC. **4400 Yeager Way** **Bakersfield, CA 93313** **(661) 831-5100** DATE: 7/26 PROJECT: #20852	**RB Inyokern Data Center (CEI#1160-01)** **NE of Brown Rd. & SR 178,** **Inyokern, Kern County, CA** Fault Location Map	PLATE 5

FAULT CLASSIFICATION COLOR CODE
(Indicating Recency of Movement)

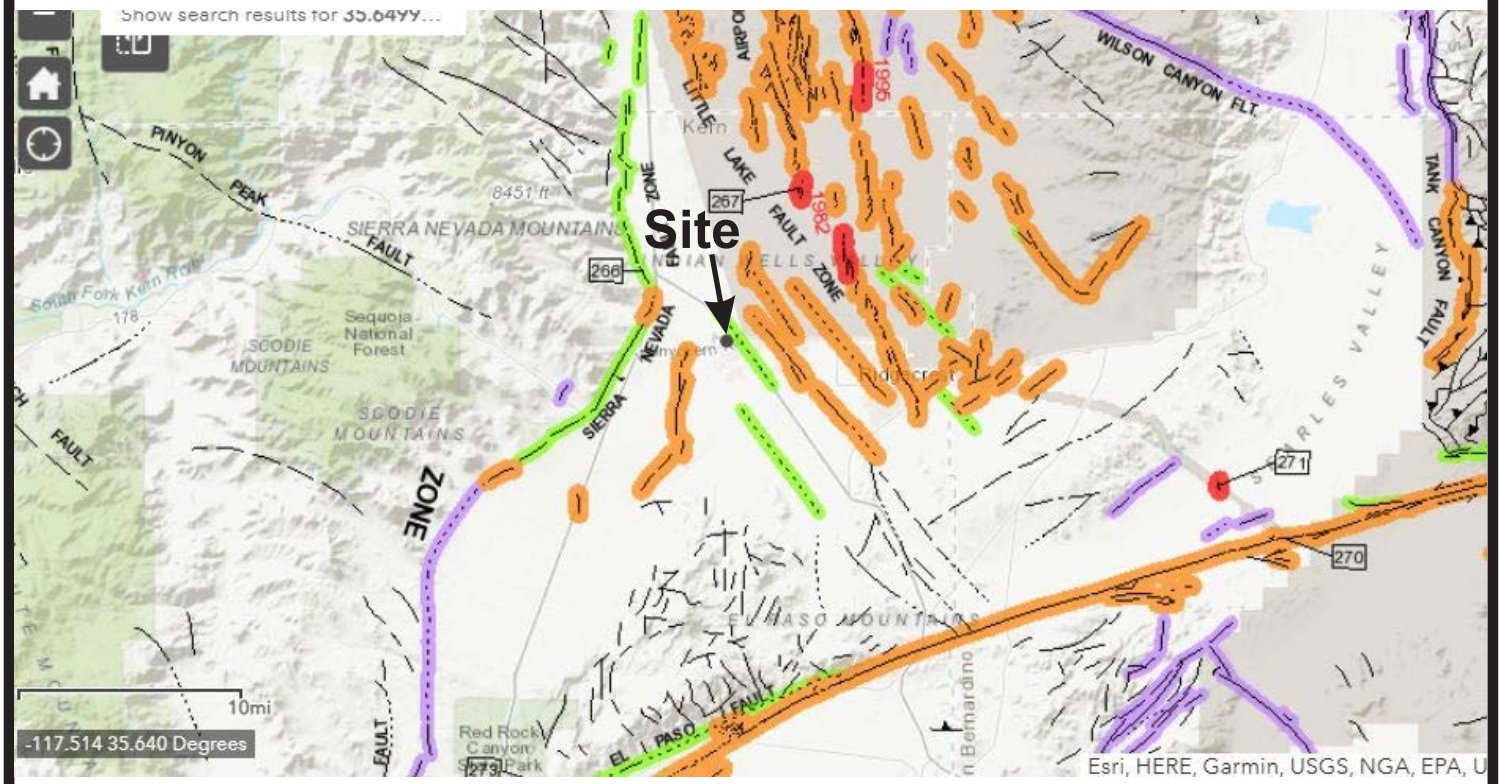
Fault along which historic (last 200 years) displacement has occurred.

Holocene fault displacement (during past 11,700 years) without historic record.

Late Quaternary fault displacement (during past 700,000 years).

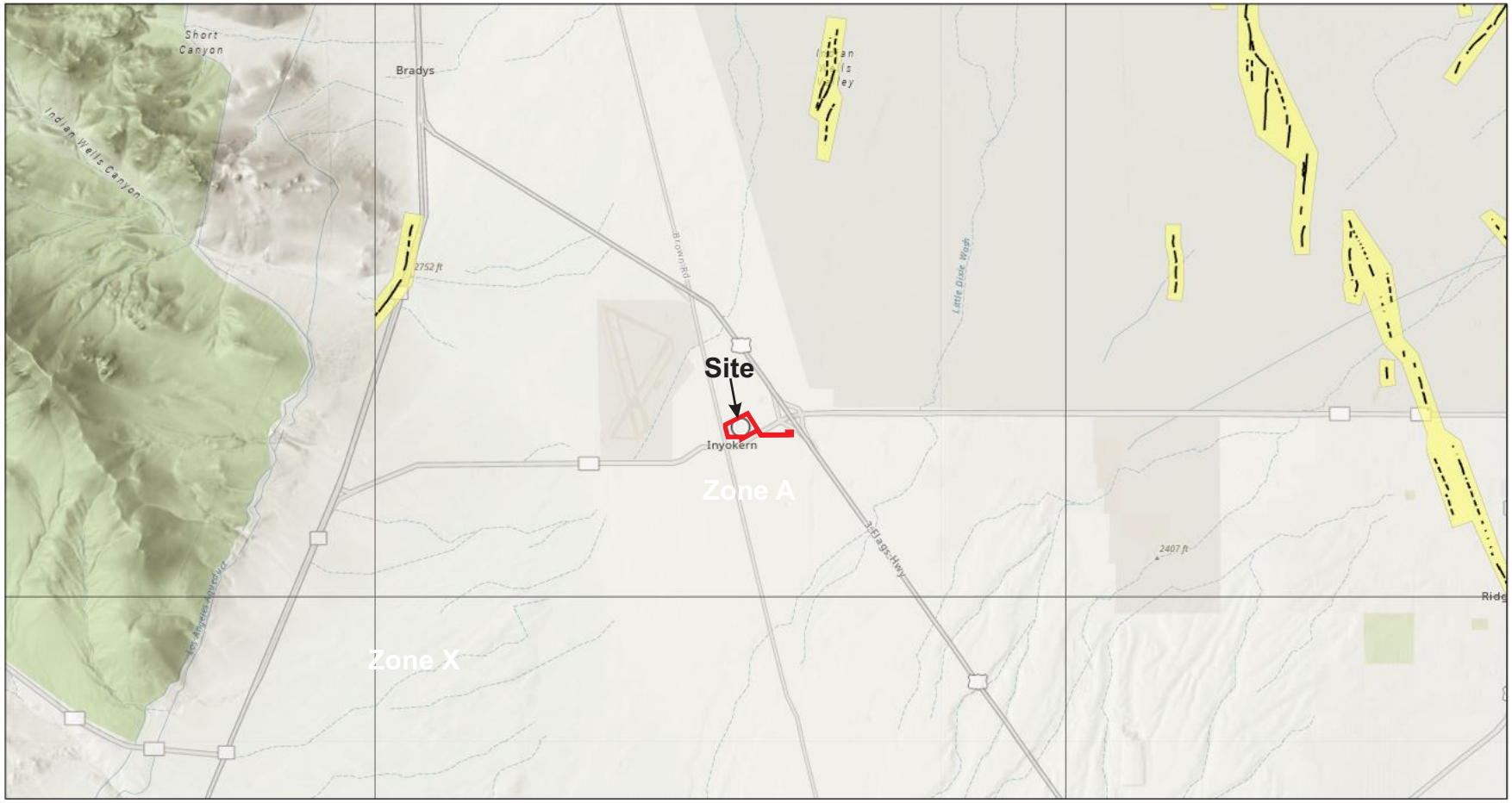
Quaternary fault (age undifferentiated).

Pre-Quaternary fault (older that 1.6 million years) or fault without recognized Quaternary displacement.



SOURCE: 2010 Fault Activity Map of California, CDMG

SOILS ENGINEERING, INC. **4400 Yeager Way** **Bakersfield, CA 93313** **(661) 831-5100** DATE: 7/26 PROJECT: #20852	**RB Inyokern Data Center (CEI#1160-01)** **NE of Brown Rd. & SR 178,** **Inyokern, Kern County, CA** **REGIONAL FAULT MAP**	PLATE 5A



SOILS ENGINEERING, INC.
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DATE: 7/26
PROJECT: #20852

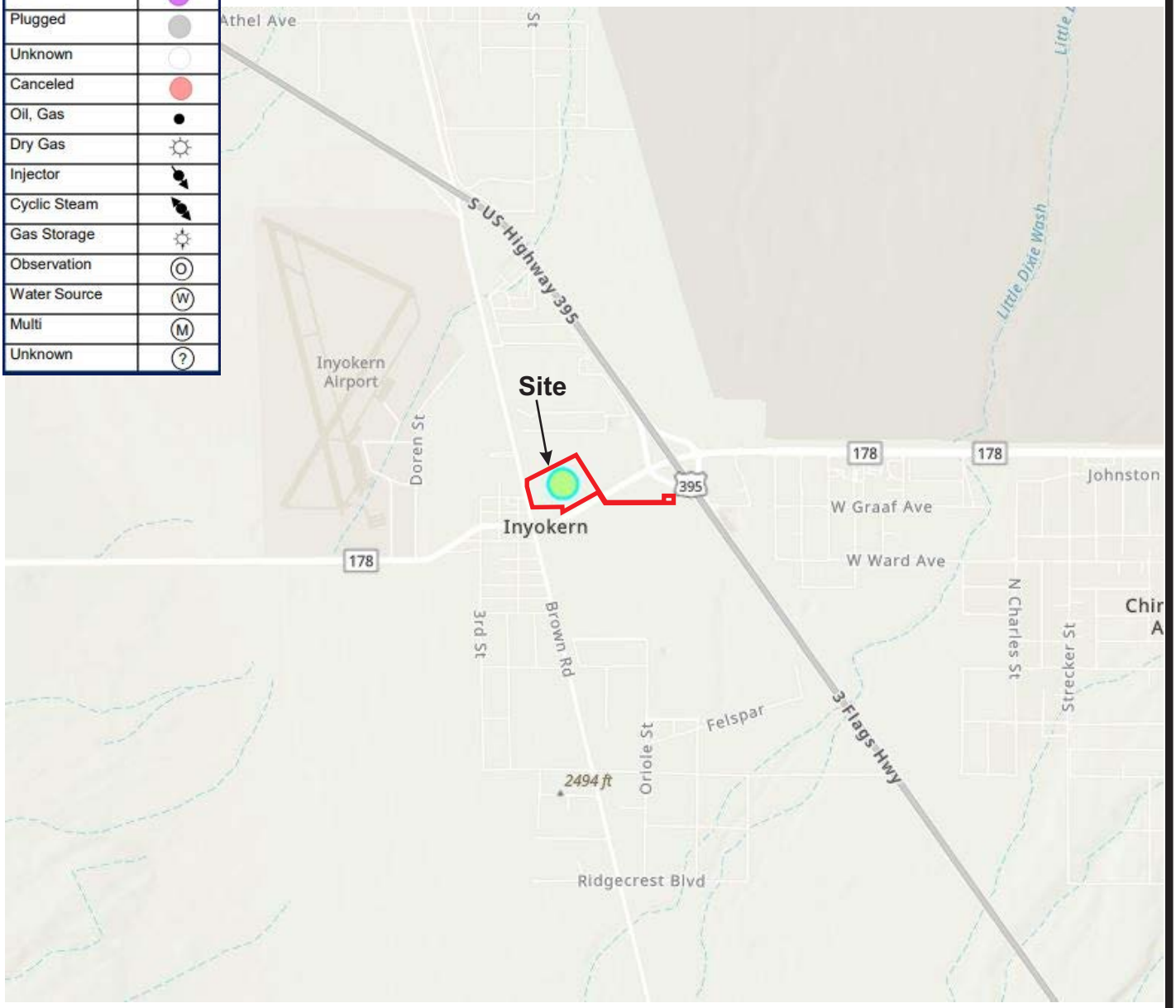
RB Inyokern Data Center (CEI#1160-01)
NE of Brown Rd. & SR 178,
Inyokern, Kern County, CA

Alquist-Priolo Special Studies Zone Map

PLATE
5B

Basic Well Symbols	
Well Status or Type	**Symbol**
Active	
New	
Idle	
Plugged	
Unknown	
Canceled	
Oil, Gas	
Dry Gas	
Injector	
Cyclic Steam	
Gas Storage	
Observation	O
Water Source	W
Multi	M
Unknown	?

Plugged/Abandoned Oil Well



0 mi. 1.0 mi.

ApproximateScale

SOILS ENGINEERING, INC.
4400 Yeager Way
Bakersfield, CA 93313
(661) 831-5100

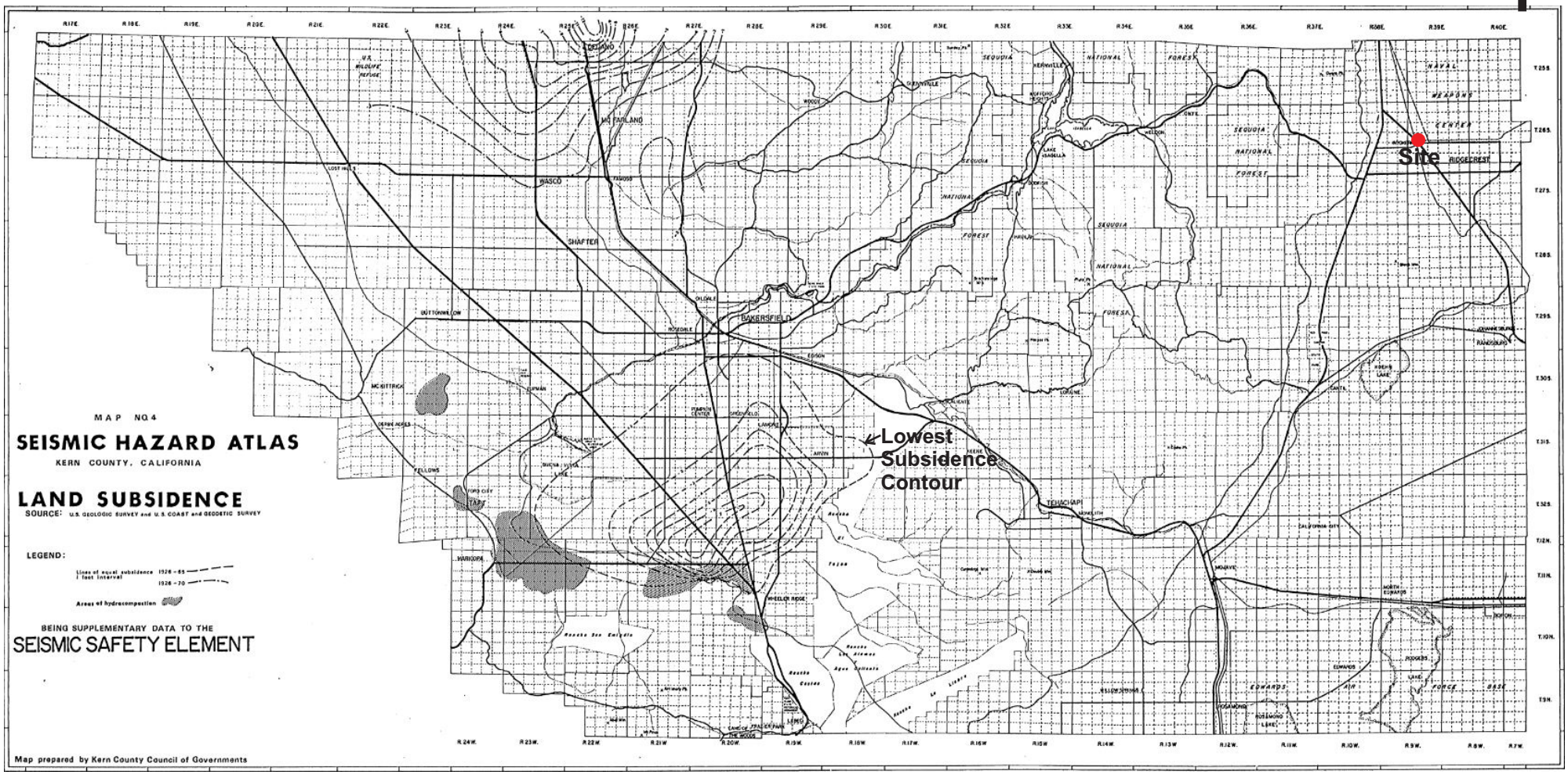
DATE: 7/26
PROJECT: #20852

RB Inyokern Data Center (CEI#1160-01)
NE of Brown Rd. & SR 178,
Inyokern, Kern County, CA

CalGEM Oil Well Map

PLATE

6



Regional Land Subsidence Map

From Kern County Safety Element (Figure 15)

Plate 7

Attachment A

EQFAULTWIN data, EQSEARCHWIN data, USGS Seismic Design Maps SEAOC/OSHPD, USGS Earthquake Hazard Toolbox Results, Shearwave Velocity Calculation Spreadsheets, CPT-01 Shearwave Data

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*    E Q F A U L T   *
*                    *
*    Version 3.00    *
*                    *
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DETERMINISTIC ESTIMATION OF
PEAK ACCELERATION FROM DIGITIZED FAULTS

JOB NUMBER: 20852

DATE: 07-15-2026

JOB NAME: RB Inyokern Data Center

CALCULATION NAME: Test Run Analysis

FAULT-DATA-FILE NAME: CGSFLTE.DAT

SITE COORDINATES:
   SITE LATITUDE: 35.6510
   SITE LONGITUDE: 117.8090

SEARCH RADIUS: 100 mi

ATTENUATION RELATION: 3) Boore et al. (1997) Horiz. - NEHRP D (250)
   UNCERTAINTY (M=Median, S=Sigma): M   Number of Sigmas: 0.0
   DISTANCE MEASURE: cd_2drp
   SCOND: 0
   Basement Depth: 5.00 km   Campbell SSR: Campbell SHR:
   COMPUTE PEAK HORIZONTAL ACCELERATION

FAULT-DATA FILE USED: CGSFLTE.DAT

MINIMUM DEPTH VALUE (km): 0.0

EQFAULT SUMMARY

DETERMINISTIC SITE PARAMETERS

Page 1

ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT: MAXIMUM EARTHQUAKE MAG.(Mw)	ESTIMATED MAX. EARTHQUAKE EVENT: PEAK SITE ACCEL. g	ESTIMATED MAX. EARTHQUAKE EVENT: EST. SITE INTENSITY MOD.MERC.
So. SIERRA NEVADA	0.0(0.0)	7.3	0.878	XI
LITTLE LAKE	8.9(14.3)	6.9	0.266	IX
GARLOCK (East)	16.0(25.7)	7.5	0.240	IX
BLACKWATER	26.2(42.2)	7.1	0.134	VIII
TANK CANYON	27.6(44.4)	6.4	0.108	VII
GARLOCK (West)	28.6(46.0)	7.3	0.139	VIII
LENWOOD-LOCKHART-OLD WOMAN SPRGS	29.9(48.1)	7.5	0.149	VIII
GRAVEL HILLS - HARPER LAKE	33.8(54.4)	7.1	0.110	VII
OWENS VALLEY	38.6(62.2)	7.6	0.129	VIII
PANAMINT VALLEY	38.8(62.4)	7.4	0.116	VII
WHITE WOLF	39.2(63.1)	7.3	0.132	VIII
HELENDALE - S. LOCKHARDT	44.2(71.2)	7.3	0.099	VII
OWL LAKE	52.4(84.3)	6.5	0.057	VI
HUNTER MTN. - SALINE VALLEY	60.8(97.8)	7.2	0.074	VII
INDEPENDENCE	60.9(98.0)	7.1	0.085	VII
DEATH VALLEY (Graben)	61.9(99.6)	7.1	0.084	VII
DEATH VALLEY (South)	65.0(104.6)	7.1	0.066	VI
CALICO - HIDALGO	67.4(108.5)	7.3	0.072	VI
Kern Front	69.3(111.6)	6.3	0.050	VI
SAN ANDREAS - Whole M-1a	76.2(122.6)	8.0	0.094	VII
SAN ANDREAS - 1857 Rupture M-2a	76.2(122.6)	7.8	0.085	VII
SAN ANDREAS - Mojave M-1c-3	76.2(122.6)	7.4	0.069	VI
SAN ANDREAS - Cho-Moj M-1b-1	76.2(122.6)	7.8	0.085	VII
SAN ANDREAS - Carrizo M-1c-2	76.7(123.4)	7.4	0.068	VI
PLEITO THRUST	77.8(125.2)	7.0	0.067	VI
LANDERS	80.6(129.7)	7.3	0.062	VI
DEATH VALLEY (Northern)	80.6(129.7)	7.4	0.066	VI
SAN GABRIEL	88.2(142.0)	7.2	0.055	VI
BIG PINE	88.4(142.2)	6.9	0.047	VI
SIERRA MADRE (San Fernando)	90.3(145.3)	6.7	0.051	VI
CLAMSHELL-SAWPIT	90.7(146.0)	6.5	0.045	VI
NORTH FRONTAL FAULT ZONE (West)	91.3(147.0)	7.2	0.065	VI
SIERRA MADRE	91.3(147.0)	7.2	0.065	VI
SANTA SUSANA	94.0(151.3)	6.7	0.049	VI
PISGAH-BULLION MTN.-MESQUITE LK	94.0(151.3)	7.3	0.055	VI
VERDUGO	94.2(151.6)	6.9	0.054	VI
CUCAMONGA	94.4(152.0)	6.9	0.054	VI
CLEGHORN	94.6(152.2)	6.5	0.036	V
HOLSER	94.8(152.6)	6.5	0.044	VI
SAN ANDREAS - San Bernardino M-1	95.7(154.0)	7.5	0.061	VI

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT: MAXIMUM EARTHQUAKE MAG.(Mw)	ESTIMATED MAX. EARTHQUAKE EVENT: PEAK SITE ACCEL. g	ESTIMATED MAX. EARTHQUAKE EVENT: EST. SITE INTENSITY MOD.MERC.
SAN ANDREAS - SB-Coach. M-2b	95.7(154.0)	7.7	0.067	VI
SAN ANDREAS - SB-Coach. M-1b-2	95.7(154.0)	7.7	0.067	VI
SANTA YNEZ (East)	95.9(154.3)	7.1	0.049	VI
BIRCH CREEK	96.1(154.6)	6.4	0.041	V
WHITE MOUNTAINS	96.8(155.8)	7.4	0.057	VI
SAN CAYETANO	97.4(156.8)	7.0	0.056	VI
JOHNSON VALLEY (Northern)	98.1(157.8)	6.7	0.039	V
SAN JACINTO-SAN BERNARDINO	98.6(158.7)	6.7	0.039	V
NORTHRIDGE (E. Oak Ridge)	99.5 (160.2)	7.0	0.055	VI

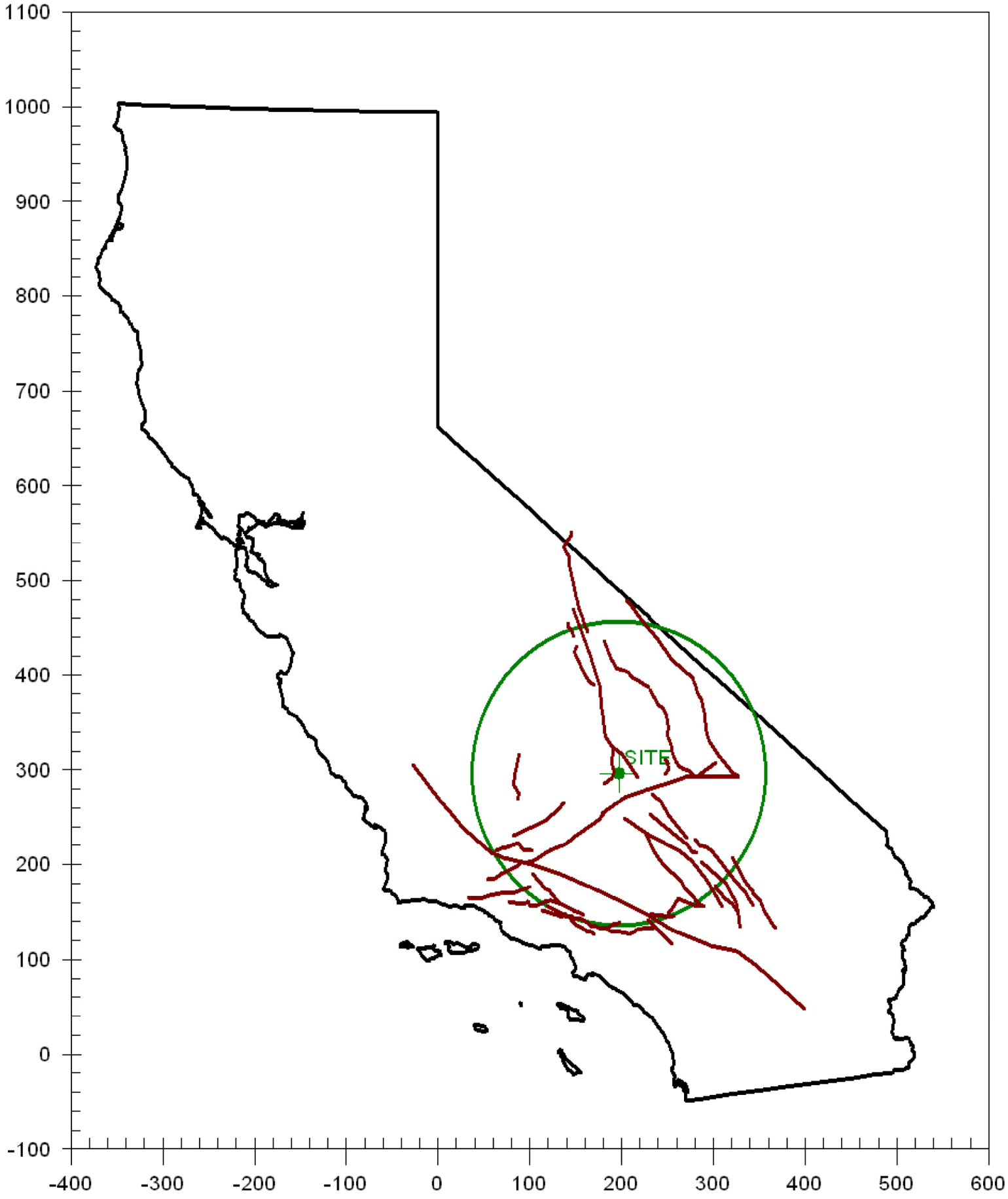
-END OF SEARCH- 49 FAULTS FOUND WITHIN THE SPECIFIED SEARCH RADIUS.

THE So. SIERRA NEVADA FAULT IS CLOSEST TO THE SITE.
IT IS ABOUT 0.0 MILES (0.0 km) AWAY.

LARGEST MAXIMUM-EARTHQUAKE SITE ACCELERATION: 0.8782 g

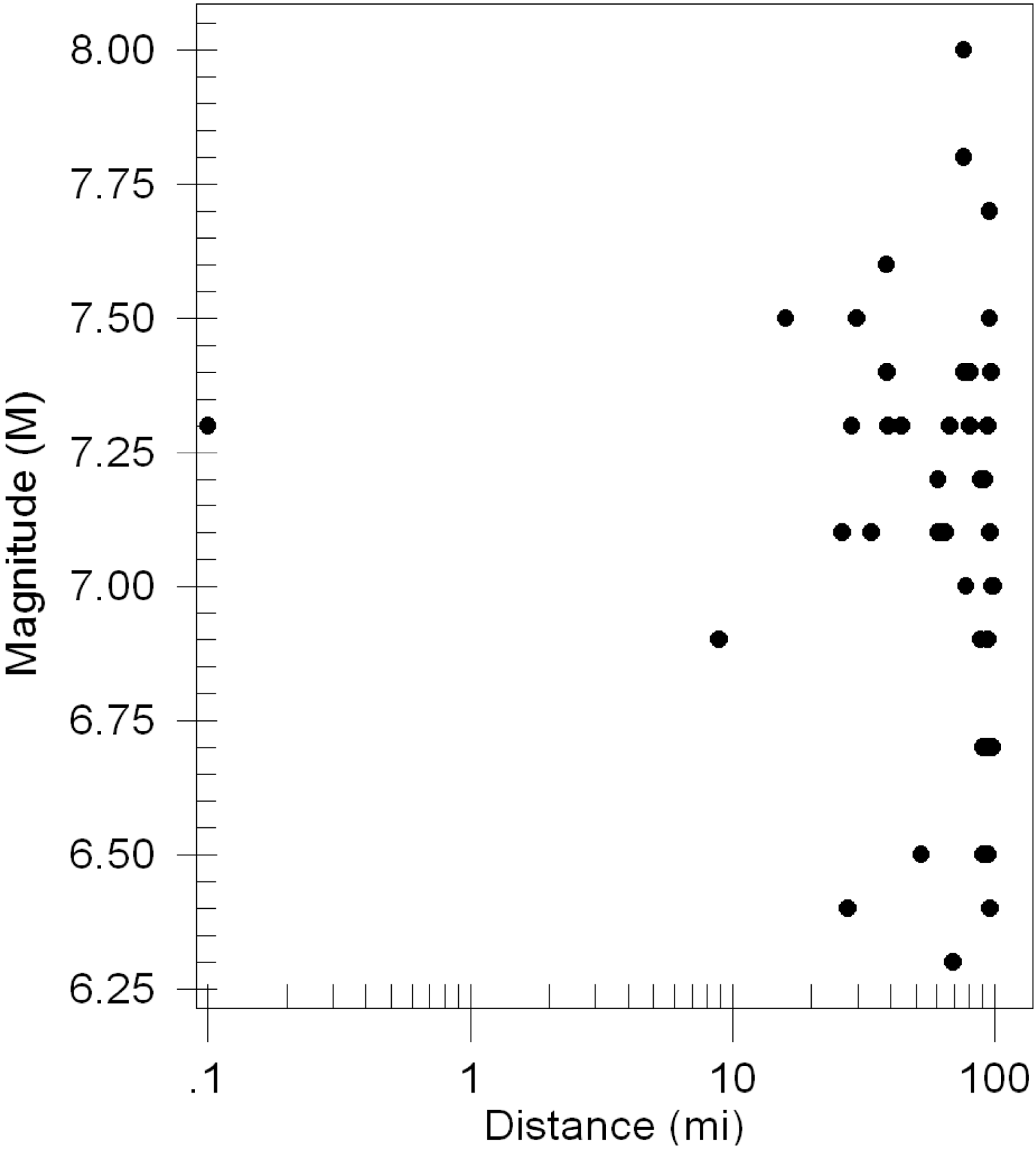
CALIFORNIA FAULT MAP

RB Inyokern Data Center



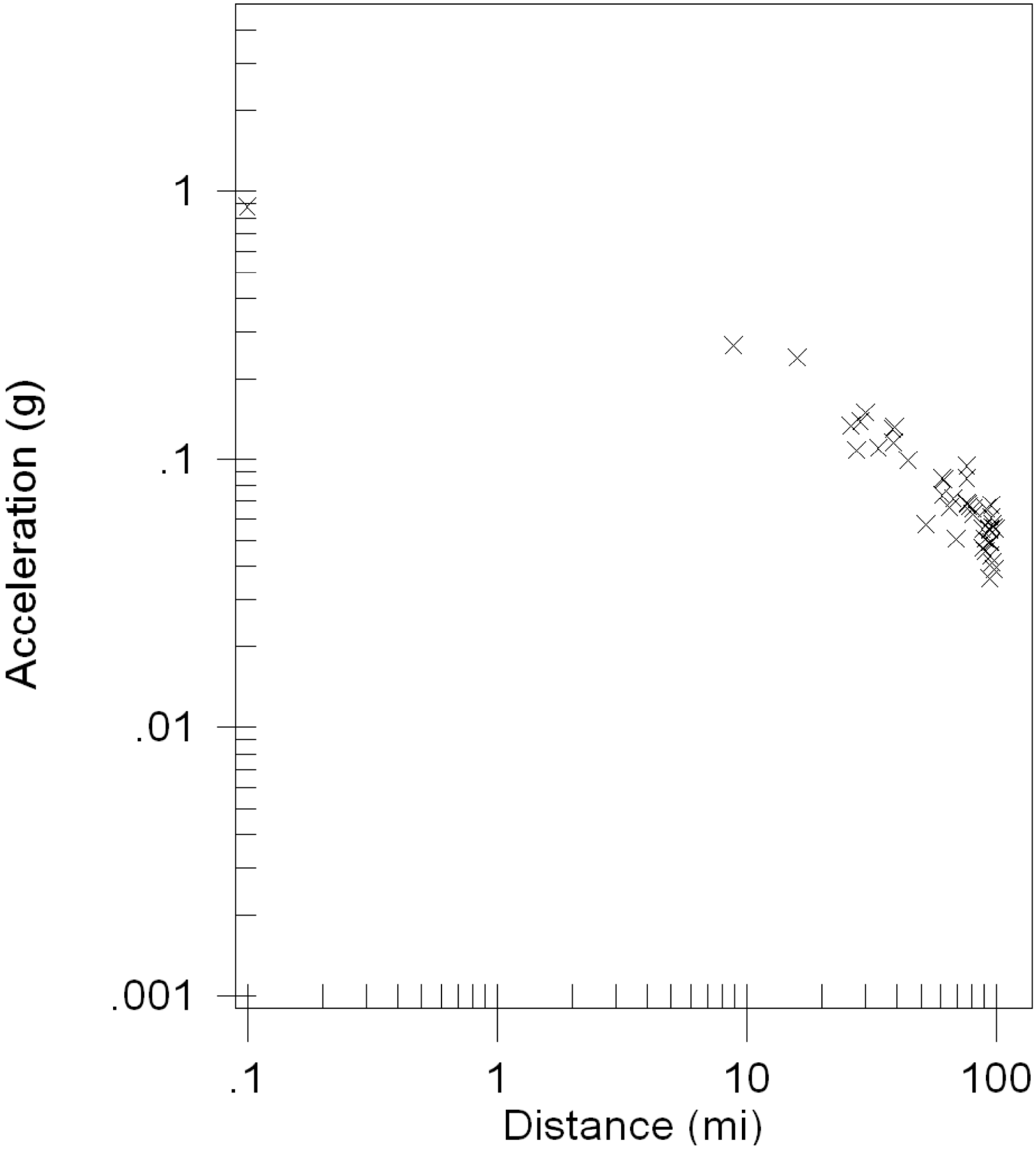
EARTHQUAKE MAGNITUDES & DISTANCES

RB Inyokern Data Center



MAXIMUM EARTHQUAKES

RB Inyokern Data Center



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*    E Q S E A R C H     *
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*     Version 3.00       *
*                        *
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ESTIMATION OF
PEAK ACCELERATION FROM
CALIFORNIA EARTHQUAKE CATALOGS

JOB NUMBER: 20852

DATE: 07-15-2026

JOB NAME: RB Inyokern Data Center

EARTHQUAKE-CATALOG-FILE NAME: ALLQUAKE.DAT

SITE COORDINATES:
SITE LATITUDE: 35.6510
SITE LONGITUDE: 117.8090

SEARCH DATES:
START DATE: 1800
END DATE: 2010

SEARCH RADIUS:
100.0 mi
160.9 km

ATTENUATION RELATION: 3) Boore et al. (1997) Horiz. - NEHRP D (250)
UNCERTAINTY (M=Median, S=Sigma): M Number of Sigmas: 0.0
ASSUMED SOURCE TYPE: DS [SS=Strike-slip, DS=Reverse-slip, BT=Blind-thrust]
SCOND: 0 Depth Source: A
Basement Depth: 5.00 km Campbell SSR: Campbell SHR:
COMPUTE PEAK HORIZONTAL ACCELERATION

MINIMUM DEPTH VALUE (km): 0.0

EARTHQUAKE SEARCH RESULTS

Page 1

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	35.7470	117.9080	03/18/1946	155042.6	4.4	5.30	0.142	VIII	8.6(13.9)
DMG	35.7140	117.9770	03/15/1946	191853.6	0.0	5.40	0.132	VIII	10.4(16.7)
GSP	35.7760	117.6620	08/17/1995	223959.0	5.0	5.40	0.119	VII	11.9(19.2)
GSP	35.7660	117.6490	01/07/1996	143253.1	5.0	5.20	0.107	VII	12.0(19.3)
DMG	35.7530	117.9860	03/15/1946	1321 0.9	0.0	5.20	0.106	VII	12.2(19.6)
GSB	35.7610	117.6390	09/20/1995	232736.3	5.0	6.10	0.170	VIII	12.2(19.6)
DMG	35.8310	117.7610	10/19/1961	5 943.9	-2.0	5.20	0.103	VII	12.7(20.5)
DMG	35.7510	118.0290	03/15/1946	215433.4	0.0	5.20	0.095	VII	14.1(22.7)
DMG	35.7450	118.0390	03/16/1946	94617.9	0.0	5.10	0.089	VII	14.4(23.2)
DMG	35.7250	118.0550	03/15/1946	134935.9	22.0	6.30	0.165	VIII	14.7(23.7)
DMG	35.7150	118.0740	03/15/1946	14 035.4	0.0	5.30	0.094	VII	15.5(24.9)
DMG	35.7780	118.0490	01/28/1961	81246.2	5.5	5.30	0.091	VII	16.1(25.8)
DMG	35.6310	117.5130	09/17/1938	1423 4.1	-2.0	5.00	0.076	VII	16.7(26.8)
GSP	36.0670	117.6380	03/06/1998	054740.3	1.0	5.20	0.053	VI	30.3(48.7)
GSP	36.0750	117.6500	11/27/1996	201724.1	1.0	5.30	0.056	VI	30.6(49.2)
GSP	36.0760	117.6180	03/07/1998	003646.8	1.0	5.00	0.047	VI	31.2(50.2)
GSP	35.2100	118.0660	07/11/1992	181416.2	10.0	5.70	0.064	VI	33.7(54.2)
DMG	35.3170	118.4940	07/25/1952	19 944.6	5.5	5.70	0.051	VI	44.9(72.2)
DMG	35.3110	118.4990	07/25/1952	1313 8.2	2.8	5.00	0.035	V	45.3(73.0)
DMG	35.3150	118.5160	07/25/1952	194323.7	11.2	5.70	0.050	VI	46.0(74.1)
DMG	35.3670	118.5830	07/23/1952	31923.0	0.0	5.00	0.034	V	47.7(76.8)
DMG	35.3670	118.5830	07/23/1952	03832.0	0.0	6.10	0.060	VI	47.7(76.8)
DMG	35.3330	118.6000	07/31/1952	12 9 9.0	0.0	5.80	0.050	VI	49.6(79.8)
DMG	35.2330	118.5330	07/21/1952	174244.0	0.0	5.10	0.034	V	49.9(80.3)
DMG	35.5000	118.7000	01/06/1905	1430 0.0	0.0	5.00	0.032	V	51.1(82.2)
DMG	36.0000	117.0000	11/04/1908	837 0.0	0.0	6.50	0.071	VI	51.3(82.5)
DMG	36.0000	117.0000	11/10/1916	911 0.0	0.0	5.50	0.042	VI	51.3(82.5)
DMG	36.4000	118.0000	07/05/1871	21 6 0.0	0.0	5.20	0.035	V	52.8(85.0)
DMG	35.6000	118.8000	06/30/1926	1331 0.0	0.0	5.00	0.030	V	55.7(89.7)
DMG	35.1830	118.6500	07/21/1952	151358.0	0.0	5.10	0.031	V	57.3(92.2)
DMG	35.1500	118.6330	01/27/1954	141948.0	0.0	5.00	0.029	V	57.9(93.1)
DMG	35.4000	118.8170	07/29/1952	8 146.0	0.0	5.10	0.030	V	59.2(95.3)
DMG	35.3000	118.8000	12/23/1905	2223 0.0	0.0	5.00	0.028	V	60.8(97.8)
DMG	35.3830	118.8500	07/29/1952	7 347.0	0.0	6.10	0.050	VI	61.4(98.7)
DMG	36.0800	118.8200	05/29/1915	646 0.0	0.0	5.00	0.027	V	63.9(102.8)
DMG	35.2170	118.8170	07/23/1952	1317 5.0	0.0	5.70	0.039	V	64.1(103.2)
DMG	35.1330	118.7670	07/21/1952	194122.0	0.0	5.50	0.035	V	64.7(104.1)
T-A	36.5800	118.0700	08/13/1882	0 0 0.0	0.0	5.00	0.026	V	65.8(105.8)
T-A	36.5800	118.0700	04/18/1872	0 0 0.0	0.0	5.00	0.026	V	65.8(105.8)
MGI	36.5800	118.0800	07/06/1917	11 1 0.0	0.0	5.70	0.038	V	65.9(106.0)
DMG	35.3330	118.9170	08/22/1952	224124.0	0.0	5.80	0.040	V	66.0(106.3)
MGI	36.6000	118.1000	05/17/1872	21 0 0.0	0.0	5.00	0.026	V	67.5(108.6)
PAS	34.9430	118.7430	06/10/1988	23 643.0	6.8	5.40	0.030	V	71.8(115.6)
GSP	34.9700	116.8190	03/18/1997	152447.7	1.0	5.10	0.026	V	72.9(117.4)
DMG	35.0000	118.8330	07/23/1952	181351.0	0.0	5.20	0.027	V	73.1(117.7)
DMG	35.0000	118.8330	07/23/1952	75319.0	0.0	5.40	0.030	V	73.1(117.7)
MGI	36.6000	118.4000	09/04/1868	0 0 0.0	0.0	5.00	0.024	V	73.3(118.0)
DMG	36.7000	118.1000	03/26/1872	1030 0.0	0.0	7.80	0.105	VII	74.2(119.4)
DMG	34.9500	118.8670	07/21/1952	121936.0	0.0	5.30	0.027	V	76.8(123.6)
DMG	36.7000	118.3000	08/17/1896	1130 0.0	0.0	5.90	0.037	V	77.4(124.6)
T-A	34.8300	118.7500	11/27/1852	0 0 0.0	0.0	7.00	0.067	VI	77.6(124.9)
T-A	34.9200	118.9200	01/20/1857	0 0 0.0	0.0	5.00	0.023	IV	80.4(129.4)
T-A	34.9200	118.9200	05/23/1857	0 0 0.0	0.0	5.00	0.023	IV	80.4(129.4)

EARTHQUAKE SEARCH RESULTS

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	34.9000	118.9000	10/23/1916	244 0.0	0.0	6.00	0.038	V	80.4(129.4)
DMG	34.9830	118.9830	05/23/1954	235243.0	0.0	5.10	0.024	IV	80.6(129.8)
GSP	35.1490	119.1040	05/28/1993	044740.6	21.0	5.20	0.025	V	80.7(129.9)
DMG	35.0000	119.0000	07/21/1952	12 531.0	0.0	6.40	0.047	VI	80.8(130.0)
DMG	35.0000	119.0000	02/16/1919	1557 0.0	0.0	5.00	0.023	IV	80.8(130.0)
DMG	34.5190	118.1980	08/23/1952	10 9 7.1	13.1	5.00	0.022	IV	81.2(130.7)
DMG	35.0000	119.0170	01/12/1954	233349.0	0.0	5.90	0.036	V	81.5(131.2)
DMG	35.0000	119.0170	07/21/1952	115214.0	0.0	7.70	0.093	VII	81.5(131.2)
DMG	35.0000	119.0330	07/21/1952	12 2 0.0	0.0	5.60	0.030	V	82.3(132.4)
DMG	34.9320	118.9760	03/01/1963	02557.9	13.9	5.00	0.022	IV	82.4(132.6)
DMG	34.9410	118.9870	11/15/1961	53855.5	10.7	5.00	0.022	IV	82.5(132.8)
DMG	34.9000	118.9500	08/01/1952	13 430.0	0.0	5.10	0.023	IV	82.6(132.9)
DMG	34.8670	118.9330	09/21/1941	1953 7.2	0.0	5.20	0.024	V	83.3(134.1)
T-A	36.8300	118.1700	07/12/1871	330 0.0	0.0	5.00	0.022	IV	83.8(134.9)
T-A	36.8300	118.1700	02/28/1895	825 0.0	0.0	5.00	0.022	IV	83.8(134.9)
DMG	34.9830	116.5500	04/10/1947	1558 6.0	0.0	6.20	0.041	V	84.6(136.1)
DMG	34.9670	116.5500	04/11/1947	747 0.0	0.0	5.00	0.022	IV	85.2(137.1)
DMG	34.9670	116.5500	04/10/1947	16 3 0.0	0.0	5.10	0.023	IV	85.2(137.1)
DMG	34.9500	116.5330	04/10/1947	171822.0	0.0	5.00	0.021	IV	86.7(139.5)
DMG	36.9000	118.1900	11/28/1929	1949 0.0	0.0	5.50	0.027	V	88.8(142.9)
DMG	34.3700	117.6500	12/08/1812	15 0 0.0	0.0	7.00	0.060	VI	88.9(143.1)
DMG	36.9000	118.2000	03/26/1872	14 6 0.0	0.0	6.50	0.046	VI	88.9(143.1)
T-A	36.1700	119.3200	07/25/1868	230 0.0	0.0	5.00	0.020	IV	91.8(147.7)
DMG	34.4110	118.4010	02/09/1971	14 1 8.0	8.0	5.80	0.031	V	91.9(147.9)
DMG	34.4110	118.4010	02/09/1971	141028.0	8.0	5.30	0.024	IV	91.9(147.9)
DMG	34.4110	118.4010	02/09/1971	14 041.8	8.4	6.40	0.043	VI	91.9(147.9)
DMG	34.4110	118.4010	02/09/1971	14 244.0	8.0	5.80	0.031	V	91.9(147.9)
DMG	34.8300	116.5200	09/26/1929	20 022.7	0.0	5.10	0.021	IV	92.2(148.3)
DMG	34.8000	119.1000	09/05/1883	1230 0.0	0.0	6.00	0.034	V	93.6(150.6)
DMG	34.7000	119.0000	10/23/1916	254 0.0	0.0	5.50	0.026	V	94.0(151.2)
DMG	34.3000	117.6000	07/30/1894	512 0.0	0.0	6.00	0.034	V	94.0(151.3)
DMG	34.3000	117.5000	07/22/1899	2032 0.0	0.0	6.50	0.044	VI	94.9(152.7)
MGI	37.0000	118.1700	12/08/1929	1245 0.0	0.0	5.30	0.023	IV	95.3(153.3)
MGI	37.0000	118.1700	12/02/1929	7 0 0.0	0.0	5.30	0.023	IV	95.3(153.3)
DMG	37.0000	118.2000	04/03/1872	1215 0.0	0.0	6.10	0.035	V	95.6(153.9)
PDP	34.8600	116.4100	10/22/1999	160848.0	1.0	5.00	0.020	IV	95.9(154.4)
GSP	34.2620	118.0020	06/28/1991	144354.5	11.0	5.40	0.024	V	96.5(155.3)
DMG	34.2700	117.5400	09/12/1970	143053.0	8.0	5.40	0.024	V	96.6(155.4)
PDP	34.8600	116.3900	10/21/1999	015738.0	4.0	5.00	0.020	IV	96.9(155.9)
GSB	37.0640	117.7770	05/18/1993	234853.9	3.0	5.20	0.022	IV	97.6(157.0)
DMG	34.7120	116.5030	09/25/1965	174344.1	10.6	5.20	0.022	IV	98.2(158.0)
PDP	34.8000	116.4100	10/21/1999	015435.0	1.0	5.00	0.019	IV	98.4(158.3)
DMG	37.0830	117.7500	02/11/1949	21 524.0	0.0	5.60	0.026	V	98.9(159.2)
GSP	34.3780	118.6180	01/19/1994	211144.9	11.0	5.10	0.020	IV	99.1(159.5)
DMG	37.0170	117.2500	06/13/1939	1715 0.0	0.0	5.00	0.019	IV	99.3(159.8)
GSP	34.3940	118.6690	06/26/1995	084028.9	13.0	5.00	0.019	IV	99.5(160.1)
DMG	34.3080	118.4540	02/09/1971	144346.7	6.2	5.20	0.021	IV	99.6(160.4)

****

-END OF SEARCH- 100 EARTHQUAKES FOUND WITHIN THE SPECIFIED SEARCH AREA.

TIME PERIOD OF SEARCH: 1800 TO 2010

LENGTH OF SEARCH TIME: 211 years

THE EARTHQUAKE CLOSEST TO THE SITE IS ABOUT 8.6 MILES (13.9 km) AWAY.

LARGEST EARTHQUAKE MAGNITUDE FOUND IN THE SEARCH RADIUS: 7.8

LARGEST EARTHQUAKE SITE ACCELERATION FROM THIS SEARCH: 0.170 g

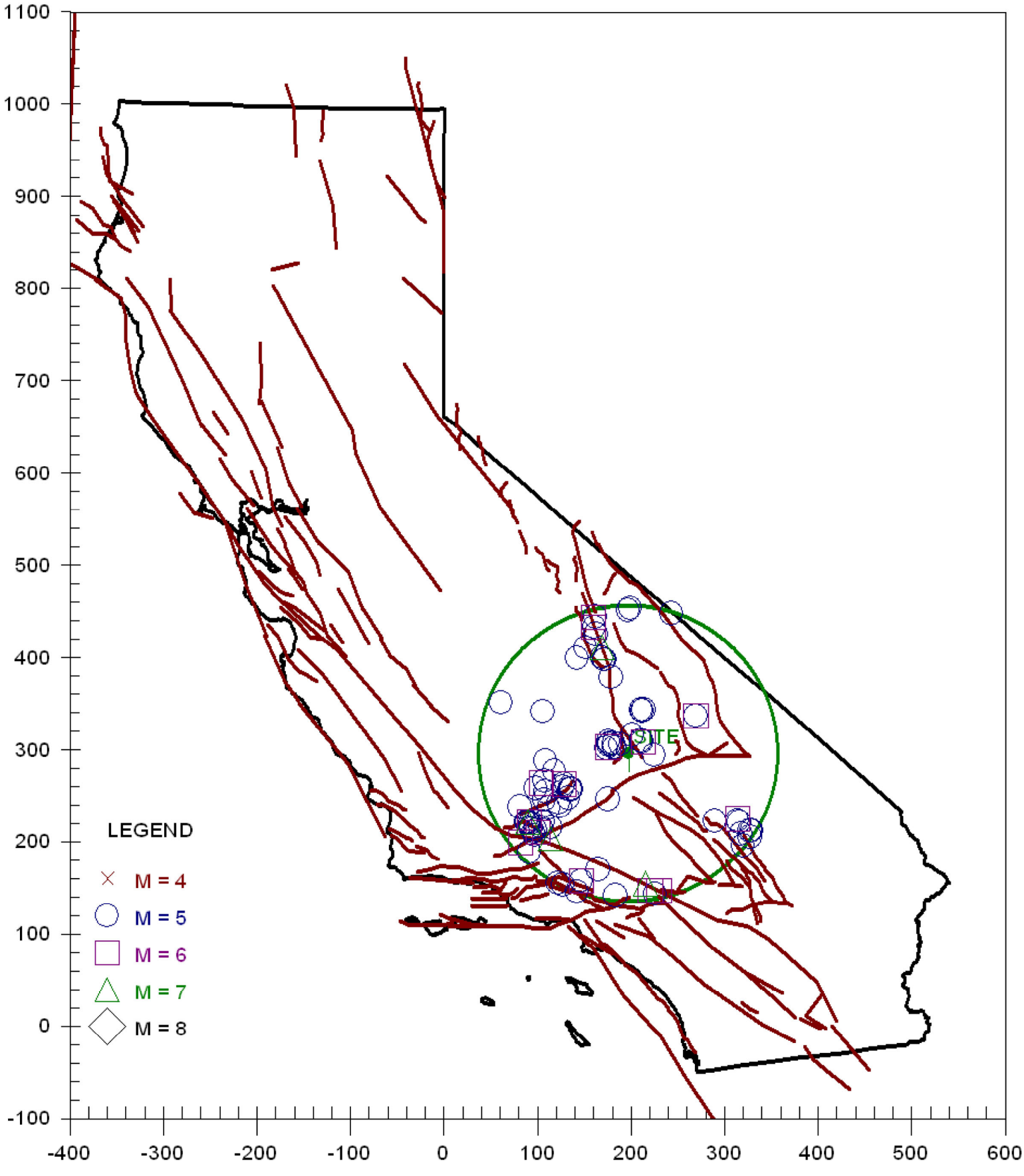
COEFFICIENTS FOR GUTENBERG & RICHTER RECURRENCE RELATION:
  a-value= 1.381
  b-value= 0.389
  beta-value= 0.896

TABLE OF MAGNITUDES AND EXCEEDANCES:

Earthquake Magnitude	Number of Times Exceeded	Cumulative No. / Year
4.0	100	0.47619
4.5	100	0.47619
5.0	100	0.47619
5.5	35	0.16667
6.0	18	0.08571
6.5	7	0.03333
7.0	4	0.01905
7.5	2	0.00952

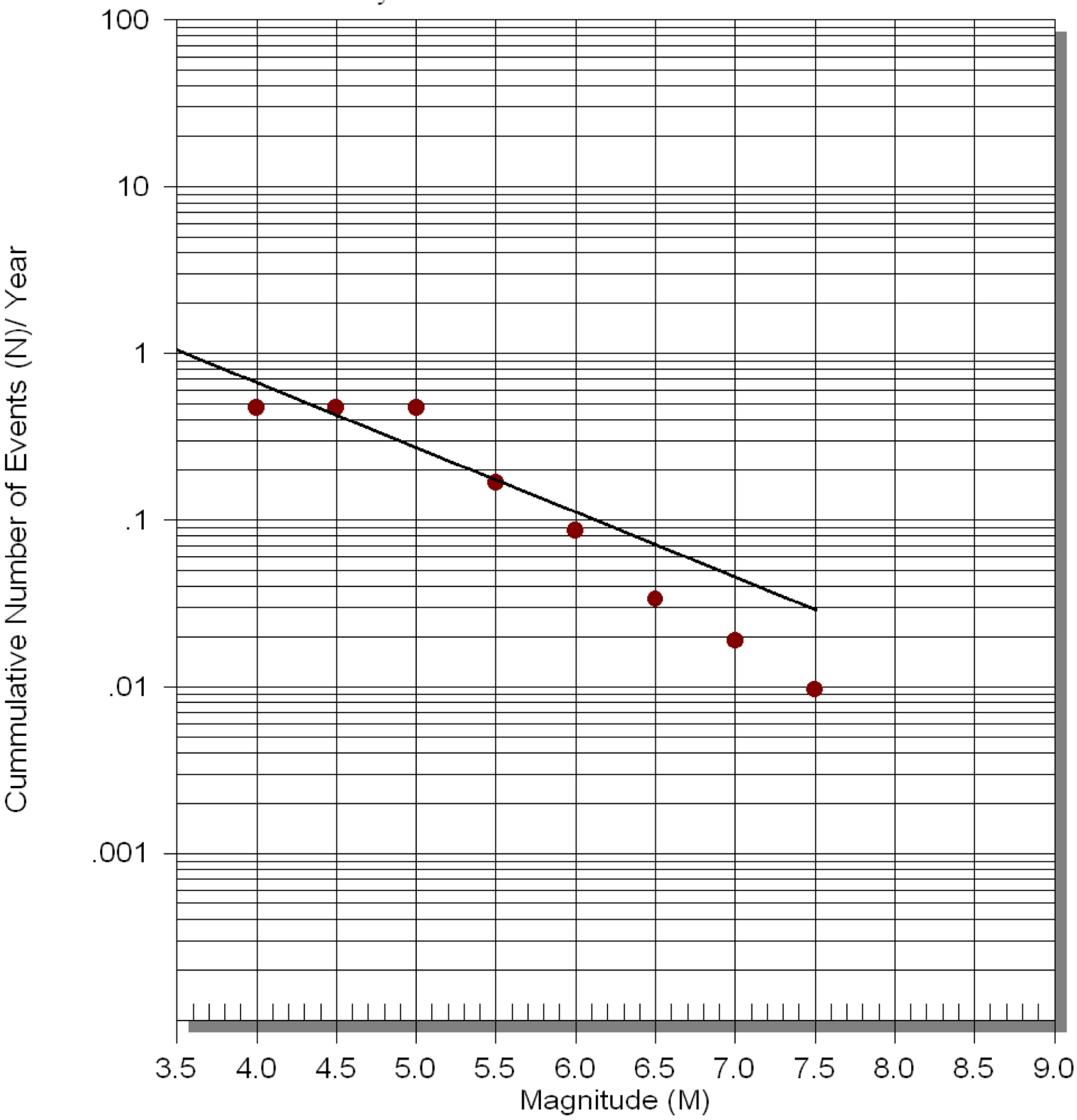
EARTHQUAKE EPICENTER MAP

RB Inyokern Data Center



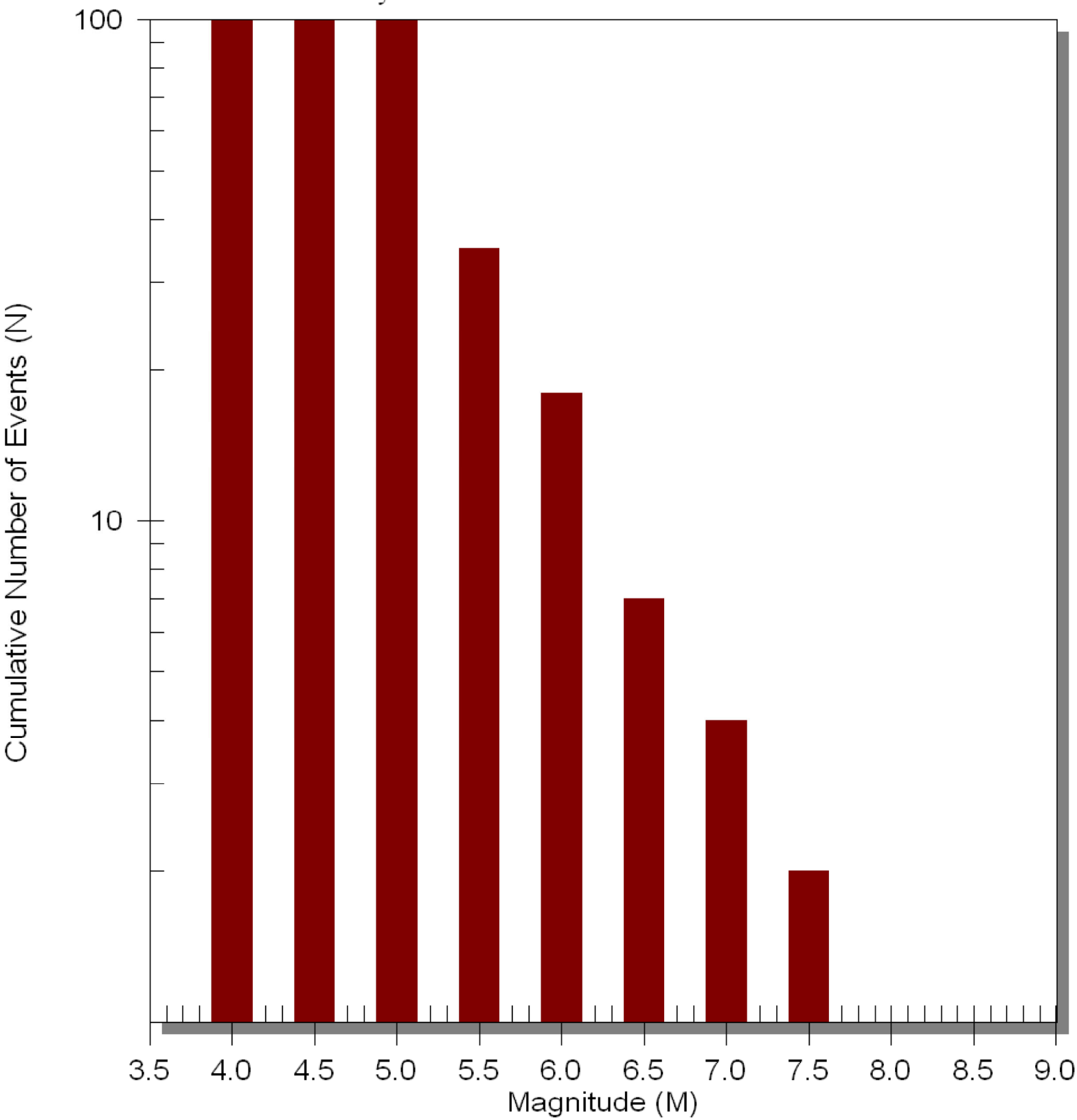
EARTHQUAKE RECURRENCE CURVE

RB Inyokern Data Center



Number of Earthquakes (N) Above Magnitude (M)

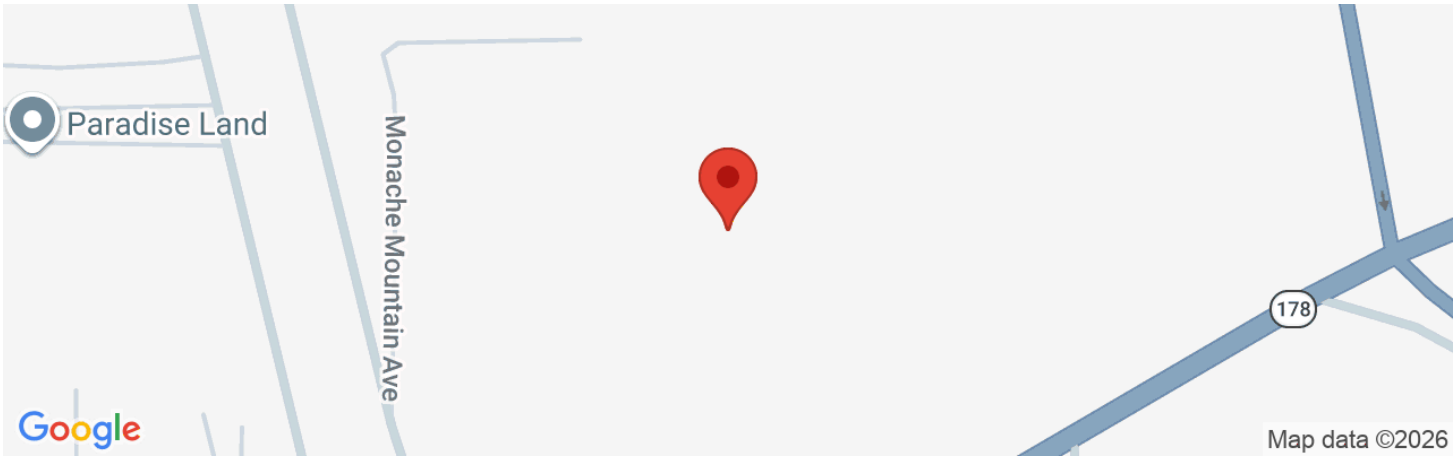
RB Inyokern Data Center



Announcement
USGS Issues have now been resolved.

20852 RB Inyokern Data Center

Latitude, Longitude: 35.650980, -117.809018



Date	7/20/2026, 8:42:11 AM
Design Code Reference Document	ASCE7-22
Risk Category	IV
Site Class	C

Type	Value	Description (Data)
S_S	1.69	The MCE_R spectral response acceleration at 0.2 seconds for Site Class BC, in units of g.
S_1	0.48	The MCE_R spectral response acceleration at 1 second for Site Class BC, in units of g.
S_{MS}	1.79	S_{MS} = 1.5 x S_{DS}, the Risk-Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class.
S_{M1}	0.69	S_{M1} = 1.5 x S_{D1}, the MCE_R spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class.
S_{DS}	1.19	The design spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class, in units of g.
S_{D1}	0.46	The design spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class, in units of g

Type	Value	Description (Data Contd.)
SDC	D	Seismic design category
PGA_M	0.71	PGA_M, the Geometric-Mean Maximum Considered Earthquake (MCE_G) peak ground acceleration for the user-specified Site Class, in units of g
T_S	0.384	T_S = S_{D1}/S_{DS}, in seconds, for construction of the two-period design spectrum
T_0	0.0768	T_0 = 0.2 x T_S, in seconds, for construction of the two-period design response spectrum
T_L	8	T_L, the long-period transition period, in seconds, for construction of the two-period design response spectrum

Type	Value	Description (Underlying Data and Metadata)
PGA_{uh}	0.71	Probabilistic uniform-hazard (2%-in-50-years), geometric-mean peak ground acceleration, in units of g.
PGA_{84th}	0.97	Deterministic 84th-percentile, geometric-mean peak ground acceleration (without deterministic lower limit), in units of g.
V_{S30}	530	The shear-wave velocity used for the user-specified Site Class, in units of m/s
Spatial Interpolation Method	linearloglinear	Identifier for spatial interpolation method used to obtain values for location of interest from underlying gridded values: "linearloglinear" for bilinear of natural logarithm of values.
PGA_{dFloor}	0.55	Deterministic lower limit peak ground acceleration (PGA_G) for the user-specified Site Class, in units of g.
riskTargetedSpectrum		Probabilistic risk-targeted, maximum direction response spectrum (for 1%-in-50-years collapse risk)
eightyFourthSpectrum		Deterministic 84^{th}-percentile, maximum-direction response spectrum (without deterministic lower limit)

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Multi Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.53	0.8
0.01	0.54	0.8
0.02	0.55	0.82
0.03	0.59	0.89
0.05	0.75	1.12
0.075	0.97	1.45
0.1	1.13	1.69
0.15	1.29	1.94
0.2	1.33	1.99
0.25	1.27	1.9
0.3	1.17	1.76
0.4	0.99	1.49
0.5	0.85	1.28
0.75	0.61	0.92
1	0.46	0.69
1.5	0.28	0.43
2	0.2	0.3
3	0.12	0.18
4	0.086	0.13
5	0.066	0.099
7.5	0.041	0.061
10	0.029	0.043

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Two Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.48	0.72
0.025	0.71	1.07
0.05	0.94	1.42
0.077	1.19	1.79
0.1	1.19	1.79
0.15	1.19	1.79
0.2	1.19	1.79
0.25	1.19	1.79
0.3	1.19	1.79
0.35	1.19	1.79
0.38	1.19	1.79
0.4	1.15	1.72
0.45	1.02	1.53
0.5	0.92	1.38
0.55	0.83	1.25
0.6	0.76	1.15
0.65	0.71	1.06
0.7	0.66	0.98
0.75	0.61	0.92
0.8	0.57	0.86
0.85	0.54	0.81
0.9	0.51	0.76
0.95	0.48	0.72

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
1	0.46	0.69
1.05	0.44	0.66
1.1	0.42	0.63
1.15	0.4	0.6
1.2	0.38	0.57
1.25	0.37	0.55
1.3	0.35	0.53
1.35	0.34	0.51
1.4	0.33	0.49
1.45	0.32	0.47
1.5	0.31	0.46
1.55	0.3	0.44
1.6	0.29	0.43
1.65	0.28	0.42
1.7	0.27	0.4
1.75	0.26	0.39
1.8	0.25	0.38
1.85	0.25	0.37
1.9	0.24	0.36
1.95	0.24	0.35
2	0.23	0.34
2.05	0.22	0.34
2.1	0.22	0.33
2.15	0.21	0.32
2.2	0.21	0.31
2.25	0.2	0.31
2.3	0.2	0.3
2.35	0.2	0.29
2.4	0.19	0.29
2.45	0.19	0.28
2.5	0.18	0.28
2.55	0.18	0.27
2.6	0.18	0.26
2.65	0.17	0.26
2.7	0.17	0.25
2.75	0.17	0.25
2.8	0.16	0.25
2.85	0.16	0.24
2.9	0.16	0.24
2.95	0.16	0.23
3	0.15	0.23
3.05	0.15	0.23
3.1	0.15	0.22
3.15	0.15	0.22
3.2	0.14	0.21
3.25	0.14	0.21
3.3	0.14	0.21
3.35	0.14	0.21
3.4	0.13	0.2
3.45	0.13	0.2

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
3.5	0.13	0.2
3.55	0.13	0.19
3.6	0.13	0.19
3.65	0.13	0.19
3.7	0.12	0.19
3.75	0.12	0.18
3.8	0.12	0.18
3.85	0.12	0.18
3.9	0.12	0.18
3.95	0.12	0.17
4	0.11	0.17
4.05	0.11	0.17
4.1	0.11	0.17
4.15	0.11	0.17
4.2	0.11	0.16
4.25	0.11	0.16
4.3	0.11	0.16
4.35	0.11	0.16
4.4	0.1	0.16
4.45	0.1	0.15
4.5	0.1	0.15
4.55	0.1	0.15
4.6	0.1	0.15
4.65	0.099	0.15
4.7	0.098	0.15
4.75	0.097	0.14
4.8	0.096	0.14
4.85	0.095	0.14
4.9	0.094	0.14
4.95	0.093	0.14
5	0.092	0.14
5.05	0.091	0.14
5.1	0.09	0.13
5.15	0.089	0.13
5.2	0.088	0.13
5.25	0.087	0.13
5.3	0.087	0.13
5.35	0.086	0.13
5.4	0.085	0.13
5.45	0.084	0.13
5.5	0.083	0.13
5.55	0.083	0.12
5.6	0.082	0.12
5.65	0.081	0.12
5.7	0.08	0.12
5.75	0.08	0.12
5.8	0.079	0.12
5.85	0.078	0.12
5.9	0.078	0.12
5.95	0.077	0.12

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
6	0.076	0.11
6.05	0.076	0.11
6.1	0.075	0.11
6.15	0.075	0.11
6.2	0.074	0.11
6.25	0.073	0.11
6.3	0.073	0.11
6.35	0.072	0.11
6.4	0.072	0.11
6.45	0.071	0.11
6.5	0.071	0.11
6.55	0.07	0.11
6.6	0.069	0.1
6.65	0.069	0.1
6.7	0.068	0.1
6.75	0.068	0.1
6.8	0.067	0.1
6.85	0.067	0.1
6.9	0.066	0.1
6.95	0.066	0.099
7	0.066	0.098
7.05	0.065	0.098
7.1	0.065	0.097
7.15	0.064	0.096
7.2	0.064	0.096
7.25	0.063	0.095
7.3	0.063	0.094
7.35	0.062	0.094
7.4	0.062	0.093
7.45	0.062	0.092
7.5	0.061	0.092
7.55	0.061	0.091
7.6	0.06	0.091
7.65	0.06	0.09
7.7	0.06	0.089
7.75	0.059	0.089
7.8	0.059	0.088
7.85	0.058	0.088
7.9	0.058	0.087
7.95	0.058	0.087
8	0.057	0.086
8.05	0.057	0.085
8.1	0.056	0.084
8.15	0.055	0.083
8.2	0.055	0.082
8.25	0.054	0.081
8.3	0.053	0.08
8.35	0.053	0.079
8.4	0.052	0.078
8.45	0.051	0.077

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
8.5	0.051	0.076
8.55	0.05	0.075
8.6	0.05	0.074
8.65	0.049	0.074
8.7	0.048	0.073
8.75	0.048	0.072
8.8	0.047	0.071
8.85	0.047	0.07
8.9	0.046	0.069
8.95	0.046	0.069
9	0.045	0.068

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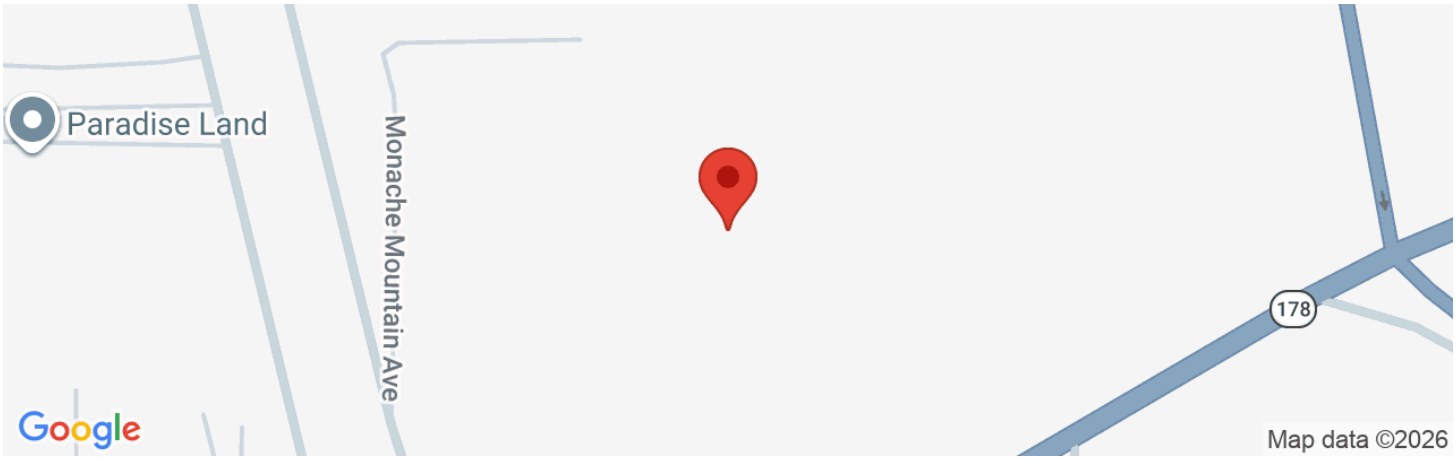
Probabilistic & Deterministic

Period T(s)	Risk Targeted Spectrum Ordinates (g)	84^{th} Spectrum Ordinates(g)
0	0.8	1.16
0.01	0.8	1.17
0.02	0.82	1.2
0.03	0.89	1.29
0.05	1.12	1.57
0.075	1.45	1.9
0.1	1.69	2.17
0.15	1.94	2.57
0.2	1.99	2.9
0.25	1.9	2.9
0.3	1.76	2.73
0.4	1.49	2.38
0.5	1.28	2.07
0.75	0.92	1.56
1	0.69	1.18
1.5	0.43	0.75
2	0.3	0.53
3	0.18	0.32
4	0.13	0.22
5	0.099	0.16
7.5	0.061	0.084
10	0.043	0.054

Announcement
USGS Issues have now been resolved.

20852 RB Inyokern Data Center

Latitude, Longitude: 35.650980, -117.809018



Date	7/17/2026, 7:36:27 AM
Design Code Reference Document	ASCE7-22
Risk Category	IV
Site Class	CD

Type	Value	Description (Data)
S_S	1.69	The MCE_R spectral response acceleration at 0.2 seconds for Site Class BC, in units of g.
S_1	0.48	The MCE_R spectral response acceleration at 1 second for Site Class BC, in units of g.
S_{MS}	1.88	S_{MS} = 1.5 x S_{DS}, the Risk-Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class.
S_{M1}	0.96	S_{M1} = 1.5 x S_{D1}, the MCE_R spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class.
S_{DS}	1.26	The design spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class, in units of g.
S_{D1}	0.64	The design spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class, in units of g

Type	Value	Description (Data Contd.)
SDC	D	Seismic design category
PGA_M	0.75	PGA_M, the Geometric-Mean Maximum Considered Earthquake (MCE_G) peak ground acceleration for the user-specified Site Class, in units of g
T_S	0.508	T_S = S_{D1}/S_{DS}, in seconds, for construction of the two-period design spectrum
T_0	0.102	T_0 = 0.2 x T_S, in seconds, for construction of the two-period design response spectrum
T_L	8	T_L, the long-period transition period, in seconds, for construction of the two-period design response spectrum

Type	Value	Description (Underlying Data and Metadata)
PGA_{uh}	0.75	Probabilistic uniform-hazard (2%-in-50-years), geometric-mean peak ground acceleration, in units of g.
PGA_{84th}	0.93	Deterministic 84th-percentile, geometric-mean peak ground acceleration (without deterministic lower limit), in units of g.
V_{S30}	365	The shear-wave velocity used for the user-specified Site Class, in units of m/s
Spatial Interpolation Method	linearloglinear	Identifier for spatial interpolation method used to obtain values for location of interest from underlying gridded values: "linearloglinear" for bilinear of natural logarithm of values.
PGA_{dFloor}	0.56	Deterministic lower limit peak ground acceleration (PGA_G) for the user-specified Site Class, in units of g.
riskTargetedSpectrum		Probabilistic risk-targeted, maximum direction response spectrum (for 1%-in-50-years collapse risk)
eightyFourthSpectrum		Deterministic 84^{th}-percentile, maximum-direction response spectrum (without deterministic lower limit)

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Multi Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.57	0.85
0.01	0.57	0.86
0.02	0.58	0.87
0.03	0.61	0.91
0.05	0.73	1.1
0.075	0.93	1.39
0.1	1.1	1.64
0.15	1.29	1.93
0.2	1.38	2.07
0.25	1.4	2.09
0.3	1.37	2.06
0.4	1.24	1.86
0.5	1.11	1.66
0.75	0.83	1.24
1	0.64	0.96
1.5	0.41	0.61
2	0.29	0.43
3	0.18	0.27
4	0.12	0.18
5	0.092	0.14
7.5	0.055	0.082
10	0.038	0.057

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Two Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.5	0.75
0.025	0.69	1.03
0.05	0.87	1.31
0.1	1.26	1.88
0.15	1.26	1.88
0.2	1.26	1.88
0.25	1.26	1.88
0.3	1.26	1.88
0.35	1.26	1.88
0.4	1.26	1.88
0.45	1.26	1.88
0.5	1.26	1.88
0.51	1.26	1.88
0.55	1.16	1.74
0.6	1.06	1.59
0.65	0.98	1.47
0.7	0.91	1.37
0.75	0.85	1.28
0.8	0.8	1.2
0.85	0.75	1.13
0.9	0.71	1.06
0.95	0.67	1.01
1	0.64	0.96

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
1.05	0.61	0.91
1.1	0.58	0.87
1.15	0.55	0.83
1.2	0.53	0.8
1.25	0.51	0.77
1.3	0.49	0.74
1.35	0.47	0.71
1.4	0.46	0.68
1.45	0.44	0.66
1.5	0.43	0.64
1.55	0.41	0.62
1.6	0.4	0.6
1.65	0.39	0.58
1.7	0.38	0.56
1.75	0.36	0.55
1.8	0.35	0.53
1.85	0.34	0.52
1.9	0.34	0.5
1.95	0.33	0.49
2	0.32	0.48
2.05	0.31	0.47
2.1	0.3	0.46
2.15	0.3	0.44
2.2	0.29	0.43
2.25	0.28	0.43
2.3	0.28	0.42
2.35	0.27	0.41
2.4	0.27	0.4
2.45	0.26	0.39
2.5	0.26	0.38
2.55	0.25	0.38
2.6	0.25	0.37
2.65	0.24	0.36
2.7	0.24	0.35
2.75	0.23	0.35
2.8	0.23	0.34
2.85	0.22	0.34
2.9	0.22	0.33
2.95	0.22	0.32
3	0.21	0.32
3.05	0.21	0.31
3.1	0.21	0.31
3.15	0.2	0.3
3.2	0.2	0.3
3.25	0.2	0.29
3.3	0.19	0.29
3.35	0.19	0.29
3.4	0.19	0.28
3.45	0.18	0.28
3.5	0.18	0.27

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
3.55	0.18	0.27
3.6	0.18	0.27
3.65	0.17	0.26
3.7	0.17	0.26
3.75	0.17	0.26
3.8	0.17	0.25
3.85	0.17	0.25
3.9	0.16	0.25
3.95	0.16	0.24
4	0.16	0.24
4.05	0.16	0.24
4.1	0.16	0.23
4.15	0.15	0.23
4.2	0.15	0.23
4.25	0.15	0.23
4.3	0.15	0.22
4.35	0.15	0.22
4.4	0.14	0.22
4.45	0.14	0.21
4.5	0.14	0.21
4.55	0.14	0.21
4.6	0.14	0.21
4.65	0.14	0.21
4.7	0.14	0.2
4.75	0.13	0.2
4.8	0.13	0.2
4.85	0.13	0.2
4.9	0.13	0.2
4.95	0.13	0.19
5	0.13	0.19
5.05	0.13	0.19
5.1	0.13	0.19
5.15	0.12	0.19
5.2	0.12	0.18
5.25	0.12	0.18
5.3	0.12	0.18
5.35	0.12	0.18
5.4	0.12	0.18
5.45	0.12	0.18
5.5	0.12	0.17
5.55	0.11	0.17
5.6	0.11	0.17
5.65	0.11	0.17
5.7	0.11	0.17
5.75	0.11	0.17
5.8	0.11	0.16
5.85	0.11	0.16
5.9	0.11	0.16
5.95	0.11	0.16
6	0.11	0.16

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
6.05	0.11	0.16
6.1	0.1	0.16
6.15	0.1	0.16
6.2	0.1	0.15
6.25	0.1	0.15
6.3	0.1	0.15
6.35	0.1	0.15
6.4	0.1	0.15
6.45	0.099	0.15
6.5	0.098	0.15
6.55	0.097	0.15
6.6	0.097	0.14
6.65	0.096	0.14
6.7	0.095	0.14
6.75	0.094	0.14
6.8	0.094	0.14
6.85	0.093	0.14
6.9	0.092	0.14
6.95	0.092	0.14
7	0.091	0.14
7.05	0.09	0.14
7.1	0.09	0.13
7.15	0.089	0.13
7.2	0.089	0.13
7.25	0.088	0.13
7.3	0.087	0.13
7.35	0.087	0.13
7.4	0.086	0.13
7.45	0.086	0.13
7.5	0.085	0.13
7.55	0.084	0.13
7.6	0.084	0.13
7.65	0.083	0.13
7.7	0.083	0.12
7.75	0.082	0.12
7.8	0.082	0.12
7.85	0.081	0.12
7.9	0.081	0.12
7.95	0.08	0.12
8	0.08	0.12
8.05	0.079	0.12
8.1	0.078	0.12
8.15	0.077	0.12
8.2	0.076	0.11
8.25	0.075	0.11
8.3	0.074	0.11
8.35	0.073	0.11
8.4	0.072	0.11
8.45	0.071	0.11
8.5	0.071	0.11

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
8.55	0.07	0.1
8.6	0.069	0.1
8.65	0.068	0.1
8.7	0.067	0.1
8.75	0.067	0.1
8.8	0.066	0.099
8.85	0.065	0.098
8.9	0.064	0.097
8.95	0.064	0.096
9	0.063	0.094

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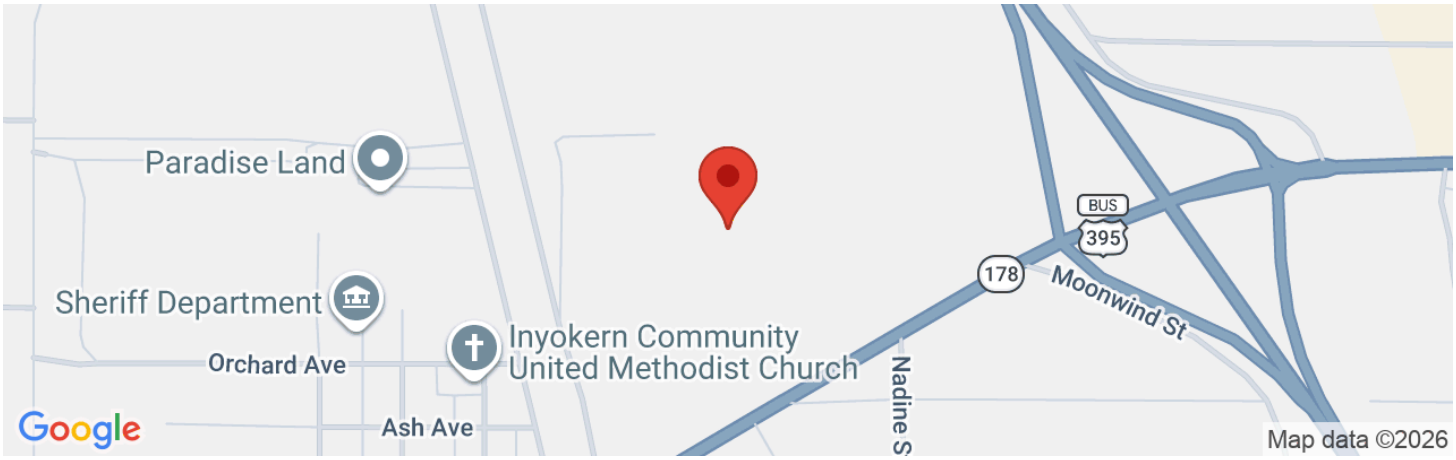
Probabilistic & Deterministic

Period T(s)	Risk Targeted Spectrum Ordinates (g)	84^{th} Spectrum Ordinates(g)
0	0.85	1.12
0.01	0.86	1.13
0.02	0.87	1.14
0.03	0.91	1.18
0.05	1.1	1.35
0.075	1.39	1.59
0.1	1.64	1.81
0.15	1.93	2.19
0.2	2.07	2.6
0.25	2.09	2.87
0.3	2.06	3
0.4	1.86	2.89
0.5	1.66	2.62
0.75	1.24	2.08
1	0.96	1.62
1.5	0.61	1.06
2	0.43	0.76
3	0.27	0.47
4	0.18	0.32
5	0.14	0.23
7.5	0.082	0.11
10	0.057	0.07

Announcement
USGS Issues have now been resolved.

20852 RB Inyokern Data Center

Latitude, Longitude: 35.650980, -117.809018



Date	7/16/2026, 4:53:19 PM
Design Code Reference Document	ASCE7-22
Risk Category	IV
Site Class	D

Type	Value	Description (Data)
S_S	1.69	The MCE_R spectral response acceleration at 0.2 seconds for Site Class BC, in units of g.
S_1	0.48	The MCE_R spectral response acceleration at 1 second for Site Class BC, in units of g.
S_{MS}	1.9	S_{MS} = 1.5 x S_{DS}, the Risk-Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class.
S_{M1}	1.19	S_{M1} = 1.5 x S_{D1}, the MCE_R spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class.
S_{DS}	1.27	The design spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class, in units of g.
S_{D1}	0.79	The design spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class, in units of g

Type	Value	Description (Data Contd.)
SDC	D	Seismic design category
PGA_M	0.72	PGA_M, the Geometric-Mean Maximum Considered Earthquake (MCE_G) peak ground acceleration for the user-specified Site Class, in units of g
T_S	0.626	T_S = S_{D1}/S_{DS}, in seconds, for construction of the two-period design spectrum
T_0	0.125	T_0 = 0.2 x T_S, in seconds, for construction of the two-period design response spectrum
T_L	8	T_L, the long-period transition period, in seconds, for construction of the two-period design response spectrum

Type	Value	Description (Underlying Data and Metadata)
PGA_{uh}	0.72	Probabilistic uniform-hazard (2%-in-50-years), geometric-mean peak ground acceleration, in units of g.
PGA_{84th}	0.82	Deterministic 84th-percentile, geometric-mean peak ground acceleration (without deterministic lower limit), in units of g.
V_{S30}	260	The shear-wave velocity used for the user-specified Site Class, in units of m/s
Spatial Interpolation Method	linearloglinear	Identifier for spatial interpolation method used to obtain values for location of interest from underlying gridded values: "linearloglinear" for bilinear of natural logarithm of values.
PGA_{dFloor}	0.53	Deterministic lower limit peak ground acceleration (PGA_G) for the user-specified Site Class, in units of g.
riskTargetedSpectrum		Probabilistic risk-targeted, maximum direction response spectrum (for 1%-in-50-years collapse risk)
eightyFourthSpectrum		Deterministic 84^{th}-percentile, maximum-direction response spectrum (without deterministic lower limit)

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Multi Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.56	0.84
0.01	0.56	0.85
0.02	0.57	0.85
0.03	0.58	0.88
0.05	0.67	1.01
0.075	0.83	1.25
0.1	0.94	1.41
0.15	1.12	1.68
0.2	1.32	1.98
0.25	1.38	2.07
0.3	1.41	2.11
0.4	1.34	2.02
0.5	1.25	1.88
0.75	0.98	1.47
1	0.79	1.19
1.5	0.53	0.8
2	0.39	0.59
3	0.25	0.37
4	0.17	0.25
5	0.12	0.19
7.5	0.072	0.11
10	0.049	0.073

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Two Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.51	0.76
0.025	0.66	0.99
0.05	0.81	1.21
0.1	1.11	1.67
0.13	1.27	1.9
0.15	1.27	1.9
0.2	1.27	1.9
0.25	1.27	1.9
0.3	1.27	1.9
0.35	1.27	1.9
0.4	1.27	1.9
0.45	1.27	1.9
0.5	1.27	1.9
0.55	1.27	1.9
0.6	1.27	1.9
0.63	1.27	1.9
0.65	1.22	1.83
0.7	1.13	1.7
0.75	1.06	1.59
0.8	0.99	1.49
0.85	0.93	1.4
0.9	0.88	1.32
0.95	0.83	1.25

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
1	0.79	1.19
1.05	0.76	1.13
1.1	0.72	1.08
1.15	0.69	1.03
1.2	0.66	0.99
1.25	0.63	0.95
1.3	0.61	0.92
1.35	0.59	0.88
1.4	0.57	0.85
1.45	0.55	0.82
1.5	0.53	0.79
1.55	0.51	0.77
1.6	0.5	0.74
1.65	0.48	0.72
1.7	0.47	0.7
1.75	0.45	0.68
1.8	0.44	0.66
1.85	0.43	0.64
1.9	0.42	0.63
1.95	0.41	0.61
2	0.4	0.59
2.05	0.39	0.58
2.1	0.38	0.57
2.15	0.37	0.55
2.2	0.36	0.54
2.25	0.35	0.53
2.3	0.34	0.52
2.35	0.34	0.51
2.4	0.33	0.5
2.45	0.32	0.49
2.5	0.32	0.48
2.55	0.31	0.47
2.6	0.31	0.46
2.65	0.3	0.45
2.7	0.29	0.44
2.75	0.29	0.43
2.8	0.28	0.42
2.85	0.28	0.42
2.9	0.27	0.41
2.95	0.27	0.4
3	0.26	0.4
3.05	0.26	0.39
3.1	0.26	0.38
3.15	0.25	0.38
3.2	0.25	0.37
3.25	0.24	0.37
3.3	0.24	0.36
3.35	0.24	0.36
3.4	0.23	0.35
3.45	0.23	0.34

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
3.5	0.23	0.34
3.55	0.22	0.34
3.6	0.22	0.33
3.65	0.22	0.33
3.7	0.21	0.32
3.75	0.21	0.32
3.8	0.21	0.31
3.85	0.21	0.31
3.9	0.2	0.31
3.95	0.2	0.3
4	0.2	0.3
4.05	0.2	0.29
4.1	0.19	0.29
4.15	0.19	0.29
4.2	0.19	0.28
4.25	0.19	0.28
4.3	0.18	0.28
4.35	0.18	0.27
4.4	0.18	0.27
4.45	0.18	0.27
4.5	0.18	0.26
4.55	0.17	0.26
4.6	0.17	0.26
4.65	0.17	0.26
4.7	0.17	0.25
4.75	0.17	0.25
4.8	0.17	0.25
4.85	0.16	0.25
4.9	0.16	0.24
4.95	0.16	0.24
5	0.16	0.24
5.05	0.16	0.24
5.1	0.16	0.23
5.15	0.15	0.23
5.2	0.15	0.23
5.25	0.15	0.23
5.3	0.15	0.22
5.35	0.15	0.22
5.4	0.15	0.22
5.45	0.15	0.22
5.5	0.14	0.22
5.55	0.14	0.21
5.6	0.14	0.21
5.65	0.14	0.21
5.7	0.14	0.21
5.75	0.14	0.21
5.8	0.14	0.21
5.85	0.14	0.2
5.9	0.13	0.2
5.95	0.13	0.2

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
6	0.13	0.2
6.05	0.13	0.2
6.1	0.13	0.2
6.15	0.13	0.19
6.2	0.13	0.19
6.25	0.13	0.19
6.3	0.13	0.19
6.35	0.12	0.19
6.4	0.12	0.19
6.45	0.12	0.18
6.5	0.12	0.18
6.55	0.12	0.18
6.6	0.12	0.18
6.65	0.12	0.18
6.7	0.12	0.18
6.75	0.12	0.18
6.8	0.12	0.17
6.85	0.12	0.17
6.9	0.11	0.17
6.95	0.11	0.17
7	0.11	0.17
7.05	0.11	0.17
7.1	0.11	0.17
7.15	0.11	0.17
7.2	0.11	0.17
7.25	0.11	0.16
7.3	0.11	0.16
7.35	0.11	0.16
7.4	0.11	0.16
7.45	0.11	0.16
7.5	0.11	0.16
7.55	0.11	0.16
7.6	0.1	0.16
7.65	0.1	0.16
7.7	0.1	0.15
7.75	0.1	0.15
7.8	0.1	0.15
7.85	0.1	0.15
7.9	0.1	0.15
7.95	0.1	0.15
8	0.099	0.15
8.05	0.098	0.15
8.1	0.097	0.15
8.15	0.096	0.14
8.2	0.094	0.14
8.25	0.093	0.14
8.3	0.092	0.14
8.35	0.091	0.14
8.4	0.09	0.13
8.45	0.089	0.13

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
8.5	0.088	0.13
8.55	0.087	0.13
8.6	0.086	0.13
8.65	0.085	0.13
8.7	0.084	0.13
8.75	0.083	0.12
8.8	0.082	0.12
8.85	0.081	0.12
8.9	0.08	0.12
8.95	0.079	0.12
9	0.078	0.12

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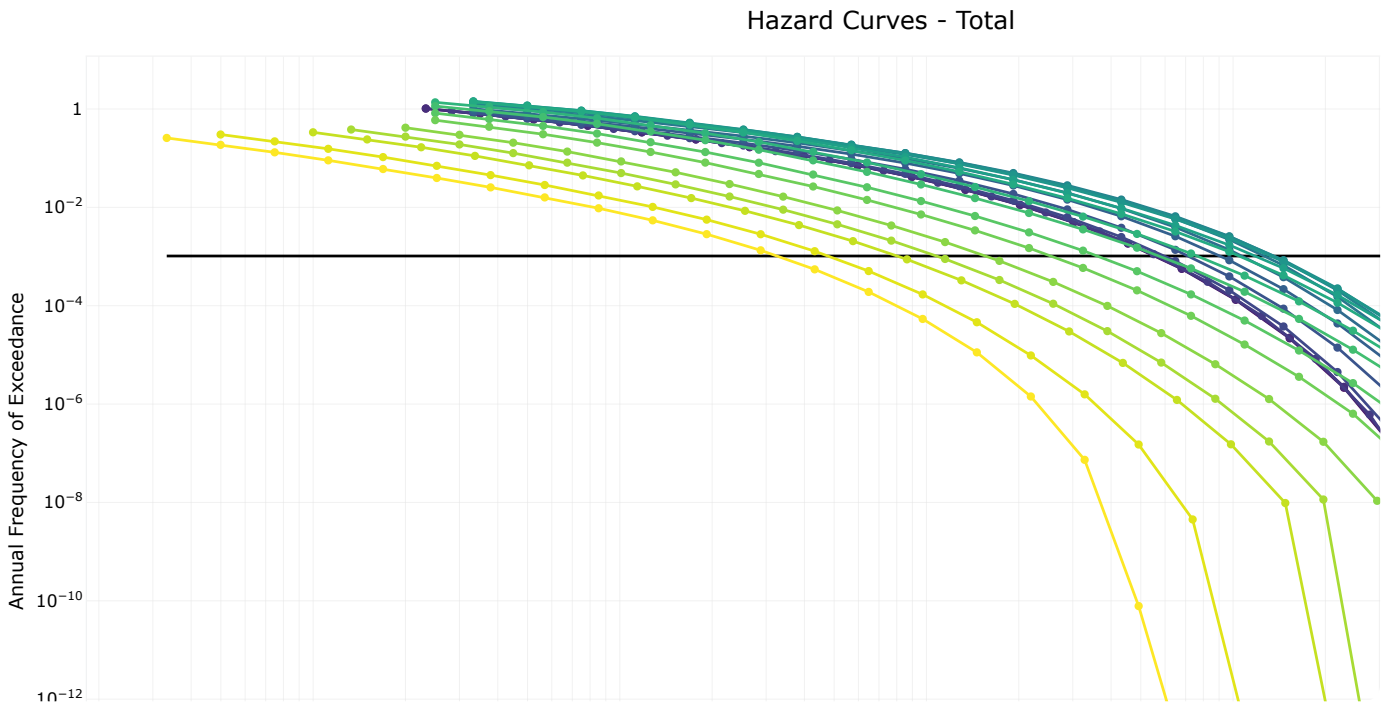
Probabilistic & Deterministic

Period T(s)	Risk Targeted Spectrum Ordinates (g)	84^{th} Spectrum Ordinates(g)
0	0.84	0.99
0.01	0.85	1
0.02	0.85	1
0.03	0.88	0.99
0.05	1.01	1.08
0.075	1.27	1.25
0.1	1.51	1.41
0.15	1.82	1.68
0.2	1.98	2.01
0.25	2.07	2.3
0.3	2.11	2.56
0.4	2.02	2.75
0.5	1.88	2.67
0.75	1.47	2.29
1	1.19	1.9
1.5	0.8	1.36
2	0.59	1.03
3	0.37	0.65
4	0.25	0.43
5	0.19	0.31
7.5	0.11	0.15
10	0.073	0.089

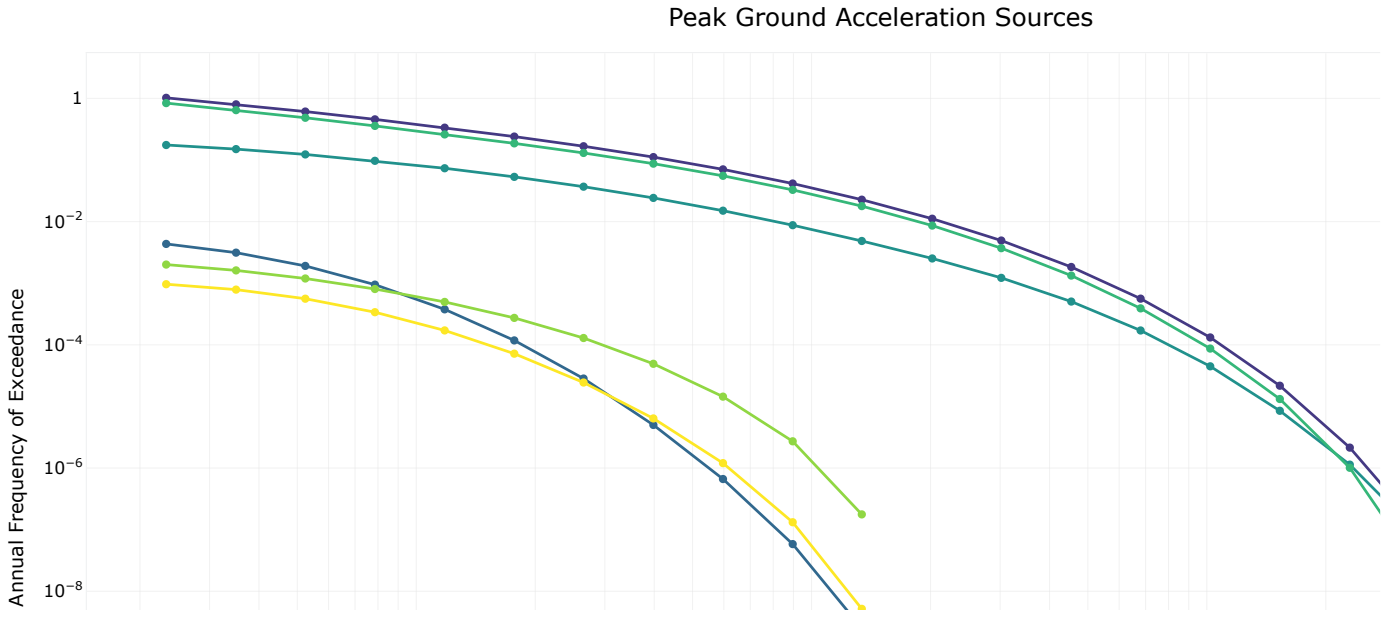
Hazard

Source Type
Total



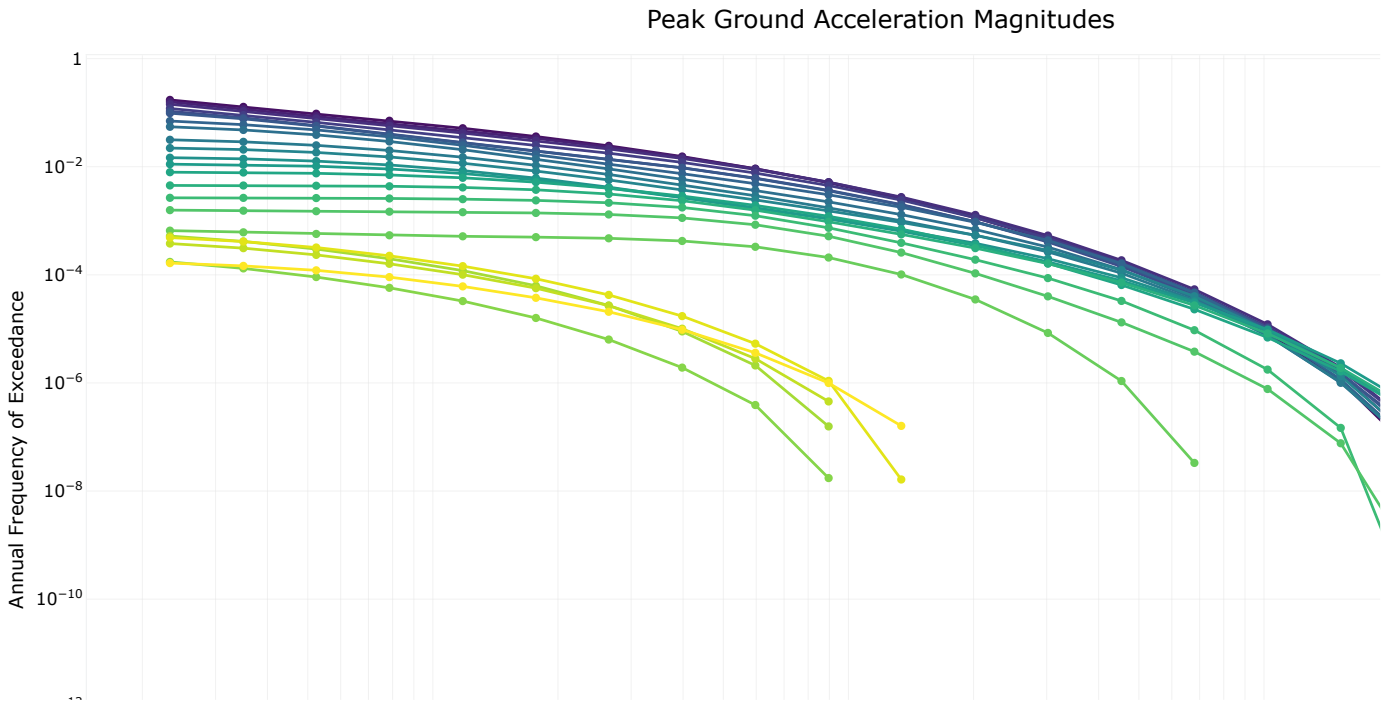
Sources

IMT
PGA

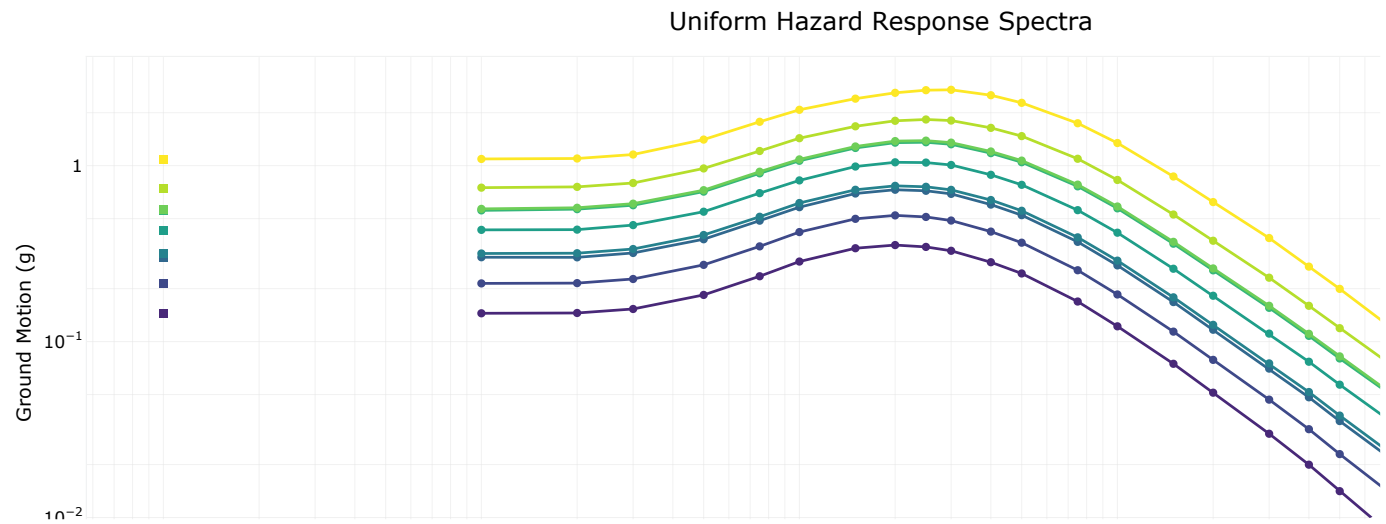


Magnitudes

IMT
PGA



Spectra



Parameter Summary

Model: Conterminous U.S. 2018.R1

Return Period: 975 (5% in 50)

Latitude: 35.65098 °
Longitude: -117.809018 °
Site Class: CD (Vs30 365)
Source Type: Total
Truncate: Off
Max Direction: Off

Connected Applications

Disaggregation

Open the disaggregation application using the current control panel inputs

Inputs for Disaggregation:

Model: Conterminous U.S. 2018.R1
Latitude: 35.65098 °
Longitude: -117.809018 °
Vs30: 365 m/s
Imt: PGA
Return Period: 975 years
Site Class: CD

Open Disaggregation

Risk-Targeted Ground Motion

Open the RTGM application using the current control panel inputs

Inputs for Risk-Targeted Ground Motion:

Model: Conterminous U.S. 2018.R1
Latitude: 35.65098 °
Longitude: -117.809018 °
Vs30: 365 m/s
Imt: PGA
Return Period: 975 years
Site Class: CD
Control Type: DYNAMIC_HAZARD

Open Risk-Targeted Ground Motion

Model Maps

Open the model maps application using the current NSHM

Inputs for Model Maps:

Model: Conterminous U.S. 2018.R1

Open Model Maps

NCM Geophysical Profiles

Open the NCM geophysical profiles applications using the current location

Inputs for NCM Geophysical Profiles:

Location: 35.65098°,-117.809018°

Open NCM Geophysical Profiles

Magnitude Frequency Distribution

Open the magnitude frequency distribution application using the current NSHM

Inputs for Magnitude Frequency Distribution:

Model: Conterminous U.S. 2018.R1

Open Magnitude Frequency Distribution

Earthquake Rates and Probabilities

Open the rates and probabilities application using the current control panel inputs

Inputs for Earthquake Rates and Probabilities:

Model: Conterminous U.S. 2018.R1
Latitude: 35.65098 °
Longitude: -117.809018 °

Open Earthquake Rates and Probabilities

Application Metadata

Application: Dynamic Hazard Curves
Version: 22.1.2
URL: https://earthquake.usgs.gov/nshmp/hazard/dynamic

Repository : nshmp-apps
Version: 22.1.2
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-apps

Repository : nshmp-lib-ng
Version: 22.1.1
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-lib-ng

Repository : nshmp-template
Version: 22.0.2
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-template

Repository : nshmp-haz
Version: 2.11.3
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-haz

Repository : nshmp-lib
Version: 1.7.20
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-lib

Repository : nshm-conus
Version: 5.2.4
URL: https://code.usgs.gov/ghsc/nshmp/nshms/nshm-conus.git

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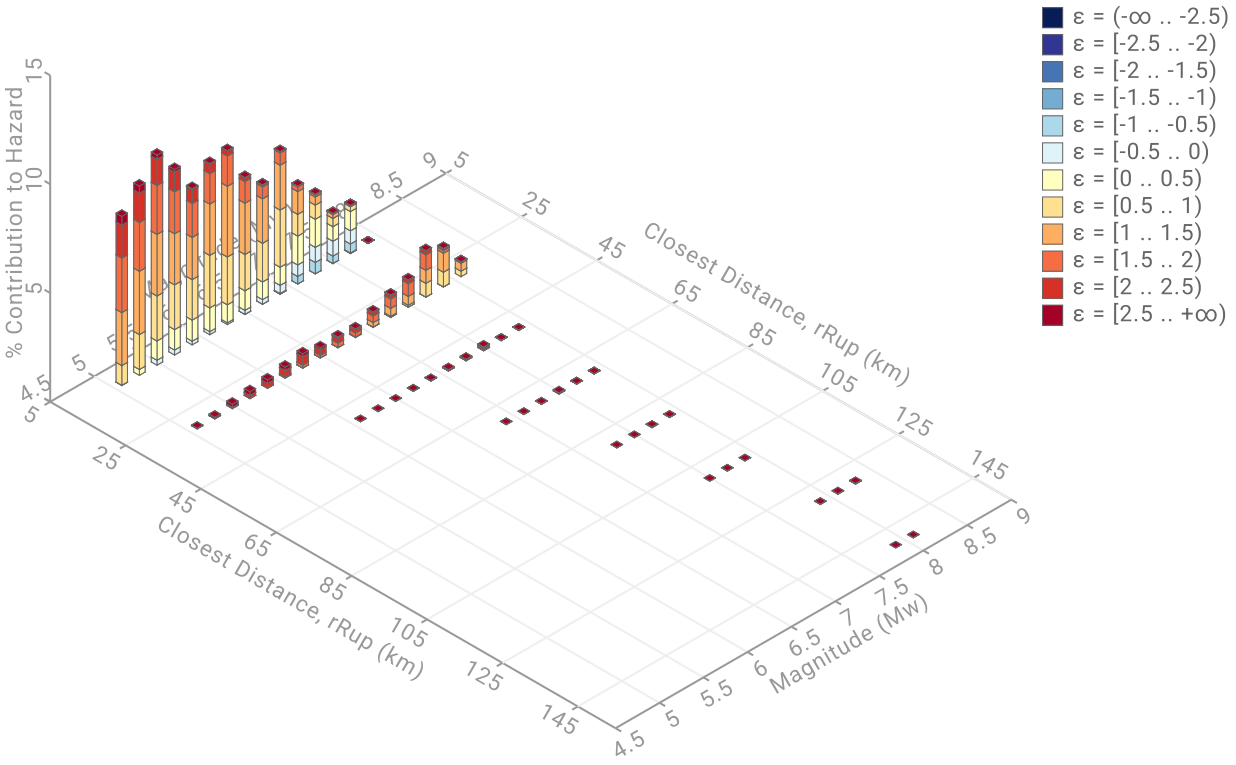
Disaggregation Report

Disaggregation



Geographical Disaggregation

Parameter Summary

Model: Conterminous U.S. 2018.R1

Latitude: 35.65098 °

Longitude: -117.809018 °

Site Class: CD (Vs30 365)

Intensity Measure Type: PGA

Return Period: 975 (5% in 50)

Component: Total

Disaggregation Summary: Total

Disaggregation targets

Return period : 975 yrs

Exceedance rate : 1.026e-3 yr^{-1}

PGA ground motion : 5.537e-1 g

Recovered targets

Return period : 947.4692 yrs

Exceedance rate : 1.055e-3 yr^{-1}

Totals

Binned : 100 %

Residual : 0 %

Trace : 0.15 %

Mean (over all sources)

m : 6.25

r : 11.18 km

ε_0 : 1.14 σ

Mode (largest m-r bin)

m : 5.5

r : 9.23 km

ε_0 : 1.28 σ

Contribution : 9.64 %

Mode (largest m-r-ε_0 bin)

m : 6.26

r : 10.39 km

ε_0 : 1.25 σ

Contribution : 3.25 %

Discretization

r : min = 0.0, max = 1000.0, Δ = 20.0 km

m : min = 4.4, max = 9.4, Δ = 0.2

ε : min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0 : [-∞ .. -2.5)

ε1 : [-2.5 .. -2.0)

ε2 : [-2.0 .. -1.5)

ε3 : [-1.5 .. -1.0)

ε4 : [-1.0 .. -0.5)

ε5 : [-0.5 .. 0.0)

ε6 : [0.0 .. 0.5)

ε7 : [0.5 .. 1.0)

ε8 : [1.0 .. 1.5)

ε9 : [1.5 .. 2.0)

ε10 : [2.0 .. 2.5)

ε11 : [2.5 .. +∞]

Disaggregation Contributions: Total

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
UCERF3 Fault Model 3.1 (opt)	Grid							22.06
UCERF3 Fault Model 3.2 (opt)	Grid							22.06
Extensional (adaptive) (opt)	Grid							16.31
PointSourceFinite: -117.809, 35.718		8.23	6.01	1.08	117.809°W	35.718°N	0.00	1.17
PointSourceFinite: -117.809, 35.709		7.64	5.96	1.02	117.809°W	35.709°N	0.00	1.15
PointSourceFinite: -117.809, 35.727		8.83	6.05	1.14	117.809°W	35.727°N	0.00	1.11
PointSourceFinite: -117.809, 35.691		6.52	5.88	0.89	117.809°W	35.691°N	0.00	1.11
PointSourceFinite: -117.809, 35.700		7.07	5.92	0.96	117.809°W	35.700°N	0.00	1.07
PointSourceFinite: -117.809, 35.736		9.44	6.10	1.19	117.809°W	35.736°N	0.00	1.05
UCERF3 Fault Model 3.1	FaultSystem							14.51
Sierra Nevada (south) (5)		5.10	7.32	-0.07	117.863°W	35.672°N	295.19	4.08
Little Lake (2)		9.67	6.84	0.97	117.722°W	35.700°N	55.31	3.57
Garlock (center) (5)		25.70	7.76	1.29	117.718°W	35.432°N	161.21	2.56
Little Lake (1)		9.67	6.23	1.25	117.722°W	35.700°N	55.31	1.23
UCERF3 Fault Model 3.2	FaultSystem							14.38
Sierra Nevada (south) (5)		5.10	7.31	-0.07	117.863°W	35.672°N	295.19	4.06
Little Lake (2)		9.67	6.84	0.96	117.722°W	35.700°N	55.31	3.55
Garlock (center) (5)		25.70	7.76	1.29	117.718°W	35.432°N	161.21	2.56
Little Lake (1)		9.67	6.23	1.25	117.722°W	35.700°N	55.31	1.14
Extensional (fixed) (opt)	Grid							10.68

Application Metadata

Application: Disaggregation
Version: 22.1.2
URL: https://earthquake.usgs.gov/nshmp/hazard/disagg

Repository : nshmp-apps
Version: 22.1.2
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-apps

Repository : nshmp-lib-ng
Version: 22.1.1
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-lib-ng

Repository : nshmp-template
Version: 22.0.2
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-template

Repository : nshmp-haz
Version: 2.11.3
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-haz

Repository : nshmp-lib
Version: 1.7.20
URL: https://code.usgs.gov/ghsc/nshmp/nshmp-lib

Repository : nshm-conus
Version: 5.2.4
URL: https://code.usgs.gov/ghsc/nshmp/nshms/nshm-conus.git

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N to Shear Wave Velocity Estimation - ASCE 7-22

PROJECT:	Inyokern Data Center
BORING NUMBER:	B-7
BORING DATE:	6/30/2026
DRILL METHOD:	4.25" ID HSA
DRILLING CO.:	SEI
HAMMER TYPE:	
DEPTH TO GW:	Not Encountered

Sampler Type	Sampler Factor
Cal	
Mod Cal	0.65
SPT	1.00

Hammer Efficiency (%)	85%

Table 20.2-1. Site Classification.

Site Class	$\bar{v}_s$ Calculated Using Measured or Estimated Shear Wave Velocity Profile (ft/s)
A. Hard rock	>5,000
B. Medium hard rock	>3,000 to 5,000
BC. Soft rock	>2,100 to 3,000
C. Very dense sand or hard clay	>1,450 to 2,100
CD. Dense sand or very stiff clay	>1,000 to 1,450
D. Medium dense sand or stiff clay	>700 to 1,000
DE. Loose sand or medium stiff clay	>500 to 700
E. Very loose sand or soft clay	≤500
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.2.1

Note: For SI: 1 ft = 0.3048 m; 1 ft/s = 0.3048 m/s.

Note: Yellow fields are for data entry.

Depth to (feet) Top	Depth to (feet) Bot.	Unit Wt. (pcf)	Saturated	Thickness Feet	Soil Type for Correlation	Field N (bpf)	Sampler Type	N_{60} (bpf)	Vs (m/s)	Vs (ft/s)	Depth/Vs	g_{buoy} (pcf)	Effect Stress (psf)
0	6	120	No	6	Sand	48	ModCal	44.2	161	528	0.01137	120	360
6	10	120	No	4	Sand	18	ModCal	16.6	185	605	0.00661	120	960
10	15	120	No	5	Sand	38	ModCal	35.0	220	723	0.00692	120	1500
15	20	120	No	5	Sand	35	ModCal	32.2	237	776	0.00644	120	2100
20	26	120	No	6	Sand	70	SPT	99.2	281	922	0.00651	120	2760
26	30	120	No	4	Sand	87	SPT	123.3	301	986	0.00405	120	3360
30	36	120	No	6	Sand	26	SPT	36.8	278	913	0.00657	120	3960
36	41	120	No	5	Sand	48	SPT	68.0	306	1,004	0.00498	120	4620
41	45	120	No	4	Sand	45	SPT	63.8	312	1,025	0.00390	120	5160
45	50	120	No	5	Sand	100	SPT	141.7	345	1,133	0.00441	120	5700
50	100	120	No	50	Sand	60	SPT	85.0	366	1,201	0.04163	120	9000

Total Depth Soil Profile (Feet):	100
Average Shear Wave Velocity, Vs30 (ft/s):	967
Average Shear Wave Velocity, Vs30(m/s):	295
Vs30 +1SD (ft/s):	744
Vs30=1SD(m/s):	227
Site Soil Class per ASCE 7-22:	**D - Medium dense sand or stiff clay**

Soil Type	Equation Used
Sand:	$V_S = \exp(4.045 + 0.096(\ln(N_{60})) + 0.236(\ln(\sigma'_v)))$
Silt:	$V_S = \exp(3.783 + 0.178(\ln(N_{60})) + 0.231(\ln(\sigma'_v)))$
Clay:	$V_S = \exp(3.996 + 0.230(\ln(N_{60})) + 0.164(\ln(\sigma'_v)))$
Gravel:	$Vs = 53.0\ N_{60}^{0.19}\ \sigma_{v}^{0.18}$
Soft Rock:	$V_S = 109\,(N_{60})^{0.319}$

Based on:
Brandenberg, S.J., 2010 Shear Wave Velocity as a Statistical Function of Standard Penetration Test Resistance and Vertical Effective Stress at Caltrans Bridge Sites, PEER Report 2010/03, June 2010

N to Shear Wave Velocity Estimation - ASCE 7-22

PROJECT:	Inyokern Data Center
BORING NUMBER:	B-10
BORING DATE:	6/29/2026
DRILL METHOD:	4.25" ID HSA
DRILLING CO.:	SEI
HAMMER TYPE:	
DEPTH TO GW:	Not Encountered

Sampler Type	Sampler Factor
Cal	
Mod Cal	0.65
SPT	1.00

Hammer Efficiency (%)	85%

Table 20.2-1. Site Classification.

Site Class	$\bar{v}_s$ Calculated Using Measured or Estimated Shear Wave Velocity Profile (ft/s)
A. Hard rock	>5,000
B. Medium hard rock	>3,000 to 5,000
BC. Soft rock	>2,100 to 3,000
C. Very dense sand or hard clay	>1,450 to 2,100
CD. Dense sand or very stiff clay	>1,000 to 1,450
D. Medium dense sand or stiff clay	>700 to 1,000
DE. Loose sand or medium stiff clay	>500 to 700
E. Very loose sand or soft clay	≤500
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.2.1

Note: For SI: 1 ft = 0.3048 m; 1 ft/s = 0.3048 m/s.

Note: Yellow fields are for data entry.

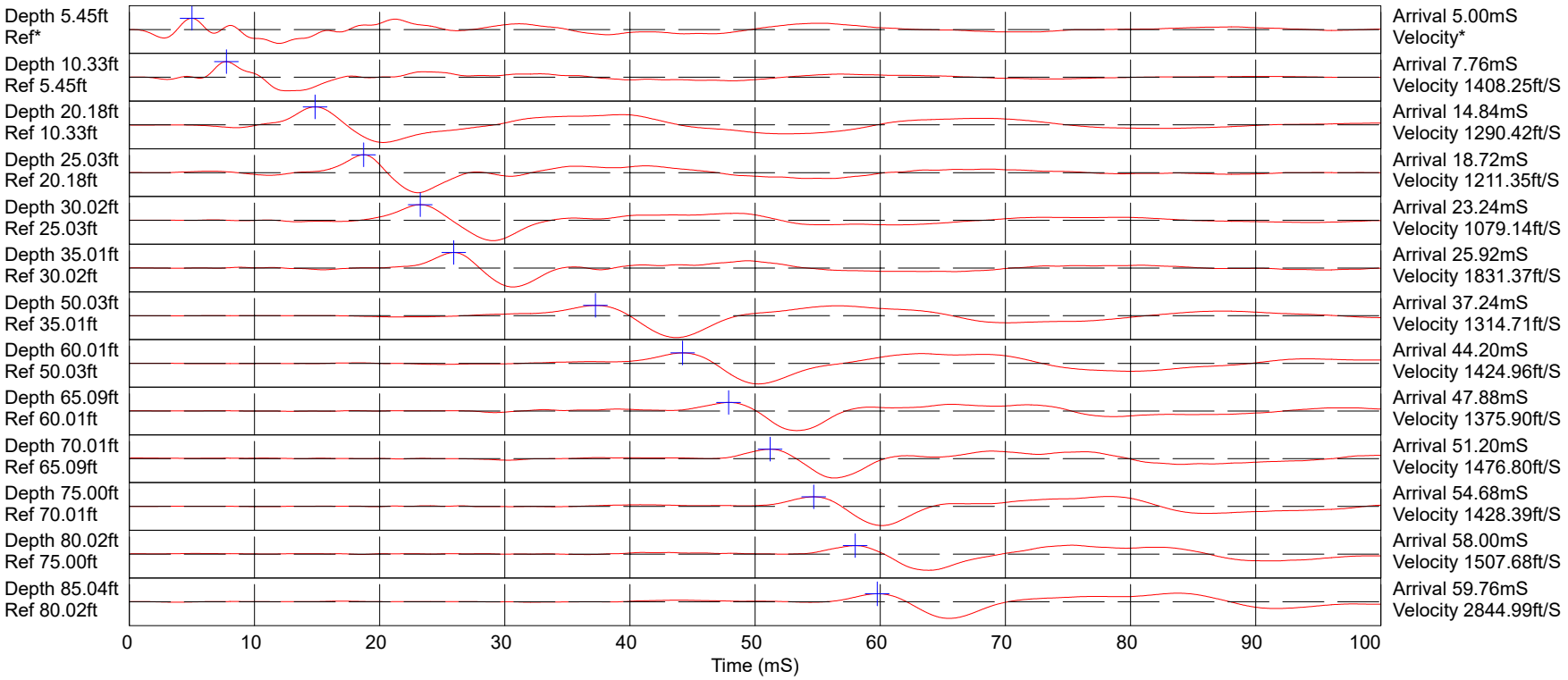
Depth to (feet) Top	Bot.	Unit Wt. (pcf)	Saturated	Thickness Feet	Soil Type for Correlation	Field N (bpf)	Sampler Type	N_{60} (bpf)	Vs (m/s)	Vs (ft/s)	Depth/Vs	g_{buoy} (pcf)	Effect Stress (psf)
0	5	120	No	5	Sand	42	ModCal	38.7	152	499	0.01002	120	300
5	11	120	No	6	Sand	15	ModCal	13.8	181	595	0.01009	120	960
11	16	120	No	5	Sand	79	ModCal	72.7	241	789	0.00633	120	1620
16	21	120	No	5	Sand	43	ModCal	39.6	245	802	0.00623	120	2220
21	25	120	No	4	Sand	35	SPT	49.6	263	863	0.00464	120	2760
25	30	120	No	5	Sand	40	SPT	56.7	278	912	0.00548	120	3300
30	35	120	No	5	Sand	84	SPT	119.0	310	1,018	0.00491	120	3900
35	40	120	No	5	Sand	30	SPT	42.5	291	954	0.00524	120	4500
40	45	120	No	5	Sand	39	SPT	55.3	307	1,008	0.00496	120	5100
45	50	120	No	5	Sand	59	SPT	83.6	328	1,077	0.00464	120	5700
50	100	120	No	50	Sand	60	SPT	85.0	366	1,201	0.04163	120	9000

Total Depth Soil Profile (Feet):	100
Average Shear Wave Velocity, Vs30 (ft/s):	960
Average Shear Wave Velocity, Vs30(m/s):	293
Vs30 +1SD (ft/s):	738
Vs30=1SD(m/s):	225
Site Soil Class per ASCE 7-22:	**D - Medium dense sand or stiff clay**

Soil Type	Equation Used
Sand:	$V_S = \exp(4.045 + 0.096(\ln(N_{60})) + 0.236(\ln(\sigma'_v)))$
Silt:	$V_S = \exp(3.783 + 0.178(\ln(N_{60})) + 0.231(\ln(\sigma'_v)))$
Clay:	$V_S = \exp(3.996 + 0.230(\ln(N_{60})) + 0.164(\ln(\sigma'_v)))$
Gravel:	$Vs = 53.0\ N_{60}^{0.19}\ \sigma_v^{0.18}$
Soft Rock:	$V_S = 109\,(N_{60})^{0.319}$

Based on:
Brandenberg, S.J., 2010 Shear Wave Velocity as a Statistical Function of Standard Penetration Test Resistance and Vertical Effective Stress at Caltrans Bridge Sites, PEER Report 2010/03, June 2010

CLIENT: Soil Engineering Inc.



Hammer to Rod String Distance (ft): 5.83
* = Not Determined

PROJECT: 20852

Average Shear Wave Velocity Based on Measured Shear Wave Velocity

Project: 20852 RB Inyokern Data Center
CPT: CPT-01
CPT Date: 7/16/2026
Drilling Company: Middle Earth Geo Testing, Inc.

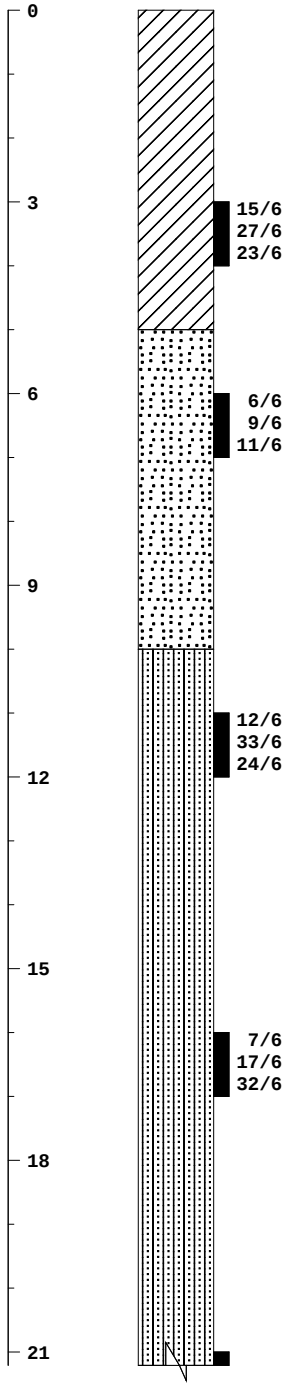
Location: CPT-01		
Total Depth (ft):100		
Depth	Measured Shear Wave Velocity (ft/s)	Thickness (ft)
0	-	-
10	1408.25	10
20	1290.42	10
25	1211.35	5
30	1079.14	5
35	1831.37	5
50	1314.7	15
60	1424.96	10
65	1375.9	5
70	1476.8	5
75	1428.39	5
80	1507.68	5
85	2844.99	20
Ave Shear Wave Velocity	1524 ft/s	

Attachment B

Boring Logs, Flood Insurance Rate Map, Flooding and Shallow Groundwater Map (Figure 14), Tsunami Hazard Areas Map, LiquefyPro Plots and Calculation Sheets for Liquefaction and Settlement, and Lab Results Table.

LOG OF TEST BORING
BORING B-1

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ : *N/A* **CAVING - ⬟ :** *N/A* **LOGGER:** *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		CL	SANDY CLAY; reddish brown, dry, low to medium plasticity.			
3	15/6 27/6 23/6		Hard.		120.8	5.8
6	6/6 9/6 11/6	SP	POORLY GRADED SAND; light reddish brown, dry, fine grained, traces of gravel. Medium dense.		121.5	1.3
9						
12	12/6 33/6 24/6	SM	SILTY SAND; light reddish brown, dry, fine grained. Dense.		116.4	1.9
15	7/6 17/6 32/6		Gravel, traces of clay.		121.5	1.2
18						
21						

Figure Number 2

LOG OF TEST BORING
BORING B-1

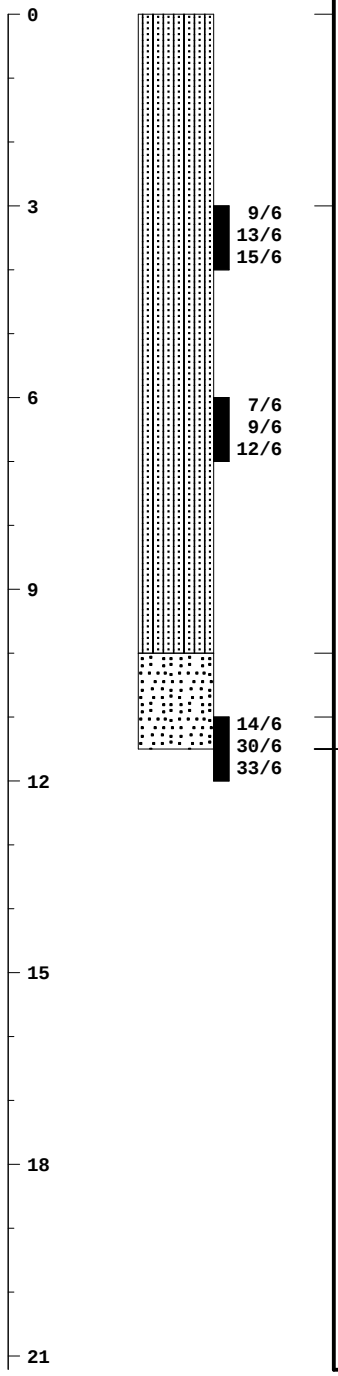
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ : *N/A* **CAVING - ⬢ :** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
	16/6 28/6 44/6		**Gravel.** **BOTTOM.**		123.5	0.9
24						
27						
30						
33						
36						
39						
42						

Figure Number 2

LOG OF TEST BORING
BORING B-2

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*

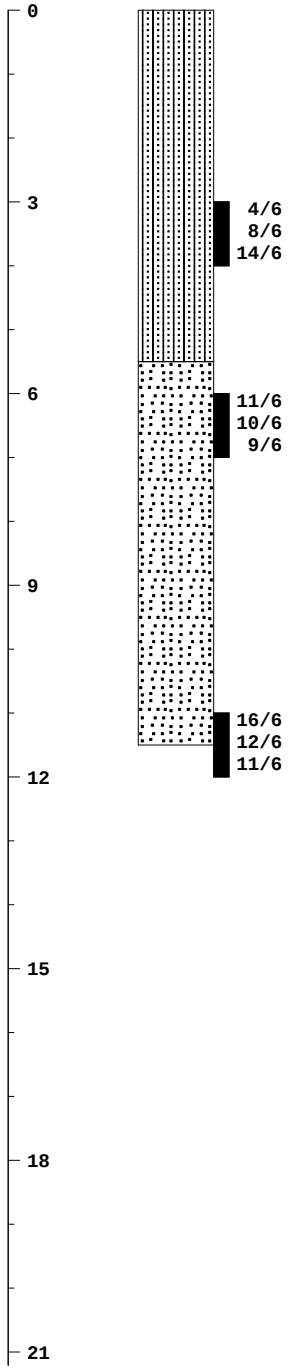


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light yellowish brown, dry to damp, fine to medium grained, cohesive.**			
3	9/6 13/6 15/6		**Medium dense.**		119.5	3.0
6	7/6 9/6 12/6				110.3	1.9
9		SP	**POORLY GRADED SAND; light yellowish brown, fine to coarse grained, fine gravel.**		120.7	1.4
12	14/6 30/6 33/6		**Dense.**			
			BOTTOM.			
15						
18						
21						

Figure Number 3

LOG OF TEST BORING
BORING B-3

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SM	**SILTY SAND; light yellowish brown, dry to damp, fine to medium grained.**			
			Medium dense.		118.5	3.7
		SP	**POORLY GRADED SAND; light yellowish brown, dry to damp, fine to coarse grained, fine gravel.**		120.2	2.3
			BOTTOM.		95.7	1.1

Figure Number 4

LOG OF TEST BORING
BORING B-4

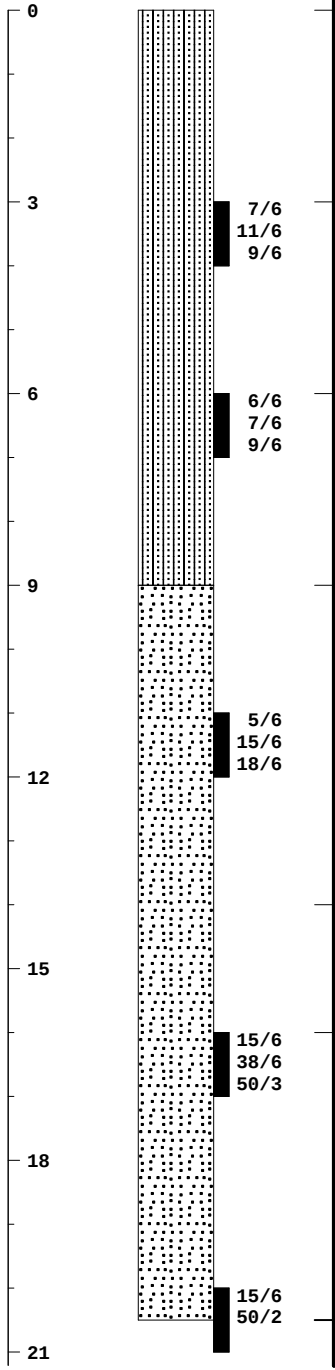
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ : *N/A* **CAVING - ▰ :** *N/A* **LOGGER:** *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3						
6						
9						
			BOTTOM.			
12						
15						
18						
21						

Figure Number 5

LOG OF TEST BORING
BORING B-5

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ⬟ **:** *N/A*
LOGGER: *LW/MV*

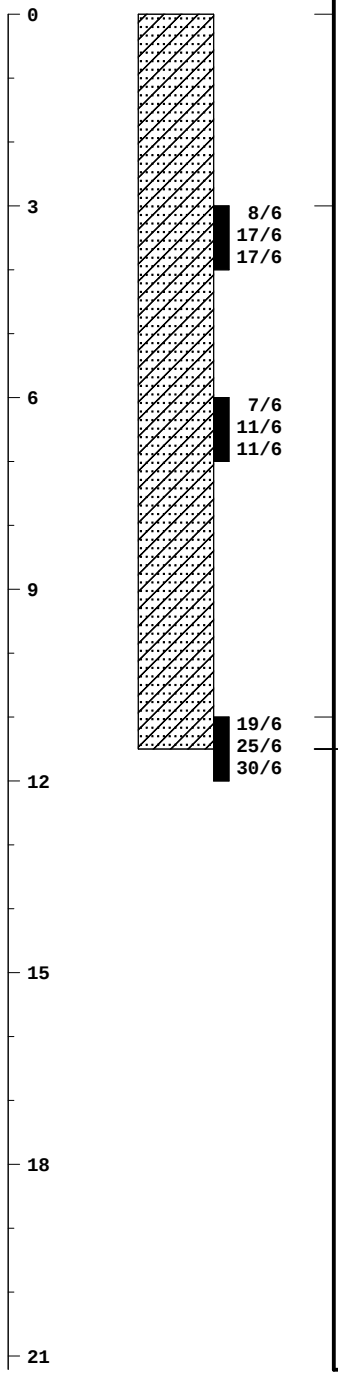


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	SILTY SAND; light yellowish brown, dry to damp, traces of clay, fine to coarse grained, cohesive.			
3	7/6 11/6 9/6		Medium dense.		116.1	3.4
6	6/6 7/6 9/6		Fine gravel.		117.5	2.4
9		SP	POORLY GRADED SAND; dry, fine to coarse grained, traces of fine gravel.			
12	5/6 15/6 18/6				116.0	1.8
			Gravel.			
15	15/6 38/6 50/3		Very dense, cobbles.		120.9	2.0
18						
21	15/6 50/2		BOTTOM.		124.7	0.7

Figure Number 6

LOG OF TEST BORING
BORING B-6

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ : *N/A* **CAVING - ▰ :** *N/A* **LOGGER:** *MW/LG*

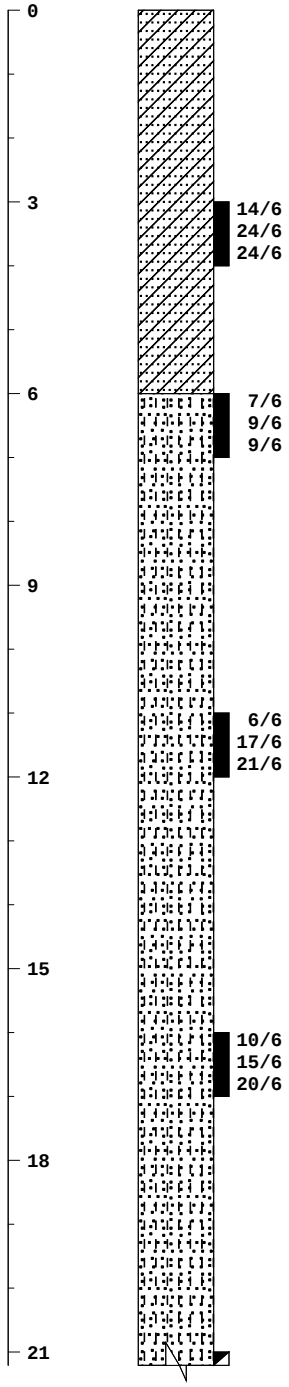


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SC	**CLAYEY SAND; light reddish brown, dry to damp, fine grained.**			
3	8/6 17/6 17/6		**Medium dense, gravel.**		122.6	3.9
6	7/6 11/6 11/6				117.2	1.3
9						
12	19/6 25/6 30/6		**Dense, traces of gravel. BOTTOM.**		118.6	1.8
15						
18						
21						

Figure Number 7

LOG OF TEST BORING
BORING B-7

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ⬢ **:** *N/A* **LOGGER:** *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SC	CLAYEY SAND; light reddish brown, dry, fine grained, traces of gravel.			
3	14/6 24/6 24/6		Dense, gravel.		126.0	4.6
6	7/6 9/6 9/6	SP-SM	POORLY GRADED SAND with low fines content; light brown, dry, trace of fine gravel/ organics, medium dense.		119.1	1.3
12	6/6 17/6 21/6				109.3	1.2
15	10/6 15/6 20/6		Gravel, cobbles.		111.9	0.8
18						
21						

Figure Number 8

LOG OF TEST BORING
BORING B-7

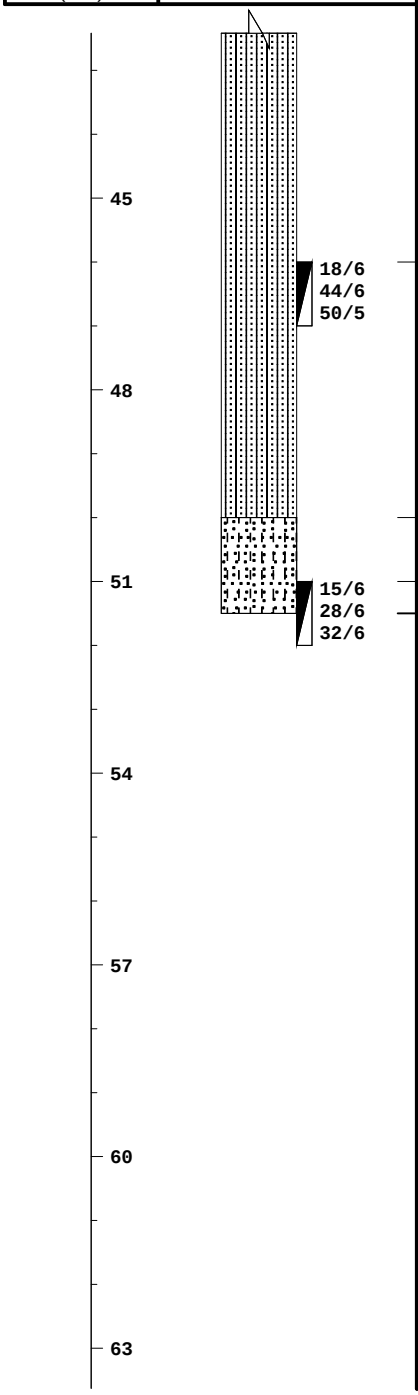
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
	15/6 30/6 40/6		**Dense.**			2.5
24						
	16/6 43/6 44/6	SC	**CLAYEY SAND; reddish brown, dry, fine grained very dense.**			5.2
27						
30						
	9/6 12/6 14/6		**Brown, medium dense.**			3.4
33						
36	13/6 22/6 26/6	SP-SM	**POORLY GRADED SAND with low fines content; brown, dry.**			1.4
39						
	11/6 18/6 27/6	SM	**SILTY SAND; brown, damp, dense.**			2.9
42						

Figure Number 8

LOG OF TEST BORING
BORING B-7

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

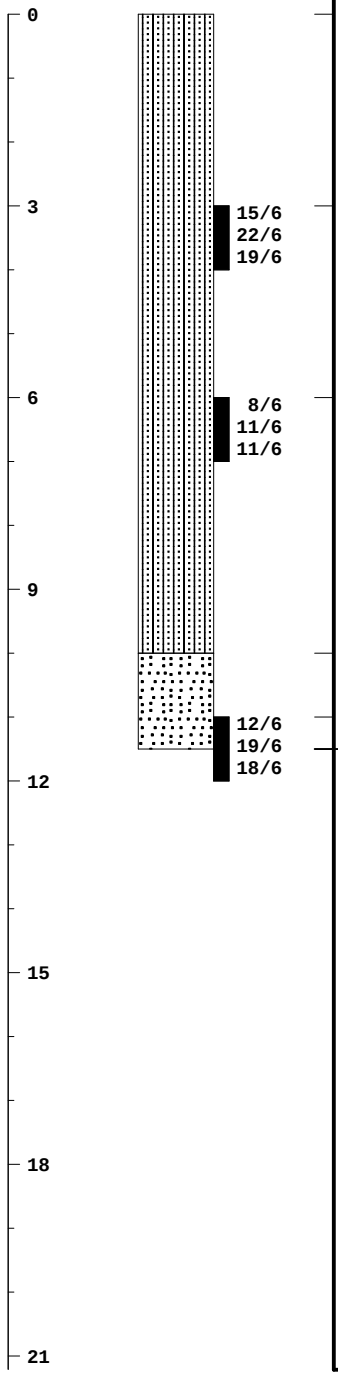


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
			Very dense.			3.9
		SP-SM	**POORLY GRADED SAND with low fines content; light yellowish brown, dry, fine grained.**			1.6
			Dense.			
			BOTTOM.			

Figure Number 8

LOG OF TEST BORING
BORING B-8

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

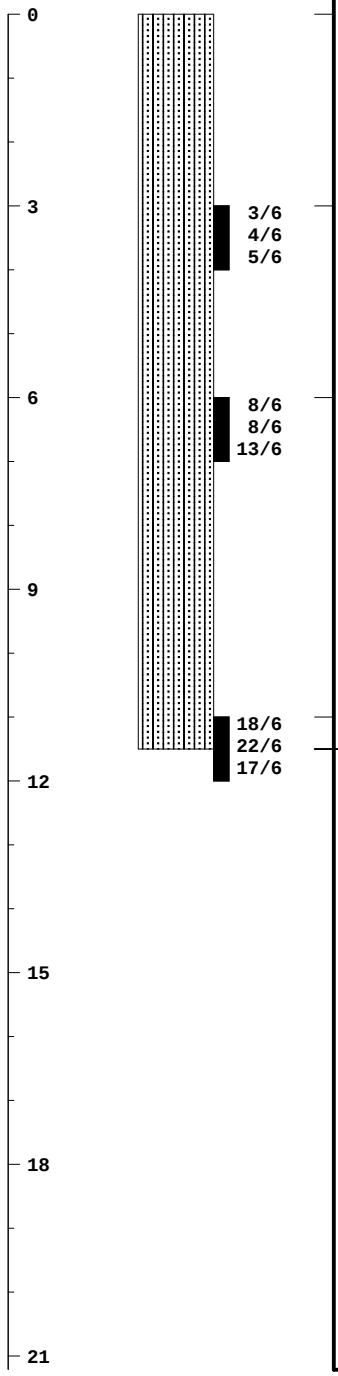


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; reddish brown, dry to damp, fine grained, traces of clay.**			
3	15/6 22/6 19/6		**Dense.**		124.3	3.4
6	8/6 11/6 11/6		**Medium dense.**		116.7	2.0
9		SP	**POORLY GRADED SAND; light reddish brown, dry, fine grained, traces of clay.**		113.5	0.7
12	12/6 19/6 18/6		**Dense.**			
			BOTTOM.			
15						
18						
21						

Figure Number 9

LOG OF TEST BORING
BORING B-9

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*

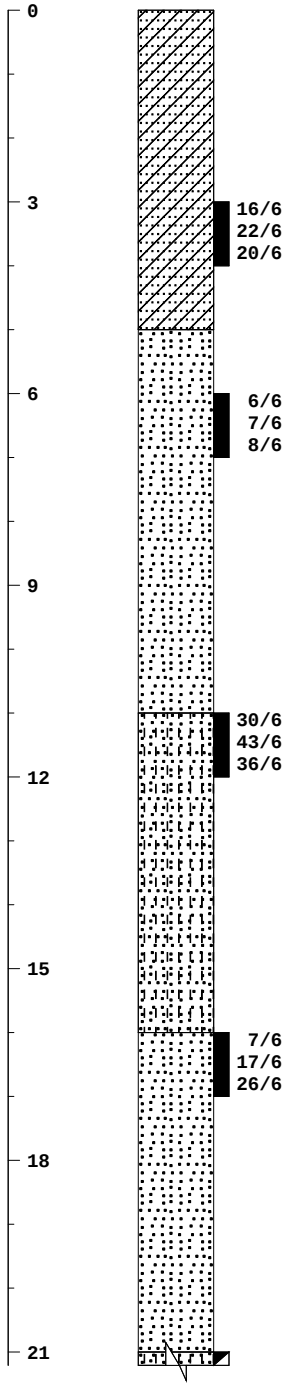


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light yellowish brown, dry, fine to medium grained, cohesive.**			
3	3/6 4/6 5/6		**Loose.**		114.8	3.3
6	8/6 8/6 13/6		**Medium dense, fine gravel.**		121.6	1.6
12	18/6 22/6 17/6		**Traces of fine gravel.** **BOTTOM.**		106.7	2.0

Figure Number 10

LOG OF TEST BORING
BORING B-10

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

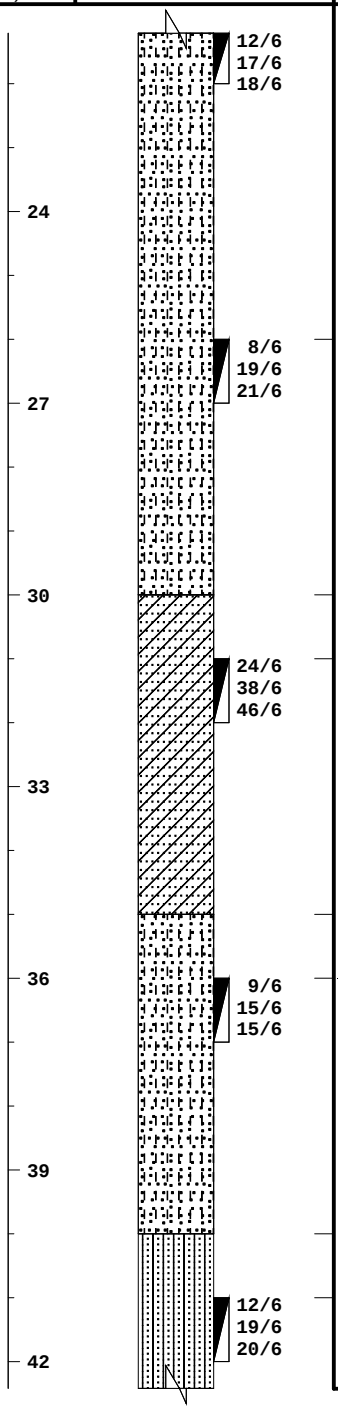


ELEVATION/ DEPTH (feet)	USCS	Description	Remarks	Density pcf	Moisture %
0	SC	CLAYEY SAND; light brown, dry, fine grained.			
3		Dense.		115.2	5.2
	SP	POORLY GRADED SAND; light yellowish brown, dry, fine grained.			
6		Loose.		120.6	0.8
9					
12	SP-SM	POORLY GRADED SAND with low fines content; brown dry, very dense.		120.6	1.8
15					
	SP	POORLY GRADED SAND; brown, dry, dense.		119.0	1.6
18					
21					

Figure Number 11

LOG OF TEST BORING
BORING B-10

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SP-SM	POORLY GRADED SAND with low fines content; brown, damp.			2.1
			Traces of gravel.			1.5
		SC	CLAYEY SAND; light brown, dry, medium plasticity. Hard, gravel.			4.2
		SP-SM	POORLY GRADED SAND with low fines content; light yellowish brown, dry, fine grained. Medium dense.			1.6
		SM	SILTY SAND; light yellowish brown, dry, fine grained. Dense.			2.5

Figure Number 11

LOG OF TEST BORING
BORING B-10

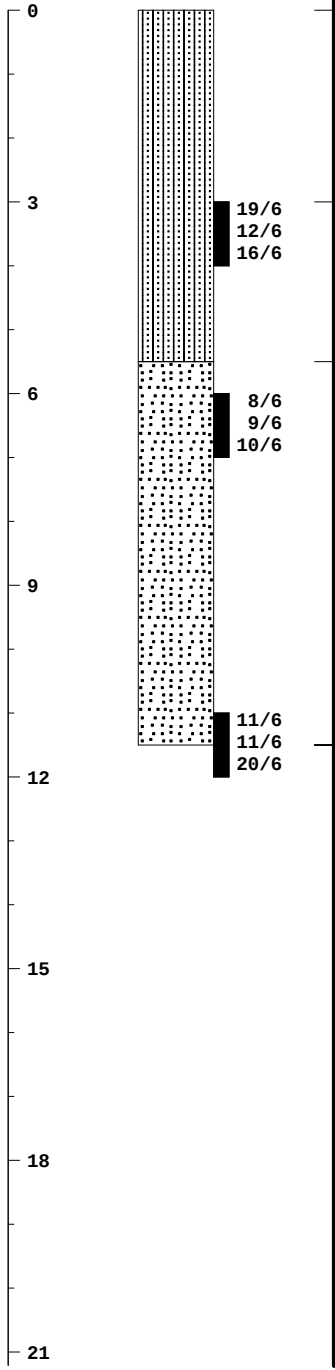
PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/29/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/29/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/29/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
45	28/6 29/6 30/6		Very dense.			2.5
48						
51	18/6 26/6 34/6		BOTTOM.			2.7
54						
57						
60						
63						

Figure Number 11

LOG OF TEST BORING
BORING B-11

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▽ : *N/A* **CAVING - ▰ :** *N/A* **LOGGER:** *LW/MV*

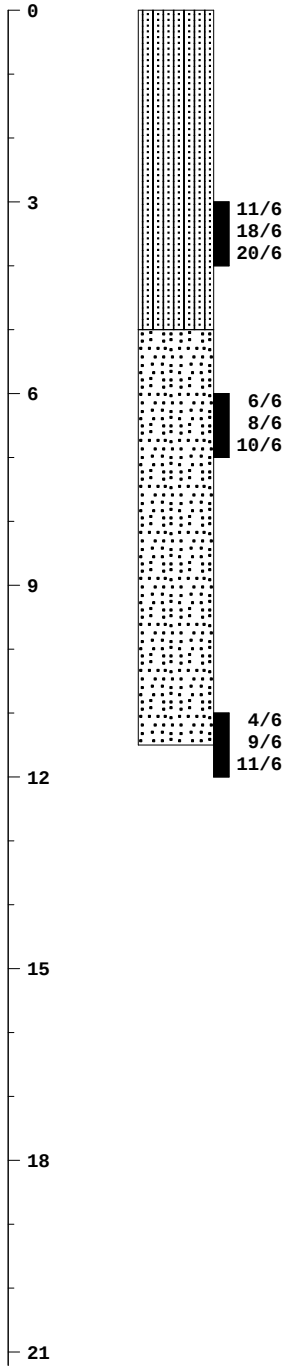


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SM	**SILTY SAND; yellowish brown, dry to damp, fine to medium grained.**			
			Medium dense.		121.1	2.6
		SP	**POORLY GRADED SAND; light yellowish brown, fine gravel.**		113.8	1.3
			BOTTOM.		112.6	0.8

Figure Number 12

LOG OF TEST BORING
BORING B-12

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

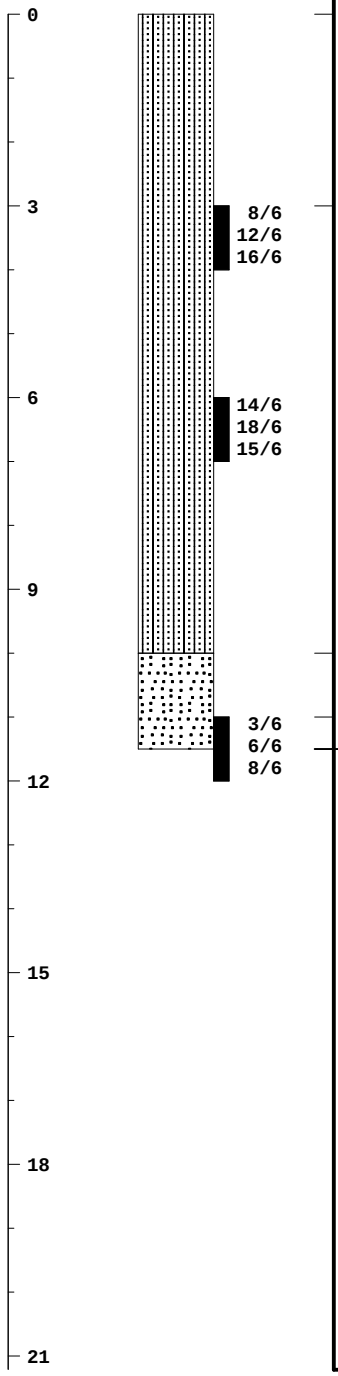


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3	11/6 18/6 20/6		**Dense.**		122.7	4.0
		SP	**POORLY GRADED SAND; light yellowish brown, dry, fine to medium grained, traces of gravel.**			
6	6/6 8/6 10/6		**Medium dense.**		110.8	0.8
9						
	4/6 9/6 11/6				115.6	1.0
12			**BOTTOM.**			
15						
18						
21						

Figure Number 13

LOG OF TEST BORING
BORING B-13

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

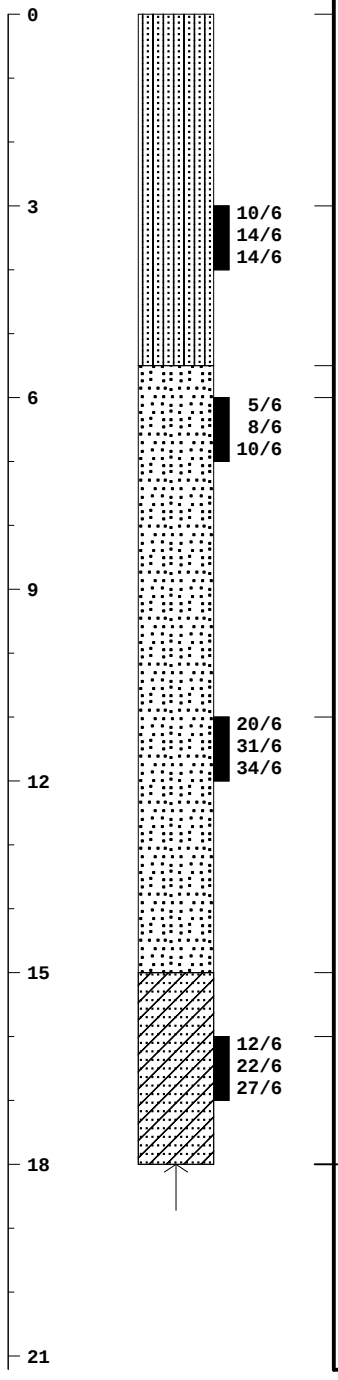


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3	8/6, 12/6, 16/6		**Medium dense.**		115.4	2.4
6	14/6, 18/6, 15/6				120.1	2.7
9		SP	**POORLY GRADED SAND; light yellowish brown, dry, fine to medium grained, gravel.**			
12	3/6, 6/6, 8/6		**Loose.**			0.5
			BOTTOM.			
15						
18						
21						

Figure Number 14

LOG OF TEST BORING
BORING B-14

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

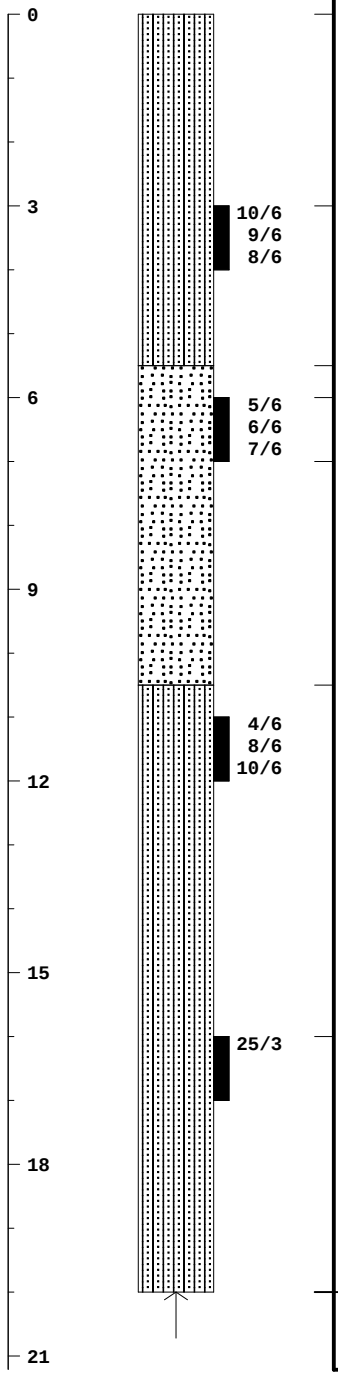


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	SILTY SAND; light reddish brown, dry, fine grained, traces of clay.			
3	10/6 14/6 14/6		Medium dense.		123.8	3.9
6	5/6 8/6 10/6	SP	POORLY GRADED SAND; light reddish brown, dry, fine to medium grained. Traces of gravel, traces of clay.		119.7	1.1
9						
12	20/6 31/6 34/6		Dense, gravel.		118.9	1.4
15	12/6 22/6 27/6	SC	CLAYEY SAND; light reddish brown, dry, fine to medium grained. Cobbles.		110.7	3.3
18			BOTTOM.	Refusal due to cobbles.		
21						

Figure Number 15

LOG OF TEST BORING
BORING B-15

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *07/01/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *07/01/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *07/01/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *LW/MV*

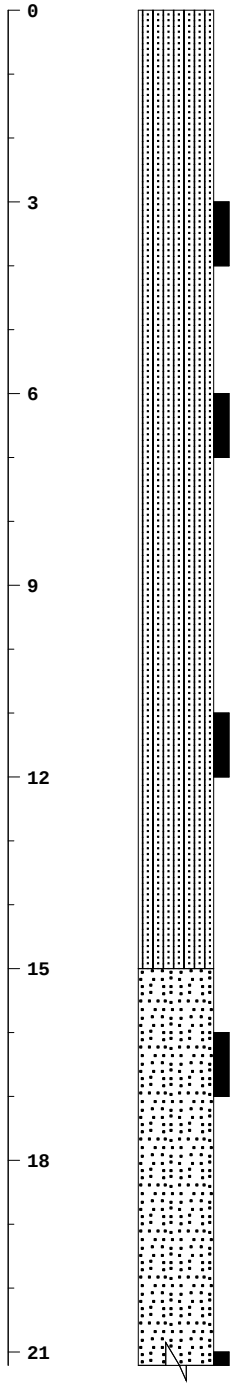


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
		SM	SILTY SAND; yellowish brown, dry to damp, fine to medium grained, cohesive.			
			Medium dense.		110.6	5.7
		SP	POORLY GRADED SAND; light brown, fine to coarse grained, traces of fine gravel.		120.8	0.8
			Loose.			
			Gravel.			
		SM	SILTY SAND; yellowish brown, damp, traces of clay, fine to coarse grained, fine gravel.		116.1	1.5
			Cobbles.		114.8	2.2
			BOTTOM.	Refusal due to gravel and cobbles.		

Figure Number 16

LOG OF TEST BORING
BORING B-16

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
0		SM	**SILTY SAND; light reddish brown, dry, fine grained, traces of clay.**			
3	7/6 12/6 18/6		**Medium dense.**		121.9	2.5
6	9/6 10/6 10/6		**Traces of gravel.**		120.9	1.4
9						
12	4/6 8/6 12/6		**Fine to medium grained, gravel.**		113.7	1.1
15		SP	**POORLY GRADED SAND; light reddish brown, dry, fine to medium grained, gravel, traces of clay.**		116.2	1.4
18	14/6 21/6 26/6		**Dense.**			
21						

Figure Number 17

LOG OF TEST BORING
BORING B-16

PROJECT: *RB Inyokern Data Center (CEI #1160-01)*
FILE NO: *20852*
BORING DATE: *06/30/26*
ELEV.:
BORING LOCATION: *See Boring Location Map, Figure 1*
START: *06/30/26*
DRILL METHOD: *4.25" I.D. Hollow-Stem Auger*
FINISH: *06/30/26*
DESCRIPTION: *Geotechnical Engineering Services*
DEPTH TO WATER - ▼ **:** *N/A* **CAVING -** ▰ **:** *N/A*
LOGGER: *MW/LG*

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Description	Remarks	Density pcf	Moisture %
	30/6 40/6 50/5		**BOTTOM.**		117.4	3.1
24						
27						
30						
33						
36						
39						
42						

Figure Number 17

KEY TO SYMBOLS

Symbol Description

Strata symbols

Low plasticity clay

Poorly graded sand

Silty sand

Clayey sand

Poorly graded sand with silt

Misc. Symbols

Boring continues

Drill rejection

Soil Samplers

California sampler

Standard penetration test

Notes:

1. Sixteen (16) exploratory borings were drilled between 06/26/2026 and 06/30/2026 using an 8-inch outside diameter hollow-stem auger.

2. No free groundwater was encountered to the maximum depth drilled of 51.5'.

3. Boring locations are shown on the Boring Location Map, Figure 1.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

5. Results of tests conducted on samples recovered are reported on the logs.

Soil Engineering Inc.

https://www.soilsengineering.com/

CPT: CPT-01

Total depth: 86.17 ft, Date: 7/16/2026

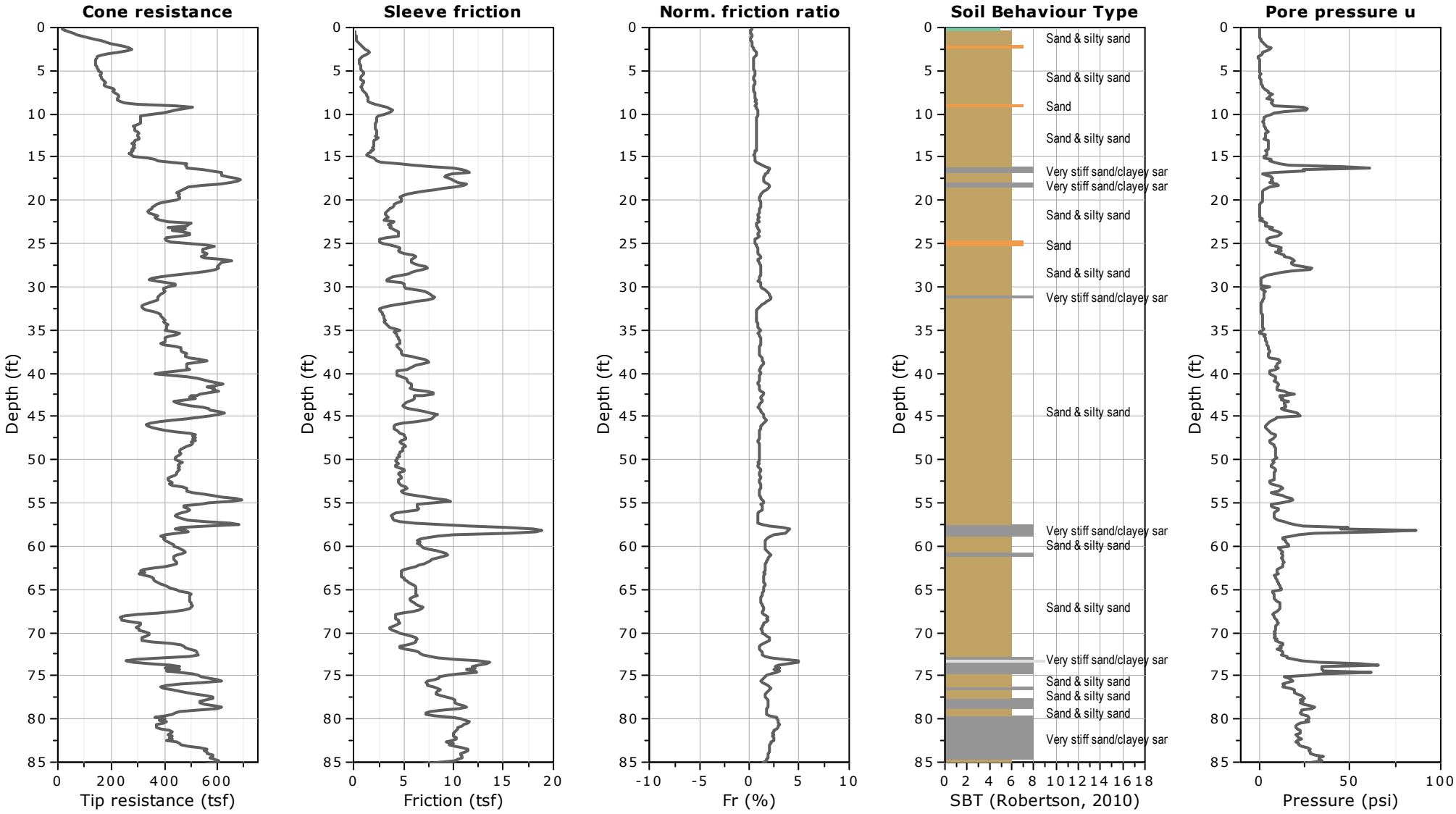
Est. GWL: 100.00 ft

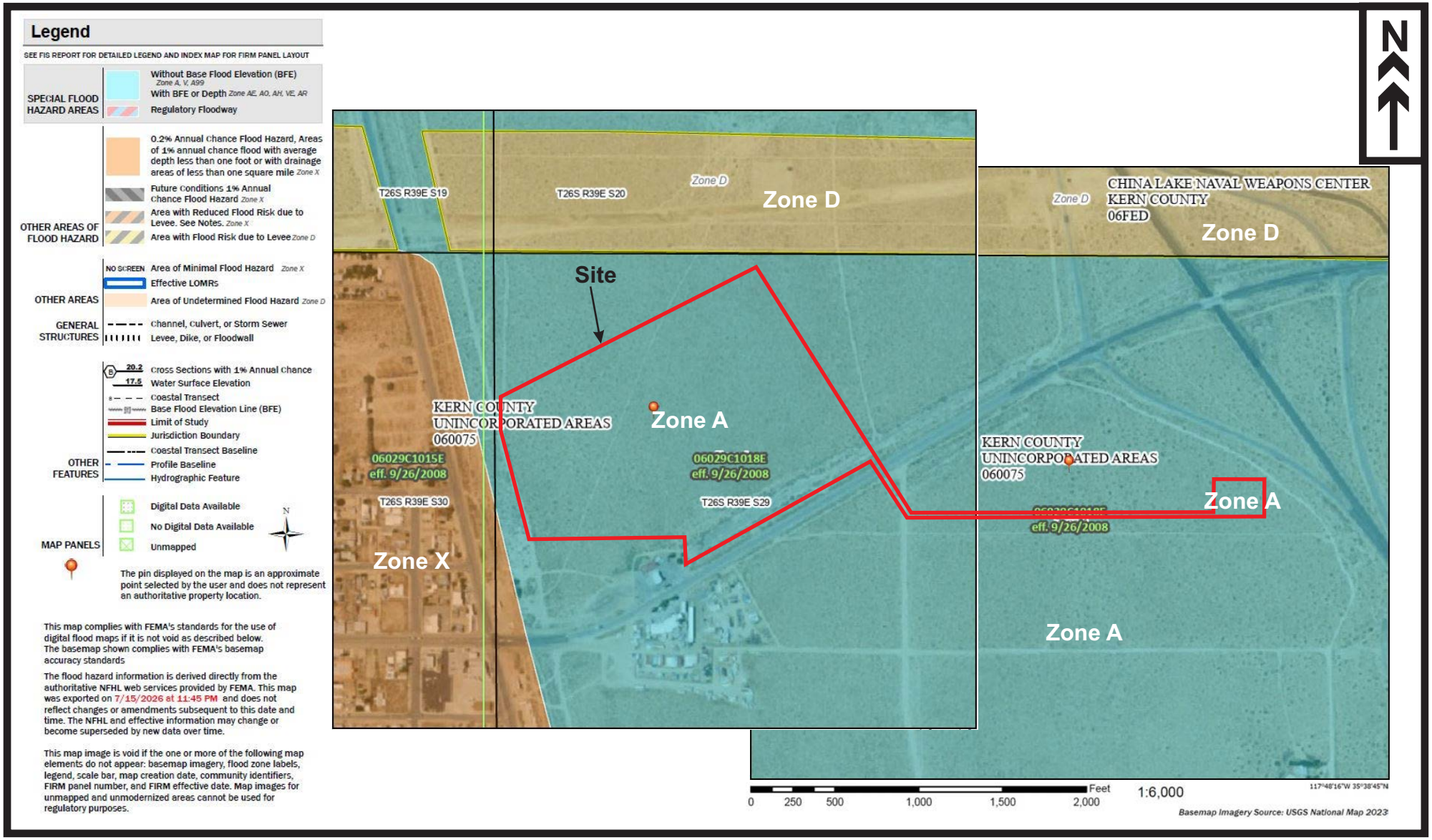
Cone Type: 15cm²

Cone Operator: AJ-GR

Project: RB Inyokern Data Center

Location: Inyokern CA



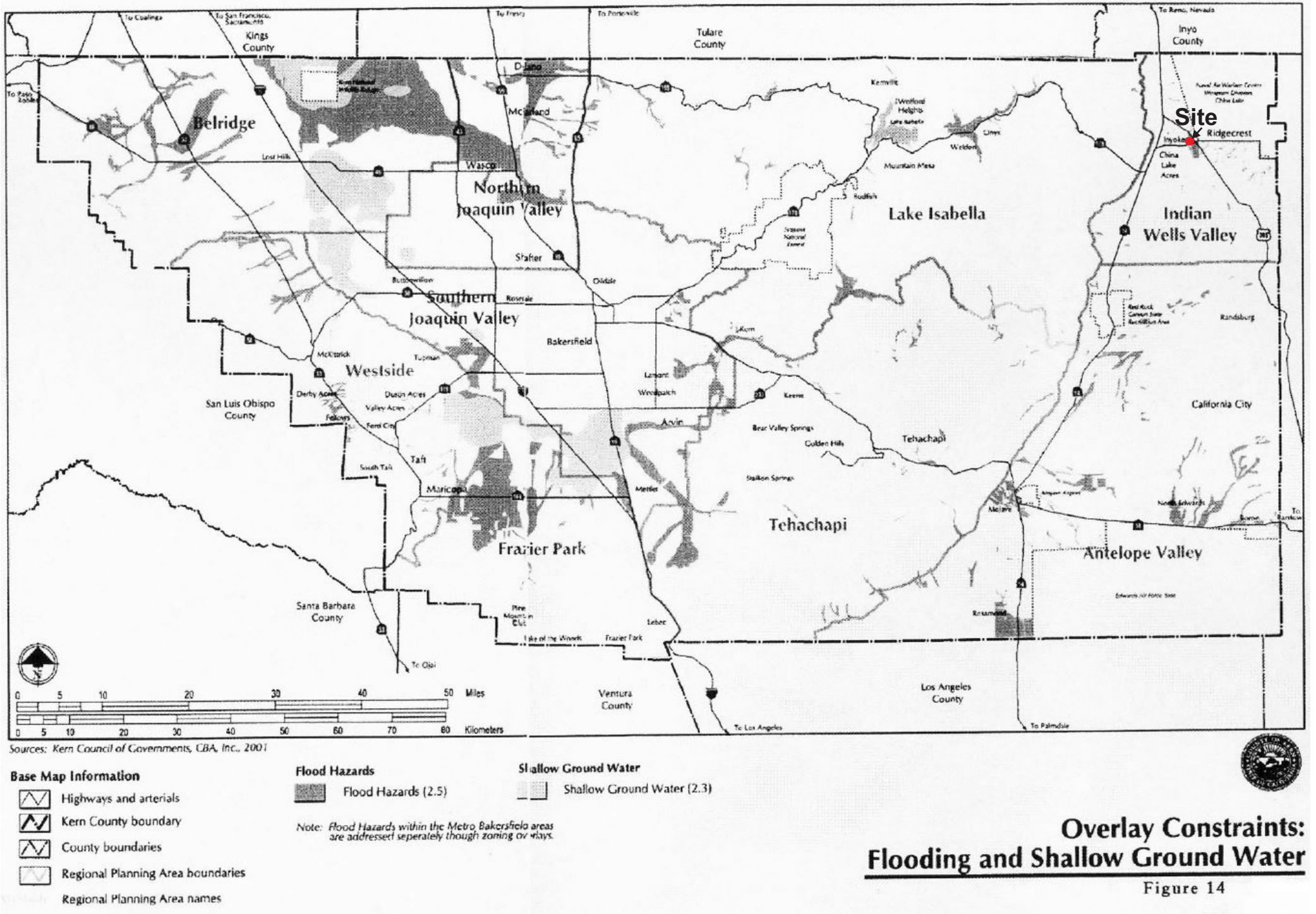


SOILS ENGINEERING, INC.
4400 Yeager Way
Bakersfield, CA 93313
(661) 831 - 5100
DATE: 7/26
PROJECT: #20852

RB Inyokern Data Center (CEI#1160-01)
NE of Brown Rd. & SR 178,
Inyokern, Kern County, CA

Fema Flood Insurance Maps

PLATE



Flooding and Shallow Groundwater Map
From Kern County Safety Element (Figure 14)

Legend

CA Tsunami Hazard Line

CA Tsunami Hazard Area Brochure

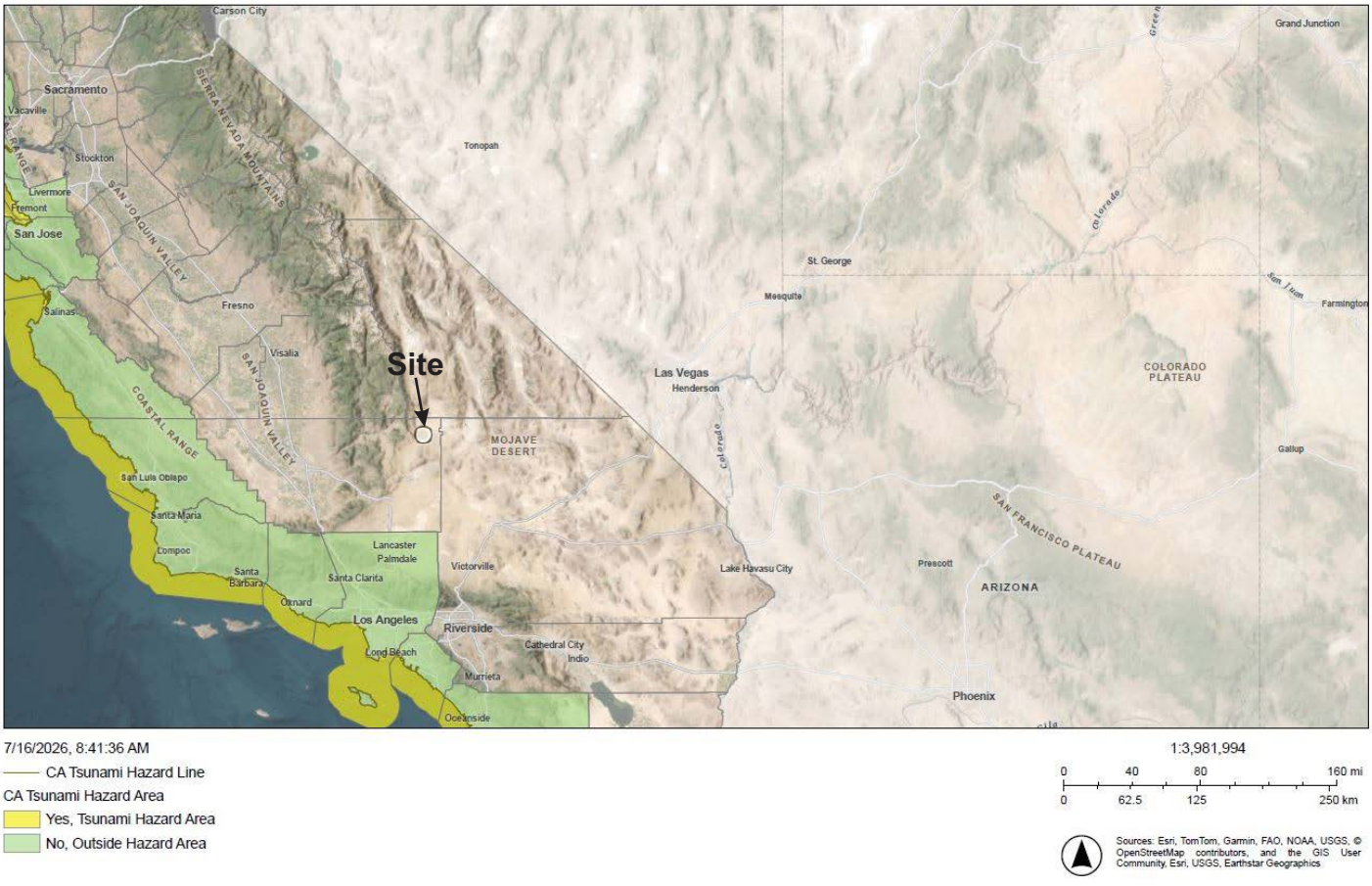
CA Tsunami Hazard Area

Yes, Tsunami Hazard Area

No, Outside Hazard Area

N

ArcGIS Web Map



Source: CGS Information Warehouse: Tsunami Hazard Area Map

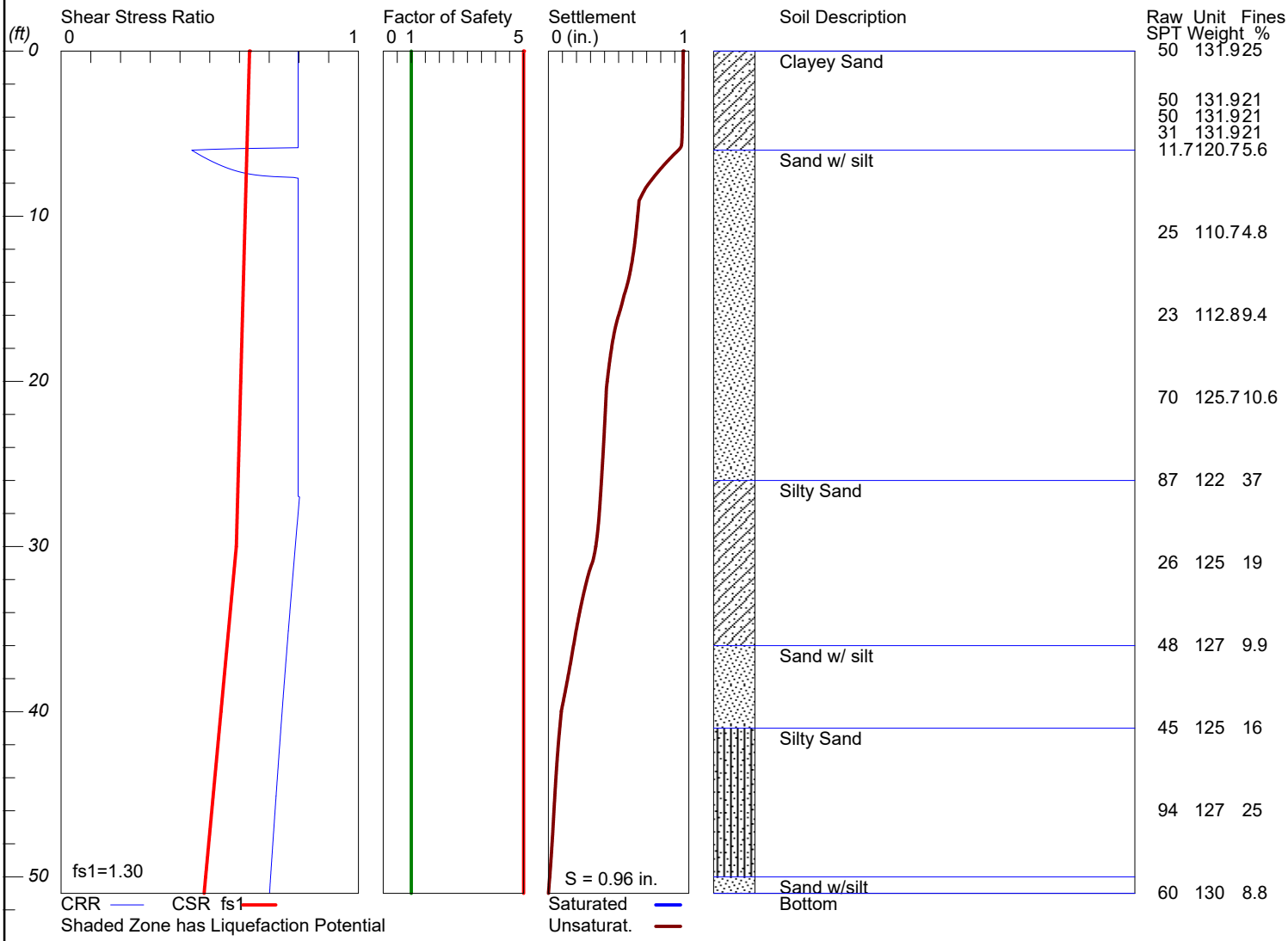
SOILS ENGINEERING, INC. **4400 Yeager Way** **Bakersfield, CA 93313** **(661) 831 - 5100** DATE: 7/26 PROJECT: #20852	**RB Inyokern Data Center (CEI#1160-01)** **NE of Brown Rd. & SR 178,** **Inyokern, Kern County, CA** **Tsunami Hazard Area Map**	**PLATE**

LIQUEFACTION ANALYSIS

RB Inyokern Data Center

Hole No.=B-7 (4' Improvement) Water Depth=100 ft

Magnitude=6.25
Acceleration=0.75g



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LIQUEFACTION ANALYSIS SUMMARY

www.civiltech.com

****

Font: Courier New, Regular, Size 8 is recommended for this report.

Licensed to , 7/17/2026 10:32:47 AM

Input File Name: O:\b. PROJECT FILES (ACTIVE)\20800-20899\20852 R&L Capital, RB Inyokern Data Center GEOTECH GEOHAZ\OFFICE REPORTS\Geohazard\Liquefy\20852 LiquefyPro B-7.liq

Title: RB Inyokern Data Center

Subtitle: 20852

Surface Elev.=

Hole No.=B-7 (4' Improvement)

Depth of Hole= 51.00 ft

Water Table during Earthquake= 100.00 ft

Water Table during In-Situ Testing= 100.00 ft

Max. Acceleration= 0.75 g

Earthquake Magnitude= 6.25

Input Data:

Surface Elev.=

Hole No.=B-7 (4' Improvement)

Depth of Hole=51.00 ft

Water Table during Earthquake= 100.00 ft

Water Table during In-Situ Testing= 100.00 ft

Max. Acceleration=0.75 g

Earthquake Magnitude=6.25

No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Tokimatsu, M-correction
3. Fines Correction for Liquefaction: Modify Stark/Olson
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.413
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1.2
9. User request factor of safety (apply to CSR) , User= 1.3
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*

* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
0.00	50.00	131.90	25.00
3.00	50.00	131.90	21.00
4.00	50.00	131.90	21.00
5.00	31.00	131.90	21.00
6.00	11.70	120.70	5.60
11.00	25.00	110.70	4.80
16.00	23.00	112.80	9.40
21.00	70.00	125.70	10.60
26.00	87.00	122.00	37.00
31.00	26.00	125.00	19.00
36.00	48.00	127.00	9.90
41.00	45.00	125.00	16.00
46.00	94.00	127.00	25.00
51.00	60.00	130.00	8.80

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.96 in.
Total Settlement of Saturated and Unsaturated Sands=0.96 in.
Differential Settlement=0.480 to 0.633 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	0.80	0.63	5.00	0.00	0.96	0.96
0.05	0.80	0.63	5.00	0.00	0.96	0.96
0.10	0.80	0.63	5.00	0.00	0.96	0.96
0.15	0.80	0.63	5.00	0.00	0.96	0.96
0.20	0.80	0.63	5.00	0.00	0.96	0.96
0.25	0.80	0.63	5.00	0.00	0.96	0.96
0.30	0.80	0.63	5.00	0.00	0.96	0.96
0.35	0.80	0.63	5.00	0.00	0.96	0.96
0.40	0.80	0.63	5.00	0.00	0.96	0.96
0.45	0.80	0.63	5.00	0.00	0.96	0.96
0.50	0.80	0.63	5.00	0.00	0.96	0.96
0.55	0.80	0.63	5.00	0.00	0.96	0.96
0.60	0.80	0.63	5.00	0.00	0.96	0.96
0.65	0.80	0.63	5.00	0.00	0.96	0.96
0.70	0.80	0.63	5.00	0.00	0.96	0.96
0.75	0.80	0.63	5.00	0.00	0.96	0.96
0.80	0.80	0.63	5.00	0.00	0.96	0.96
0.85	0.80	0.63	5.00	0.00	0.96	0.96
0.90	0.80	0.63	5.00	0.00	0.96	0.96
0.95	0.80	0.63	5.00	0.00	0.96	0.96
1.00	0.80	0.63	5.00	0.00	0.96	0.96
1.05	0.80	0.63	5.00	0.00	0.96	0.96
1.10	0.80	0.63	5.00	0.00	0.96	0.96
1.15	0.80	0.63	5.00	0.00	0.96	0.96
1.20	0.80	0.63	5.00	0.00	0.96	0.96
1.25	0.80	0.63	5.00	0.00	0.96	0.96
1.30	0.80	0.63	5.00	0.00	0.96	0.96
1.35	0.80	0.63	5.00	0.00	0.96	0.96
1.40	0.80	0.63	5.00	0.00	0.96	0.96
1.45	0.80	0.63	5.00	0.00	0.96	0.96
1.50	0.80	0.63	5.00	0.00	0.96	0.96
1.55	0.80	0.63	5.00	0.00	0.96	0.96
1.60	0.80	0.63	5.00	0.00	0.96	0.96
1.65	0.80	0.63	5.00	0.00	0.96	0.96
1.70	0.80	0.63	5.00	0.00	0.96	0.96
1.75	0.80	0.63	5.00	0.00	0.96	0.96
1.80	0.80	0.63	5.00	0.00	0.96	0.96
1.85	0.80	0.63	5.00	0.00	0.96	0.96
1.90	0.80	0.63	5.00	0.00	0.96	0.96
1.95	0.80	0.63	5.00	0.00	0.96	0.96
2.00	0.80	0.63	5.00	0.00	0.96	0.96
2.05	0.80	0.63	5.00	0.00	0.96	0.96
2.10	0.80	0.63	5.00	0.00	0.96	0.96
2.15	0.80	0.63	5.00	0.00	0.96	0.96
2.20	0.80	0.63	5.00	0.00	0.96	0.96
2.25	0.80	0.63	5.00	0.00	0.96	0.96
2.30	0.80	0.63	5.00	0.00	0.96	0.96
2.35	0.80	0.63	5.00	0.00	0.96	0.96
2.40	0.80	0.63	5.00	0.00	0.96	0.96
2.45	0.80	0.63	5.00	0.00	0.96	0.96
2.50	0.80	0.63	5.00	0.00	0.96	0.96
2.55	0.80	0.63	5.00	0.00	0.96	0.96

2.60	0.80	0.63	5.00	0.00	0.96	0.96
2.65	0.80	0.63	5.00	0.00	0.96	0.96
2.70	0.80	0.63	5.00	0.00	0.96	0.96
2.75	0.80	0.63	5.00	0.00	0.96	0.96
2.80	0.80	0.63	5.00	0.00	0.96	0.96
2.85	0.80	0.63	5.00	0.00	0.96	0.96
2.90	0.80	0.63	5.00	0.00	0.96	0.96
2.95	0.80	0.63	5.00	0.00	0.96	0.96
3.00	0.80	0.63	5.00	0.00	0.96	0.96
3.05	0.80	0.63	5.00	0.00	0.96	0.96
3.10	0.80	0.63	5.00	0.00	0.96	0.96
3.15	0.80	0.63	5.00	0.00	0.96	0.96
3.20	0.80	0.63	5.00	0.00	0.96	0.96
3.25	0.80	0.63	5.00	0.00	0.96	0.96
3.30	0.80	0.63	5.00	0.00	0.96	0.96
3.35	0.80	0.63	5.00	0.00	0.96	0.96
3.40	0.80	0.63	5.00	0.00	0.96	0.96
3.45	0.80	0.63	5.00	0.00	0.96	0.96
3.50	0.80	0.63	5.00	0.00	0.96	0.96
3.55	0.80	0.63	5.00	0.00	0.96	0.96
3.60	0.80	0.63	5.00	0.00	0.96	0.96
3.65	0.80	0.63	5.00	0.00	0.96	0.96
3.70	0.80	0.63	5.00	0.00	0.96	0.96
3.75	0.80	0.63	5.00	0.00	0.95	0.95
3.80	0.80	0.63	5.00	0.00	0.95	0.95
3.85	0.80	0.63	5.00	0.00	0.95	0.95
3.90	0.80	0.63	5.00	0.00	0.95	0.95
3.95	0.80	0.63	5.00	0.00	0.95	0.95
4.00	0.80	0.63	5.00	0.00	0.95	0.95
4.05	0.80	0.63	5.00	0.00	0.95	0.95
4.10	0.80	0.63	5.00	0.00	0.95	0.95
4.15	0.80	0.63	5.00	0.00	0.95	0.95
4.20	0.80	0.63	5.00	0.00	0.95	0.95
4.25	0.80	0.63	5.00	0.00	0.95	0.95
4.30	0.80	0.63	5.00	0.00	0.95	0.95
4.35	0.80	0.63	5.00	0.00	0.95	0.95
4.40	0.80	0.63	5.00	0.00	0.95	0.95
4.45	0.80	0.63	5.00	0.00	0.95	0.95
4.50	0.80	0.63	5.00	0.00	0.95	0.95
4.55	0.80	0.63	5.00	0.00	0.95	0.95
4.60	0.80	0.63	5.00	0.00	0.95	0.95
4.65	0.80	0.63	5.00	0.00	0.95	0.95
4.70	0.80	0.63	5.00	0.00	0.95	0.95
4.75	0.80	0.63	5.00	0.00	0.95	0.95
4.80	0.80	0.63	5.00	0.00	0.95	0.95
4.85	0.80	0.63	5.00	0.00	0.95	0.95
4.90	0.80	0.63	5.00	0.00	0.95	0.95
4.95	0.80	0.63	5.00	0.00	0.95	0.95
5.00	0.80	0.63	5.00	0.00	0.95	0.95
5.05	0.80	0.63	5.00	0.00	0.95	0.95
5.10	0.80	0.63	5.00	0.00	0.95	0.95
5.15	0.80	0.63	5.00	0.00	0.95	0.95
5.20	0.80	0.63	5.00	0.00	0.95	0.95
5.25	0.80	0.63	5.00	0.00	0.95	0.95
5.30	0.80	0.63	5.00	0.00	0.95	0.95
5.35	0.80	0.63	5.00	0.00	0.95	0.95
5.40	0.80	0.63	5.00	0.00	0.95	0.95
5.45	0.80	0.63	5.00	0.00	0.95	0.95
5.50	0.80	0.63	5.00	0.00	0.95	0.95
5.55	0.80	0.63	5.00	0.00	0.95	0.95
5.60	0.80	0.63	5.00	0.00	0.95	0.95
5.65	0.80	0.63	5.00	0.00	0.95	0.95
5.70	0.80	0.63	5.00	0.00	0.95	0.95

5.75	0.80	0.63	5.00	0.00	0.95	0.95
5.80	0.80	0.63	5.00	0.00	0.94	0.94
5.85	0.80	0.63	5.00	0.00	0.94	0.94
5.90	0.61	0.63	5.00	0.00	0.94	0.94
5.95	0.50	0.62	5.00	0.00	0.93	0.93
6.00	0.44	0.62	5.00	0.00	0.93	0.93
6.05	0.44	0.62	5.00	0.00	0.92	0.92
6.10	0.45	0.62	5.00	0.00	0.91	0.91
6.15	0.45	0.62	5.00	0.00	0.91	0.91
6.20	0.46	0.62	5.00	0.00	0.90	0.90
6.25	0.46	0.62	5.00	0.00	0.90	0.90
6.30	0.47	0.62	5.00	0.00	0.89	0.89
6.35	0.47	0.62	5.00	0.00	0.88	0.88
6.40	0.48	0.62	5.00	0.00	0.88	0.88
6.45	0.48	0.62	5.00	0.00	0.87	0.87
6.50	0.49	0.62	5.00	0.00	0.87	0.87
6.55	0.49	0.62	5.00	0.00	0.86	0.86
6.60	0.50	0.62	5.00	0.00	0.86	0.86
6.65	0.50	0.62	5.00	0.00	0.85	0.85
6.70	0.51	0.62	5.00	0.00	0.84	0.84
6.75	0.52	0.62	5.00	0.00	0.84	0.84
6.80	0.52	0.62	5.00	0.00	0.83	0.83
6.85	0.53	0.62	5.00	0.00	0.83	0.83
6.90	0.53	0.62	5.00	0.00	0.82	0.82
6.95	0.54	0.62	5.00	0.00	0.82	0.82
7.00	0.55	0.62	5.00	0.00	0.81	0.81
7.05	0.55	0.62	5.00	0.00	0.81	0.81
7.10	0.56	0.62	5.00	0.00	0.80	0.80
7.15	0.57	0.62	5.00	0.00	0.80	0.80
7.20	0.58	0.62	5.00	0.00	0.79	0.79
7.25	0.59	0.62	5.00	0.00	0.79	0.79
7.30	0.60	0.62	5.00	0.00	0.78	0.78
7.35	0.61	0.62	5.00	0.00	0.78	0.78
7.40	0.62	0.62	5.00	0.00	0.77	0.77
7.45	0.64	0.62	5.00	0.00	0.77	0.77
7.50	0.65	0.62	5.00	0.00	0.76	0.76
7.55	0.68	0.62	5.00	0.00	0.76	0.76
7.60	0.71	0.62	5.00	0.00	0.75	0.75
7.65	0.78	0.62	5.00	0.00	0.75	0.75
7.70	0.80	0.62	5.00	0.00	0.74	0.74
7.75	0.80	0.62	5.00	0.00	0.74	0.74
7.80	0.80	0.62	5.00	0.00	0.73	0.73
7.85	0.80	0.62	5.00	0.00	0.73	0.73
7.90	0.80	0.62	5.00	0.00	0.73	0.73
7.95	0.80	0.62	5.00	0.00	0.72	0.72
8.00	0.80	0.62	5.00	0.00	0.72	0.72
8.05	0.80	0.62	5.00	0.00	0.71	0.71
8.10	0.80	0.62	5.00	0.00	0.71	0.71
8.15	0.80	0.62	5.00	0.00	0.70	0.70
8.20	0.80	0.62	5.00	0.00	0.70	0.70
8.25	0.80	0.62	5.00	0.00	0.70	0.70
8.30	0.80	0.62	5.00	0.00	0.69	0.69
8.35	0.80	0.62	5.00	0.00	0.69	0.69
8.40	0.80	0.62	5.00	0.00	0.69	0.69
8.45	0.80	0.62	5.00	0.00	0.68	0.68
8.50	0.80	0.62	5.00	0.00	0.68	0.68
8.55	0.80	0.62	5.00	0.00	0.68	0.68
8.60	0.80	0.62	5.00	0.00	0.67	0.67
8.65	0.80	0.62	5.00	0.00	0.67	0.67
8.70	0.80	0.62	5.00	0.00	0.67	0.67
8.75	0.80	0.62	5.00	0.00	0.66	0.66
8.80	0.80	0.62	5.00	0.00	0.66	0.66
8.85	0.80	0.62	5.00	0.00	0.66	0.66

8.90	0.80	0.62	5.00	0.00	0.65	0.65
8.95	0.80	0.62	5.00	0.00	0.65	0.65
9.00	0.80	0.62	5.00	0.00	0.65	0.65
9.05	0.80	0.62	5.00	0.00	0.65	0.65
9.10	0.80	0.62	5.00	0.00	0.65	0.65
9.15	0.80	0.62	5.00	0.00	0.64	0.64
9.20	0.80	0.62	5.00	0.00	0.64	0.64
9.25	0.80	0.62	5.00	0.00	0.64	0.64
9.30	0.80	0.62	5.00	0.00	0.64	0.64
9.35	0.80	0.62	5.00	0.00	0.64	0.64
9.40	0.80	0.62	5.00	0.00	0.64	0.64
9.45	0.80	0.62	5.00	0.00	0.64	0.64
9.50	0.80	0.62	5.00	0.00	0.64	0.64
9.55	0.80	0.62	5.00	0.00	0.64	0.64
9.60	0.80	0.62	5.00	0.00	0.64	0.64
9.65	0.80	0.62	5.00	0.00	0.64	0.64
9.70	0.80	0.62	5.00	0.00	0.64	0.64
9.75	0.80	0.62	5.00	0.00	0.64	0.64
9.80	0.80	0.62	5.00	0.00	0.64	0.64
9.85	0.80	0.62	5.00	0.00	0.64	0.64
9.90	0.80	0.62	5.00	0.00	0.64	0.64
9.95	0.80	0.62	5.00	0.00	0.64	0.64
10.00	0.80	0.62	5.00	0.00	0.64	0.64
10.05	0.80	0.62	5.00	0.00	0.63	0.63
10.10	0.80	0.62	5.00	0.00	0.63	0.63
10.15	0.80	0.62	5.00	0.00	0.63	0.63
10.20	0.80	0.62	5.00	0.00	0.63	0.63
10.25	0.80	0.62	5.00	0.00	0.63	0.63
10.30	0.80	0.62	5.00	0.00	0.63	0.63
10.35	0.80	0.62	5.00	0.00	0.63	0.63
10.40	0.80	0.62	5.00	0.00	0.63	0.63
10.45	0.80	0.62	5.00	0.00	0.63	0.63
10.50	0.80	0.62	5.00	0.00	0.63	0.63
10.55	0.80	0.62	5.00	0.00	0.63	0.63
10.60	0.80	0.62	5.00	0.00	0.63	0.63
10.65	0.80	0.62	5.00	0.00	0.63	0.63
10.70	0.80	0.62	5.00	0.00	0.63	0.63
10.75	0.80	0.62	5.00	0.00	0.63	0.63
10.80	0.80	0.62	5.00	0.00	0.63	0.63
10.85	0.80	0.62	5.00	0.00	0.63	0.63
10.90	0.80	0.62	5.00	0.00	0.62	0.62
10.95	0.80	0.62	5.00	0.00	0.62	0.62
11.00	0.80	0.62	5.00	0.00	0.62	0.62
11.05	0.80	0.62	5.00	0.00	0.62	0.62
11.10	0.80	0.62	5.00	0.00	0.62	0.62
11.15	0.80	0.62	5.00	0.00	0.62	0.62
11.20	0.80	0.62	5.00	0.00	0.62	0.62
11.25	0.80	0.62	5.00	0.00	0.62	0.62
11.30	0.80	0.62	5.00	0.00	0.62	0.62
11.35	0.80	0.62	5.00	0.00	0.62	0.62
11.40	0.80	0.62	5.00	0.00	0.62	0.62
11.45	0.80	0.62	5.00	0.00	0.62	0.62
11.50	0.80	0.62	5.00	0.00	0.62	0.62
11.55	0.80	0.62	5.00	0.00	0.62	0.62
11.60	0.80	0.62	5.00	0.00	0.62	0.62
11.65	0.80	0.62	5.00	0.00	0.61	0.61
11.70	0.80	0.62	5.00	0.00	0.61	0.61
11.75	0.80	0.62	5.00	0.00	0.61	0.61
11.80	0.80	0.62	5.00	0.00	0.61	0.61
11.85	0.80	0.62	5.00	0.00	0.61	0.61
11.90	0.80	0.62	5.00	0.00	0.61	0.61
11.95	0.80	0.62	5.00	0.00	0.61	0.61
12.00	0.80	0.62	5.00	0.00	0.61	0.61

12.05	0.80	0.62	5.00	0.00	0.61	0.61
12.10	0.80	0.62	5.00	0.00	0.61	0.61
12.15	0.80	0.62	5.00	0.00	0.61	0.61
12.20	0.80	0.62	5.00	0.00	0.61	0.61
12.25	0.80	0.62	5.00	0.00	0.60	0.60
12.30	0.80	0.62	5.00	0.00	0.60	0.60
12.35	0.80	0.62	5.00	0.00	0.60	0.60
12.40	0.80	0.62	5.00	0.00	0.60	0.60
12.45	0.80	0.62	5.00	0.00	0.60	0.60
12.50	0.80	0.62	5.00	0.00	0.60	0.60
12.55	0.80	0.62	5.00	0.00	0.60	0.60
12.60	0.80	0.62	5.00	0.00	0.60	0.60
12.65	0.80	0.62	5.00	0.00	0.60	0.60
12.70	0.80	0.61	5.00	0.00	0.60	0.60
12.75	0.80	0.61	5.00	0.00	0.60	0.60
12.80	0.80	0.61	5.00	0.00	0.59	0.59
12.85	0.80	0.61	5.00	0.00	0.59	0.59
12.90	0.80	0.61	5.00	0.00	0.59	0.59
12.95	0.80	0.61	5.00	0.00	0.59	0.59
13.00	0.80	0.61	5.00	0.00	0.59	0.59
13.05	0.80	0.61	5.00	0.00	0.59	0.59
13.10	0.80	0.61	5.00	0.00	0.59	0.59
13.15	0.80	0.61	5.00	0.00	0.59	0.59
13.20	0.80	0.61	5.00	0.00	0.59	0.59
13.25	0.80	0.61	5.00	0.00	0.59	0.59
13.30	0.80	0.61	5.00	0.00	0.58	0.58
13.35	0.80	0.61	5.00	0.00	0.58	0.58
13.40	0.80	0.61	5.00	0.00	0.58	0.58
13.45	0.80	0.61	5.00	0.00	0.58	0.58
13.50	0.80	0.61	5.00	0.00	0.58	0.58
13.55	0.80	0.61	5.00	0.00	0.58	0.58
13.60	0.80	0.61	5.00	0.00	0.58	0.58
13.65	0.80	0.61	5.00	0.00	0.58	0.58
13.70	0.80	0.61	5.00	0.00	0.57	0.57
13.75	0.80	0.61	5.00	0.00	0.57	0.57
13.80	0.80	0.61	5.00	0.00	0.57	0.57
13.85	0.80	0.61	5.00	0.00	0.57	0.57
13.90	0.80	0.61	5.00	0.00	0.57	0.57
13.95	0.80	0.61	5.00	0.00	0.57	0.57
14.00	0.80	0.61	5.00	0.00	0.57	0.57
14.05	0.80	0.61	5.00	0.00	0.56	0.56
14.10	0.80	0.61	5.00	0.00	0.56	0.56
14.15	0.80	0.61	5.00	0.00	0.56	0.56
14.20	0.80	0.61	5.00	0.00	0.56	0.56
14.25	0.80	0.61	5.00	0.00	0.56	0.56
14.30	0.80	0.61	5.00	0.00	0.56	0.56
14.35	0.80	0.61	5.00	0.00	0.55	0.55
14.40	0.80	0.61	5.00	0.00	0.55	0.55
14.45	0.80	0.61	5.00	0.00	0.55	0.55
14.50	0.80	0.61	5.00	0.00	0.55	0.55
14.55	0.80	0.61	5.00	0.00	0.55	0.55
14.60	0.80	0.61	5.00	0.00	0.55	0.55
14.65	0.80	0.61	5.00	0.00	0.54	0.54
14.70	0.80	0.61	5.00	0.00	0.54	0.54
14.75	0.80	0.61	5.00	0.00	0.54	0.54
14.80	0.80	0.61	5.00	0.00	0.54	0.54
14.85	0.80	0.61	5.00	0.00	0.54	0.54
14.90	0.80	0.61	5.00	0.00	0.54	0.54
14.95	0.80	0.61	5.00	0.00	0.53	0.53
15.00	0.80	0.61	5.00	0.00	0.53	0.53
15.05	0.80	0.61	5.00	0.00	0.53	0.53
15.10	0.80	0.61	5.00	0.00	0.53	0.53
15.15	0.80	0.61	5.00	0.00	0.53	0.53

15.20	0.80	0.61	5.00	0.00	0.53	0.53
15.25	0.80	0.61	5.00	0.00	0.53	0.53
15.30	0.80	0.61	5.00	0.00	0.52	0.52
15.35	0.80	0.61	5.00	0.00	0.52	0.52
15.40	0.80	0.61	5.00	0.00	0.52	0.52
15.45	0.80	0.61	5.00	0.00	0.52	0.52
15.50	0.80	0.61	5.00	0.00	0.52	0.52
15.55	0.80	0.61	5.00	0.00	0.52	0.52
15.60	0.80	0.61	5.00	0.00	0.51	0.51
15.65	0.80	0.61	5.00	0.00	0.51	0.51
15.70	0.80	0.61	5.00	0.00	0.51	0.51
15.75	0.80	0.61	5.00	0.00	0.51	0.51
15.80	0.80	0.61	5.00	0.00	0.51	0.51
15.85	0.80	0.61	5.00	0.00	0.51	0.51
15.90	0.80	0.61	5.00	0.00	0.50	0.50
15.95	0.80	0.61	5.00	0.00	0.50	0.50
16.00	0.80	0.61	5.00	0.00	0.50	0.50
16.05	0.80	0.61	5.00	0.00	0.50	0.50
16.10	0.80	0.61	5.00	0.00	0.50	0.50
16.15	0.80	0.61	5.00	0.00	0.49	0.49
16.20	0.80	0.61	5.00	0.00	0.49	0.49
16.25	0.80	0.61	5.00	0.00	0.49	0.49
16.30	0.80	0.61	5.00	0.00	0.49	0.49
16.35	0.80	0.61	5.00	0.00	0.49	0.49
16.40	0.80	0.61	5.00	0.00	0.49	0.49
16.45	0.80	0.61	5.00	0.00	0.48	0.48
16.50	0.80	0.61	5.00	0.00	0.48	0.48
16.55	0.80	0.61	5.00	0.00	0.48	0.48
16.60	0.80	0.61	5.00	0.00	0.48	0.48
16.65	0.80	0.61	5.00	0.00	0.48	0.48
16.70	0.80	0.61	5.00	0.00	0.48	0.48
16.75	0.80	0.61	5.00	0.00	0.48	0.48
16.80	0.80	0.61	5.00	0.00	0.48	0.48
16.85	0.80	0.61	5.00	0.00	0.47	0.47
16.90	0.80	0.61	5.00	0.00	0.47	0.47
16.95	0.80	0.61	5.00	0.00	0.47	0.47
17.00	0.80	0.61	5.00	0.00	0.47	0.47
17.05	0.80	0.61	5.00	0.00	0.47	0.47
17.10	0.80	0.61	5.00	0.00	0.47	0.47
17.15	0.80	0.61	5.00	0.00	0.47	0.47
17.20	0.80	0.61	5.00	0.00	0.47	0.47
17.25	0.80	0.61	5.00	0.00	0.46	0.46
17.30	0.80	0.61	5.00	0.00	0.46	0.46
17.35	0.80	0.61	5.00	0.00	0.46	0.46
17.40	0.80	0.61	5.00	0.00	0.46	0.46
17.45	0.80	0.61	5.00	0.00	0.46	0.46
17.50	0.80	0.61	5.00	0.00	0.46	0.46
17.55	0.80	0.61	5.00	0.00	0.46	0.46
17.60	0.80	0.61	5.00	0.00	0.46	0.46
17.65	0.80	0.61	5.00	0.00	0.46	0.46
17.70	0.80	0.61	5.00	0.00	0.46	0.46
17.75	0.80	0.61	5.00	0.00	0.45	0.45
17.80	0.80	0.61	5.00	0.00	0.45	0.45
17.85	0.80	0.61	5.00	0.00	0.45	0.45
17.90	0.80	0.61	5.00	0.00	0.45	0.45
17.95	0.80	0.61	5.00	0.00	0.45	0.45
18.00	0.80	0.61	5.00	0.00	0.45	0.45
18.05	0.80	0.61	5.00	0.00	0.45	0.45
18.10	0.80	0.61	5.00	0.00	0.45	0.45
18.15	0.80	0.61	5.00	0.00	0.45	0.45
18.20	0.80	0.61	5.00	0.00	0.45	0.45
18.25	0.80	0.61	5.00	0.00	0.45	0.45
18.30	0.80	0.61	5.00	0.00	0.44	0.44

18.35	0.80	0.61	5.00	0.00	0.44	0.44
18.40	0.80	0.61	5.00	0.00	0.44	0.44
18.45	0.80	0.61	5.00	0.00	0.44	0.44
18.50	0.80	0.61	5.00	0.00	0.44	0.44
18.55	0.80	0.61	5.00	0.00	0.44	0.44
18.60	0.80	0.61	5.00	0.00	0.44	0.44
18.65	0.80	0.61	5.00	0.00	0.44	0.44
18.70	0.80	0.61	5.00	0.00	0.44	0.44
18.75	0.80	0.61	5.00	0.00	0.44	0.44
18.80	0.80	0.61	5.00	0.00	0.44	0.44
18.85	0.80	0.61	5.00	0.00	0.44	0.44
18.90	0.80	0.61	5.00	0.00	0.43	0.43
18.95	0.80	0.61	5.00	0.00	0.43	0.43
19.00	0.80	0.61	5.00	0.00	0.43	0.43
19.05	0.80	0.61	5.00	0.00	0.43	0.43
19.10	0.80	0.61	5.00	0.00	0.43	0.43
19.15	0.80	0.61	5.00	0.00	0.43	0.43
19.20	0.80	0.61	5.00	0.00	0.43	0.43
19.25	0.80	0.61	5.00	0.00	0.43	0.43
19.30	0.80	0.61	5.00	0.00	0.43	0.43
19.35	0.80	0.61	5.00	0.00	0.43	0.43
19.40	0.80	0.61	5.00	0.00	0.43	0.43
19.45	0.80	0.61	5.00	0.00	0.43	0.43
19.50	0.80	0.60	5.00	0.00	0.43	0.43
19.55	0.80	0.60	5.00	0.00	0.42	0.42
19.60	0.80	0.60	5.00	0.00	0.42	0.42
19.65	0.80	0.60	5.00	0.00	0.42	0.42
19.70	0.80	0.60	5.00	0.00	0.42	0.42
19.75	0.80	0.60	5.00	0.00	0.42	0.42
19.80	0.80	0.60	5.00	0.00	0.42	0.42
19.85	0.80	0.60	5.00	0.00	0.42	0.42
19.90	0.80	0.60	5.00	0.00	0.42	0.42
19.95	0.80	0.60	5.00	0.00	0.42	0.42
20.00	0.80	0.60	5.00	0.00	0.42	0.42
20.05	0.80	0.60	5.00	0.00	0.42	0.42
20.10	0.80	0.60	5.00	0.00	0.42	0.42
20.15	0.80	0.60	5.00	0.00	0.42	0.42
20.20	0.80	0.60	5.00	0.00	0.42	0.42
20.25	0.80	0.60	5.00	0.00	0.42	0.42
20.30	0.80	0.60	5.00	0.00	0.41	0.41
20.35	0.80	0.60	5.00	0.00	0.41	0.41
20.40	0.80	0.60	5.00	0.00	0.41	0.41
20.45	0.80	0.60	5.00	0.00	0.41	0.41
20.50	0.80	0.60	5.00	0.00	0.41	0.41
20.55	0.80	0.60	5.00	0.00	0.41	0.41
20.60	0.80	0.60	5.00	0.00	0.41	0.41
20.65	0.80	0.60	5.00	0.00	0.41	0.41
20.70	0.80	0.60	5.00	0.00	0.41	0.41
20.75	0.80	0.60	5.00	0.00	0.41	0.41
20.80	0.80	0.60	5.00	0.00	0.41	0.41
20.85	0.80	0.60	5.00	0.00	0.41	0.41
20.90	0.80	0.60	5.00	0.00	0.41	0.41
20.95	0.80	0.60	5.00	0.00	0.41	0.41
21.00	0.80	0.60	5.00	0.00	0.41	0.41
21.05	0.80	0.60	5.00	0.00	0.41	0.41
21.10	0.80	0.60	5.00	0.00	0.41	0.41
21.15	0.80	0.60	5.00	0.00	0.41	0.41
21.20	0.80	0.60	5.00	0.00	0.41	0.41
21.25	0.80	0.60	5.00	0.00	0.41	0.41
21.30	0.80	0.60	5.00	0.00	0.41	0.41
21.35	0.80	0.60	5.00	0.00	0.41	0.41
21.40	0.80	0.60	5.00	0.00	0.41	0.41
21.45	0.80	0.60	5.00	0.00	0.41	0.41

21.50	0.80	0.60	5.00	0.00	0.41	0.41
21.55	0.80	0.60	5.00	0.00	0.41	0.41
21.60	0.80	0.60	5.00	0.00	0.41	0.41
21.65	0.80	0.60	5.00	0.00	0.41	0.41
21.70	0.80	0.60	5.00	0.00	0.41	0.41
21.75	0.80	0.60	5.00	0.00	0.41	0.41
21.80	0.80	0.60	5.00	0.00	0.41	0.41
21.85	0.80	0.60	5.00	0.00	0.41	0.41
21.90	0.80	0.60	5.00	0.00	0.40	0.40
21.95	0.80	0.60	5.00	0.00	0.40	0.40
22.00	0.80	0.60	5.00	0.00	0.40	0.40
22.05	0.80	0.60	5.00	0.00	0.40	0.40
22.10	0.80	0.60	5.00	0.00	0.40	0.40
22.15	0.80	0.60	5.00	0.00	0.40	0.40
22.20	0.80	0.60	5.00	0.00	0.40	0.40
22.25	0.80	0.60	5.00	0.00	0.40	0.40
22.30	0.80	0.60	5.00	0.00	0.40	0.40
22.35	0.80	0.60	5.00	0.00	0.40	0.40
22.40	0.80	0.60	5.00	0.00	0.40	0.40
22.45	0.80	0.60	5.00	0.00	0.40	0.40
22.50	0.80	0.60	5.00	0.00	0.40	0.40
22.55	0.80	0.60	5.00	0.00	0.40	0.40
22.60	0.80	0.60	5.00	0.00	0.40	0.40
22.65	0.80	0.60	5.00	0.00	0.40	0.40
22.70	0.80	0.60	5.00	0.00	0.40	0.40
22.75	0.80	0.60	5.00	0.00	0.40	0.40
22.80	0.80	0.60	5.00	0.00	0.40	0.40
22.85	0.80	0.60	5.00	0.00	0.40	0.40
22.90	0.80	0.60	5.00	0.00	0.40	0.40
22.95	0.80	0.60	5.00	0.00	0.40	0.40
23.00	0.80	0.60	5.00	0.00	0.40	0.40
23.05	0.80	0.60	5.00	0.00	0.40	0.40
23.10	0.80	0.60	5.00	0.00	0.40	0.40
23.15	0.80	0.60	5.00	0.00	0.40	0.40
23.20	0.80	0.60	5.00	0.00	0.40	0.40
23.25	0.80	0.60	5.00	0.00	0.40	0.40
23.30	0.80	0.60	5.00	0.00	0.40	0.40
23.35	0.80	0.60	5.00	0.00	0.40	0.40
23.40	0.80	0.60	5.00	0.00	0.40	0.40
23.45	0.80	0.60	5.00	0.00	0.40	0.40
23.50	0.80	0.60	5.00	0.00	0.40	0.40
23.55	0.80	0.60	5.00	0.00	0.39	0.39
23.60	0.80	0.60	5.00	0.00	0.39	0.39
23.65	0.80	0.60	5.00	0.00	0.39	0.39
23.70	0.80	0.60	5.00	0.00	0.39	0.39
23.75	0.80	0.60	5.00	0.00	0.39	0.39
23.80	0.80	0.60	5.00	0.00	0.39	0.39
23.85	0.80	0.60	5.00	0.00	0.39	0.39
23.90	0.80	0.60	5.00	0.00	0.39	0.39
23.95	0.80	0.60	5.00	0.00	0.39	0.39
24.00	0.80	0.60	5.00	0.00	0.39	0.39
24.05	0.80	0.60	5.00	0.00	0.39	0.39
24.10	0.80	0.60	5.00	0.00	0.39	0.39
24.15	0.80	0.60	5.00	0.00	0.39	0.39
24.20	0.80	0.60	5.00	0.00	0.39	0.39
24.25	0.80	0.60	5.00	0.00	0.39	0.39
24.30	0.80	0.60	5.00	0.00	0.39	0.39
24.35	0.80	0.60	5.00	0.00	0.39	0.39
24.40	0.80	0.60	5.00	0.00	0.39	0.39
24.45	0.80	0.60	5.00	0.00	0.39	0.39
24.50	0.80	0.60	5.00	0.00	0.39	0.39
24.55	0.80	0.60	5.00	0.00	0.39	0.39
24.60	0.80	0.60	5.00	0.00	0.39	0.39

24.65	0.80	0.60	5.00	0.00	0.39	0.39
24.70	0.80	0.60	5.00	0.00	0.39	0.39
24.75	0.80	0.60	5.00	0.00	0.39	0.39
24.80	0.80	0.60	5.00	0.00	0.39	0.39
24.85	0.80	0.60	5.00	0.00	0.39	0.39
24.90	0.80	0.60	5.00	0.00	0.39	0.39
24.95	0.80	0.60	5.00	0.00	0.39	0.39
25.00	0.80	0.60	5.00	0.00	0.39	0.39
25.05	0.80	0.60	5.00	0.00	0.38	0.38
25.10	0.80	0.60	5.00	0.00	0.38	0.38
25.15	0.80	0.60	5.00	0.00	0.38	0.38
25.20	0.80	0.60	5.00	0.00	0.38	0.38
25.25	0.80	0.60	5.00	0.00	0.38	0.38
25.30	0.80	0.60	5.00	0.00	0.38	0.38
25.35	0.80	0.60	5.00	0.00	0.38	0.38
25.40	0.80	0.60	5.00	0.00	0.38	0.38
25.45	0.80	0.60	5.00	0.00	0.38	0.38
25.50	0.80	0.60	5.00	0.00	0.38	0.38
25.55	0.80	0.60	5.00	0.00	0.38	0.38
25.60	0.80	0.60	5.00	0.00	0.38	0.38
25.65	0.80	0.60	5.00	0.00	0.38	0.38
25.70	0.80	0.60	5.00	0.00	0.38	0.38
25.75	0.80	0.60	5.00	0.00	0.38	0.38
25.80	0.80	0.60	5.00	0.00	0.38	0.38
25.85	0.80	0.60	5.00	0.00	0.38	0.38
25.90	0.80	0.60	5.00	0.00	0.38	0.38
25.95	0.80	0.60	5.00	0.00	0.38	0.38
26.00	0.80	0.60	5.00	0.00	0.38	0.38
26.05	0.80	0.60	5.00	0.00	0.38	0.38
26.10	0.80	0.60	5.00	0.00	0.38	0.38
26.15	0.80	0.60	5.00	0.00	0.38	0.38
26.20	0.80	0.60	5.00	0.00	0.38	0.38
26.25	0.80	0.59	5.00	0.00	0.38	0.38
26.30	0.80	0.59	5.00	0.00	0.38	0.38
26.35	0.80	0.59	5.00	0.00	0.38	0.38
26.40	0.80	0.59	5.00	0.00	0.37	0.37
26.45	0.80	0.59	5.00	0.00	0.37	0.37
26.50	0.80	0.59	5.00	0.00	0.37	0.37
26.55	0.80	0.59	5.00	0.00	0.37	0.37
26.60	0.80	0.59	5.00	0.00	0.37	0.37
26.65	0.80	0.59	5.00	0.00	0.37	0.37
26.70	0.80	0.59	5.00	0.00	0.37	0.37
26.75	0.80	0.59	5.00	0.00	0.37	0.37
26.80	0.80	0.59	5.00	0.00	0.37	0.37
26.85	0.80	0.59	5.00	0.00	0.37	0.37
26.90	0.80	0.59	5.00	0.00	0.37	0.37
26.95	0.80	0.59	5.00	0.00	0.37	0.37
27.00	0.80	0.59	5.00	0.00	0.37	0.37
27.05	0.80	0.59	5.00	0.00	0.37	0.37
27.10	0.80	0.59	5.00	0.00	0.37	0.37
27.15	0.80	0.59	5.00	0.00	0.37	0.37
27.20	0.80	0.59	5.00	0.00	0.37	0.37
27.25	0.80	0.59	5.00	0.00	0.37	0.37
27.30	0.80	0.59	5.00	0.00	0.37	0.37
27.35	0.80	0.59	5.00	0.00	0.37	0.37
27.40	0.80	0.59	5.00	0.00	0.37	0.37
27.45	0.80	0.59	5.00	0.00	0.37	0.37
27.50	0.80	0.59	5.00	0.00	0.37	0.37
27.55	0.80	0.59	5.00	0.00	0.37	0.37
27.60	0.80	0.59	5.00	0.00	0.37	0.37
27.65	0.80	0.59	5.00	0.00	0.37	0.37
27.70	0.80	0.59	5.00	0.00	0.36	0.36
27.75	0.80	0.59	5.00	0.00	0.36	0.36

27.80	0.80	0.59	5.00	0.00	0.36	0.36
27.85	0.80	0.59	5.00	0.00	0.36	0.36
27.90	0.80	0.59	5.00	0.00	0.36	0.36
27.95	0.80	0.59	5.00	0.00	0.36	0.36
28.00	0.80	0.59	5.00	0.00	0.36	0.36
28.05	0.80	0.59	5.00	0.00	0.36	0.36
28.10	0.80	0.59	5.00	0.00	0.36	0.36
28.15	0.80	0.59	5.00	0.00	0.36	0.36
28.20	0.80	0.59	5.00	0.00	0.36	0.36
28.25	0.80	0.59	5.00	0.00	0.36	0.36
28.30	0.80	0.59	5.00	0.00	0.36	0.36
28.35	0.80	0.59	5.00	0.00	0.36	0.36
28.40	0.80	0.59	5.00	0.00	0.36	0.36
28.45	0.79	0.59	5.00	0.00	0.36	0.36
28.50	0.79	0.59	5.00	0.00	0.36	0.36
28.55	0.79	0.59	5.00	0.00	0.36	0.36
28.60	0.79	0.59	5.00	0.00	0.36	0.36
28.65	0.79	0.59	5.00	0.00	0.36	0.36
28.70	0.79	0.59	5.00	0.00	0.36	0.36
28.75	0.79	0.59	5.00	0.00	0.35	0.35
28.80	0.79	0.59	5.00	0.00	0.35	0.35
28.85	0.79	0.59	5.00	0.00	0.35	0.35
28.90	0.79	0.59	5.00	0.00	0.35	0.35
28.95	0.79	0.59	5.00	0.00	0.35	0.35
29.00	0.79	0.59	5.00	0.00	0.35	0.35
29.05	0.79	0.59	5.00	0.00	0.35	0.35
29.10	0.79	0.59	5.00	0.00	0.35	0.35
29.15	0.79	0.59	5.00	0.00	0.35	0.35
29.20	0.79	0.59	5.00	0.00	0.35	0.35
29.25	0.79	0.59	5.00	0.00	0.35	0.35
29.30	0.79	0.59	5.00	0.00	0.35	0.35
29.35	0.79	0.59	5.00	0.00	0.35	0.35
29.40	0.79	0.59	5.00	0.00	0.35	0.35
29.45	0.79	0.59	5.00	0.00	0.35	0.35
29.50	0.79	0.59	5.00	0.00	0.35	0.35
29.55	0.79	0.59	5.00	0.00	0.34	0.34
29.60	0.79	0.59	5.00	0.00	0.34	0.34
29.65	0.79	0.59	5.00	0.00	0.34	0.34
29.70	0.79	0.59	5.00	0.00	0.34	0.34
29.75	0.79	0.59	5.00	0.00	0.34	0.34
29.80	0.79	0.59	5.00	0.00	0.34	0.34
29.85	0.79	0.59	5.00	0.00	0.34	0.34
29.90	0.79	0.59	5.00	0.00	0.34	0.34
29.95	0.79	0.59	5.00	0.00	0.34	0.34
30.00	0.79	0.59	5.00	0.00	0.34	0.34
30.05	0.79	0.59	5.00	0.00	0.34	0.34
30.10	0.79	0.59	5.00	0.00	0.34	0.34
30.15	0.79	0.59	5.00	0.00	0.33	0.33
30.20	0.79	0.59	5.00	0.00	0.33	0.33
30.25	0.79	0.59	5.00	0.00	0.33	0.33
30.30	0.79	0.59	5.00	0.00	0.33	0.33
30.35	0.79	0.59	5.00	0.00	0.33	0.33
30.40	0.79	0.59	5.00	0.00	0.33	0.33
30.45	0.79	0.59	5.00	0.00	0.33	0.33
30.50	0.79	0.59	5.00	0.00	0.33	0.33
30.55	0.79	0.59	5.00	0.00	0.33	0.33
30.60	0.78	0.59	5.00	0.00	0.32	0.32
30.65	0.78	0.59	5.00	0.00	0.32	0.32
30.70	0.78	0.59	5.00	0.00	0.32	0.32
30.75	0.78	0.59	5.00	0.00	0.32	0.32
30.80	0.78	0.59	5.00	0.00	0.32	0.32
30.85	0.78	0.58	5.00	0.00	0.32	0.32
30.90	0.78	0.58	5.00	0.00	0.32	0.32

30.95	0.78	0.58	5.00	0.00	0.31	0.31
31.00	0.78	0.58	5.00	0.00	0.31	0.31
31.05	0.78	0.58	5.00	0.00	0.31	0.31
31.10	0.78	0.58	5.00	0.00	0.31	0.31
31.15	0.78	0.58	5.00	0.00	0.31	0.31
31.20	0.78	0.58	5.00	0.00	0.30	0.30
31.25	0.78	0.58	5.00	0.00	0.30	0.30
31.30	0.78	0.58	5.00	0.00	0.30	0.30
31.35	0.78	0.58	5.00	0.00	0.30	0.30
31.40	0.78	0.58	5.00	0.00	0.30	0.30
31.45	0.78	0.58	5.00	0.00	0.29	0.29
31.50	0.78	0.58	5.00	0.00	0.29	0.29
31.55	0.78	0.58	5.00	0.00	0.29	0.29
31.60	0.78	0.58	5.00	0.00	0.29	0.29
31.65	0.78	0.58	5.00	0.00	0.29	0.29
31.70	0.78	0.58	5.00	0.00	0.28	0.28
31.75	0.78	0.58	5.00	0.00	0.28	0.28
31.80	0.78	0.58	5.00	0.00	0.28	0.28
31.85	0.78	0.58	5.00	0.00	0.28	0.28
31.90	0.78	0.58	5.00	0.00	0.28	0.28
31.95	0.78	0.58	5.00	0.00	0.28	0.28
32.00	0.78	0.58	5.00	0.00	0.28	0.28
32.05	0.78	0.58	5.00	0.00	0.27	0.27
32.10	0.78	0.58	5.00	0.00	0.27	0.27
32.15	0.78	0.58	5.00	0.00	0.27	0.27
32.20	0.78	0.58	5.00	0.00	0.27	0.27
32.25	0.78	0.58	5.00	0.00	0.27	0.27
32.30	0.78	0.58	5.00	0.00	0.27	0.27
32.35	0.78	0.58	5.00	0.00	0.26	0.26
32.40	0.78	0.58	5.00	0.00	0.26	0.26
32.45	0.78	0.58	5.00	0.00	0.26	0.26
32.50	0.78	0.58	5.00	0.00	0.26	0.26
32.55	0.78	0.58	5.00	0.00	0.26	0.26
32.60	0.78	0.58	5.00	0.00	0.26	0.26
32.65	0.78	0.58	5.00	0.00	0.26	0.26
32.70	0.78	0.58	5.00	0.00	0.26	0.26
32.75	0.77	0.58	5.00	0.00	0.25	0.25
32.80	0.77	0.57	5.00	0.00	0.25	0.25
32.85	0.77	0.57	5.00	0.00	0.25	0.25
32.90	0.77	0.57	5.00	0.00	0.25	0.25
32.95	0.77	0.57	5.00	0.00	0.25	0.25
33.00	0.77	0.57	5.00	0.00	0.25	0.25
33.05	0.77	0.57	5.00	0.00	0.25	0.25
33.10	0.77	0.57	5.00	0.00	0.24	0.24
33.15	0.77	0.57	5.00	0.00	0.24	0.24
33.20	0.77	0.57	5.00	0.00	0.24	0.24
33.25	0.77	0.57	5.00	0.00	0.24	0.24
33.30	0.77	0.57	5.00	0.00	0.24	0.24
33.35	0.77	0.57	5.00	0.00	0.24	0.24
33.40	0.77	0.57	5.00	0.00	0.24	0.24
33.45	0.77	0.57	5.00	0.00	0.24	0.24
33.50	0.77	0.57	5.00	0.00	0.23	0.23
33.55	0.77	0.57	5.00	0.00	0.23	0.23
33.60	0.77	0.57	5.00	0.00	0.23	0.23
33.65	0.77	0.57	5.00	0.00	0.23	0.23
33.70	0.77	0.57	5.00	0.00	0.23	0.23
33.75	0.77	0.57	5.00	0.00	0.23	0.23
33.80	0.77	0.57	5.00	0.00	0.23	0.23
33.85	0.77	0.57	5.00	0.00	0.23	0.23
33.90	0.77	0.57	5.00	0.00	0.22	0.22
33.95	0.77	0.57	5.00	0.00	0.22	0.22
34.00	0.77	0.57	5.00	0.00	0.22	0.22
34.05	0.77	0.57	5.00	0.00	0.22	0.22

34.10	0.77	0.57	5.00	0.00	0.22	0.22
34.15	0.77	0.57	5.00	0.00	0.22	0.22
34.20	0.77	0.57	5.00	0.00	0.22	0.22
34.25	0.77	0.57	5.00	0.00	0.22	0.22
34.30	0.77	0.57	5.00	0.00	0.22	0.22
34.35	0.77	0.57	5.00	0.00	0.21	0.21
34.40	0.77	0.57	5.00	0.00	0.21	0.21
34.45	0.77	0.57	5.00	0.00	0.21	0.21
34.50	0.77	0.57	5.00	0.00	0.21	0.21
34.55	0.77	0.57	5.00	0.00	0.21	0.21
34.60	0.77	0.57	5.00	0.00	0.21	0.21
34.65	0.77	0.57	5.00	0.00	0.21	0.21
34.70	0.77	0.57	5.00	0.00	0.21	0.21
34.75	0.77	0.56	5.00	0.00	0.21	0.21
34.80	0.77	0.56	5.00	0.00	0.20	0.20
34.85	0.77	0.56	5.00	0.00	0.20	0.20
34.90	0.77	0.56	5.00	0.00	0.20	0.20
34.95	0.76	0.56	5.00	0.00	0.20	0.20
35.00	0.76	0.56	5.00	0.00	0.20	0.20
35.05	0.76	0.56	5.00	0.00	0.20	0.20
35.10	0.76	0.56	5.00	0.00	0.20	0.20
35.15	0.76	0.56	5.00	0.00	0.20	0.20
35.20	0.76	0.56	5.00	0.00	0.20	0.20
35.25	0.76	0.56	5.00	0.00	0.19	0.19
35.30	0.76	0.56	5.00	0.00	0.19	0.19
35.35	0.76	0.56	5.00	0.00	0.19	0.19
35.40	0.76	0.56	5.00	0.00	0.19	0.19
35.45	0.76	0.56	5.00	0.00	0.19	0.19
35.50	0.76	0.56	5.00	0.00	0.19	0.19
35.55	0.76	0.56	5.00	0.00	0.19	0.19
35.60	0.76	0.56	5.00	0.00	0.19	0.19
35.65	0.76	0.56	5.00	0.00	0.19	0.19
35.70	0.76	0.56	5.00	0.00	0.18	0.18
35.75	0.76	0.56	5.00	0.00	0.18	0.18
35.80	0.76	0.56	5.00	0.00	0.18	0.18
35.85	0.76	0.56	5.00	0.00	0.18	0.18
35.90	0.76	0.56	5.00	0.00	0.18	0.18
35.95	0.76	0.56	5.00	0.00	0.18	0.18
36.00	0.76	0.56	5.00	0.00	0.18	0.18
36.05	0.76	0.56	5.00	0.00	0.18	0.18
36.10	0.76	0.56	5.00	0.00	0.18	0.18
36.15	0.76	0.56	5.00	0.00	0.18	0.18
36.20	0.76	0.56	5.00	0.00	0.17	0.17
36.25	0.76	0.56	5.00	0.00	0.17	0.17
36.30	0.76	0.56	5.00	0.00	0.17	0.17
36.35	0.76	0.56	5.00	0.00	0.17	0.17
36.40	0.76	0.56	5.00	0.00	0.17	0.17
36.45	0.76	0.56	5.00	0.00	0.17	0.17
36.50	0.76	0.56	5.00	0.00	0.17	0.17
36.55	0.76	0.56	5.00	0.00	0.17	0.17
36.60	0.76	0.56	5.00	0.00	0.17	0.17
36.65	0.76	0.56	5.00	0.00	0.17	0.17
36.70	0.76	0.55	5.00	0.00	0.16	0.16
36.75	0.76	0.55	5.00	0.00	0.16	0.16
36.80	0.76	0.55	5.00	0.00	0.16	0.16
36.85	0.76	0.55	5.00	0.00	0.16	0.16
36.90	0.76	0.55	5.00	0.00	0.16	0.16
36.95	0.76	0.55	5.00	0.00	0.16	0.16
37.00	0.76	0.55	5.00	0.00	0.16	0.16
37.05	0.76	0.55	5.00	0.00	0.16	0.16
37.10	0.76	0.55	5.00	0.00	0.16	0.16
37.15	0.76	0.55	5.00	0.00	0.16	0.16
37.20	0.76	0.55	5.00	0.00	0.15	0.15

37.25	0.75	0.55	5.00	0.00	0.15	0.15
37.30	0.75	0.55	5.00	0.00	0.15	0.15
37.35	0.75	0.55	5.00	0.00	0.15	0.15
37.40	0.75	0.55	5.00	0.00	0.15	0.15
37.45	0.75	0.55	5.00	0.00	0.15	0.15
37.50	0.75	0.55	5.00	0.00	0.15	0.15
37.55	0.75	0.55	5.00	0.00	0.15	0.15
37.60	0.75	0.55	5.00	0.00	0.15	0.15
37.65	0.75	0.55	5.00	0.00	0.14	0.14
37.70	0.75	0.55	5.00	0.00	0.14	0.14
37.75	0.75	0.55	5.00	0.00	0.14	0.14
37.80	0.75	0.55	5.00	0.00	0.14	0.14
37.85	0.75	0.55	5.00	0.00	0.14	0.14
37.90	0.75	0.55	5.00	0.00	0.14	0.14
37.95	0.75	0.55	5.00	0.00	0.14	0.14
38.00	0.75	0.55	5.00	0.00	0.14	0.14
38.05	0.75	0.55	5.00	0.00	0.14	0.14
38.10	0.75	0.55	5.00	0.00	0.13	0.13
38.15	0.75	0.55	5.00	0.00	0.13	0.13
38.20	0.75	0.55	5.00	0.00	0.13	0.13
38.25	0.75	0.55	5.00	0.00	0.13	0.13
38.30	0.75	0.55	5.00	0.00	0.13	0.13
38.35	0.75	0.55	5.00	0.00	0.13	0.13
38.40	0.75	0.55	5.00	0.00	0.13	0.13
38.45	0.75	0.55	5.00	0.00	0.13	0.13
38.50	0.75	0.55	5.00	0.00	0.13	0.13
38.55	0.75	0.55	5.00	0.00	0.12	0.12
38.60	0.75	0.54	5.00	0.00	0.12	0.12
38.65	0.75	0.54	5.00	0.00	0.12	0.12
38.70	0.75	0.54	5.00	0.00	0.12	0.12
38.75	0.75	0.54	5.00	0.00	0.12	0.12
38.80	0.75	0.54	5.00	0.00	0.12	0.12
38.85	0.75	0.54	5.00	0.00	0.12	0.12
38.90	0.75	0.54	5.00	0.00	0.12	0.12
38.95	0.75	0.54	5.00	0.00	0.12	0.12
39.00	0.75	0.54	5.00	0.00	0.11	0.11
39.05	0.75	0.54	5.00	0.00	0.11	0.11
39.10	0.75	0.54	5.00	0.00	0.11	0.11
39.15	0.75	0.54	5.00	0.00	0.11	0.11
39.20	0.75	0.54	5.00	0.00	0.11	0.11
39.25	0.75	0.54	5.00	0.00	0.11	0.11
39.30	0.75	0.54	5.00	0.00	0.11	0.11
39.35	0.75	0.54	5.00	0.00	0.11	0.11
39.40	0.75	0.54	5.00	0.00	0.11	0.11
39.45	0.75	0.54	5.00	0.00	0.10	0.10
39.50	0.75	0.54	5.00	0.00	0.10	0.10
39.55	0.75	0.54	5.00	0.00	0.10	0.10
39.60	0.74	0.54	5.00	0.00	0.10	0.10
39.65	0.74	0.54	5.00	0.00	0.10	0.10
39.70	0.74	0.54	5.00	0.00	0.10	0.10
39.75	0.74	0.54	5.00	0.00	0.10	0.10
39.80	0.74	0.54	5.00	0.00	0.10	0.10
39.85	0.74	0.54	5.00	0.00	0.09	0.09
39.90	0.74	0.54	5.00	0.00	0.09	0.09
39.95	0.74	0.54	5.00	0.00	0.09	0.09
40.00	0.74	0.54	5.00	0.00	0.09	0.09
40.05	0.74	0.54	5.00	0.00	0.09	0.09
40.10	0.74	0.54	5.00	0.00	0.09	0.09
40.15	0.74	0.54	5.00	0.00	0.09	0.09
40.20	0.74	0.54	5.00	0.00	0.09	0.09
40.25	0.74	0.54	5.00	0.00	0.09	0.09
40.30	0.74	0.54	5.00	0.00	0.09	0.09
40.35	0.74	0.54	5.00	0.00	0.09	0.09

40.40	0.74	0.54	5.00	0.00	0.09	0.09
40.45	0.74	0.54	5.00	0.00	0.09	0.09
40.50	0.74	0.54	5.00	0.00	0.09	0.09
40.55	0.74	0.53	5.00	0.00	0.09	0.09
40.60	0.74	0.53	5.00	0.00	0.09	0.09
40.65	0.74	0.53	5.00	0.00	0.08	0.08
40.70	0.74	0.53	5.00	0.00	0.08	0.08
40.75	0.74	0.53	5.00	0.00	0.08	0.08
40.80	0.74	0.53	5.00	0.00	0.08	0.08
40.85	0.74	0.53	5.00	0.00	0.08	0.08
40.90	0.74	0.53	5.00	0.00	0.08	0.08
40.95	0.74	0.53	5.00	0.00	0.08	0.08
41.00	0.74	0.53	5.00	0.00	0.08	0.08
41.05	0.74	0.53	5.00	0.00	0.08	0.08
41.10	0.74	0.53	5.00	0.00	0.08	0.08
41.15	0.74	0.53	5.00	0.00	0.08	0.08
41.20	0.74	0.53	5.00	0.00	0.08	0.08
41.25	0.74	0.53	5.00	0.00	0.08	0.08
41.30	0.74	0.53	5.00	0.00	0.08	0.08
41.35	0.74	0.53	5.00	0.00	0.08	0.08
41.40	0.74	0.53	5.00	0.00	0.08	0.08
41.45	0.74	0.53	5.00	0.00	0.08	0.08
41.50	0.74	0.53	5.00	0.00	0.08	0.08
41.55	0.74	0.53	5.00	0.00	0.07	0.07
41.60	0.74	0.53	5.00	0.00	0.07	0.07
41.65	0.74	0.53	5.00	0.00	0.07	0.07
41.70	0.74	0.53	5.00	0.00	0.07	0.07
41.75	0.74	0.53	5.00	0.00	0.07	0.07
41.80	0.74	0.53	5.00	0.00	0.07	0.07
41.85	0.74	0.53	5.00	0.00	0.07	0.07
41.90	0.74	0.53	5.00	0.00	0.07	0.07
41.95	0.74	0.53	5.00	0.00	0.07	0.07
42.00	0.74	0.53	5.00	0.00	0.07	0.07
42.05	0.74	0.53	5.00	0.00	0.07	0.07
42.10	0.73	0.53	5.00	0.00	0.07	0.07
42.15	0.73	0.53	5.00	0.00	0.07	0.07
42.20	0.73	0.53	5.00	0.00	0.07	0.07
42.25	0.73	0.53	5.00	0.00	0.07	0.07
42.30	0.73	0.53	5.00	0.00	0.07	0.07
42.35	0.73	0.53	5.00	0.00	0.07	0.07
42.40	0.73	0.53	5.00	0.00	0.07	0.07
42.45	0.73	0.53	5.00	0.00	0.07	0.07
42.50	0.73	0.52	5.00	0.00	0.07	0.07
42.55	0.73	0.52	5.00	0.00	0.07	0.07
42.60	0.73	0.52	5.00	0.00	0.06	0.06
42.65	0.73	0.52	5.00	0.00	0.06	0.06
42.70	0.73	0.52	5.00	0.00	0.06	0.06
42.75	0.73	0.52	5.00	0.00	0.06	0.06
42.80	0.73	0.52	5.00	0.00	0.06	0.06
42.85	0.73	0.52	5.00	0.00	0.06	0.06
42.90	0.73	0.52	5.00	0.00	0.06	0.06
42.95	0.73	0.52	5.00	0.00	0.06	0.06
43.00	0.73	0.52	5.00	0.00	0.06	0.06
43.05	0.73	0.52	5.00	0.00	0.06	0.06
43.10	0.73	0.52	5.00	0.00	0.06	0.06
43.15	0.73	0.52	5.00	0.00	0.06	0.06
43.20	0.73	0.52	5.00	0.00	0.06	0.06
43.25	0.73	0.52	5.00	0.00	0.06	0.06
43.30	0.73	0.52	5.00	0.00	0.06	0.06
43.35	0.73	0.52	5.00	0.00	0.06	0.06
43.40	0.73	0.52	5.00	0.00	0.06	0.06
43.45	0.73	0.52	5.00	0.00	0.06	0.06
43.50	0.73	0.52	5.00	0.00	0.06	0.06

43.55	0.73	0.52	5.00	0.00	0.06	0.06
43.60	0.73	0.52	5.00	0.00	0.06	0.06
43.65	0.73	0.52	5.00	0.00	0.06	0.06
43.70	0.73	0.52	5.00	0.00	0.06	0.06
43.75	0.73	0.52	5.00	0.00	0.06	0.06
43.80	0.73	0.52	5.00	0.00	0.06	0.06
43.85	0.73	0.52	5.00	0.00	0.05	0.05
43.90	0.73	0.52	5.00	0.00	0.05	0.05
43.95	0.73	0.52	5.00	0.00	0.05	0.05
44.00	0.73	0.52	5.00	0.00	0.05	0.05
44.05	0.73	0.52	5.00	0.00	0.05	0.05
44.10	0.73	0.52	5.00	0.00	0.05	0.05
44.15	0.73	0.52	5.00	0.00	0.05	0.05
44.20	0.73	0.52	5.00	0.00	0.05	0.05
44.25	0.73	0.52	5.00	0.00	0.05	0.05
44.30	0.73	0.52	5.00	0.00	0.05	0.05
44.35	0.73	0.52	5.00	0.00	0.05	0.05
44.40	0.73	0.52	5.00	0.00	0.05	0.05
44.45	0.73	0.51	5.00	0.00	0.05	0.05
44.50	0.73	0.51	5.00	0.00	0.05	0.05
44.55	0.73	0.51	5.00	0.00	0.05	0.05
44.60	0.72	0.51	5.00	0.00	0.05	0.05
44.65	0.72	0.51	5.00	0.00	0.05	0.05
44.70	0.72	0.51	5.00	0.00	0.05	0.05
44.75	0.72	0.51	5.00	0.00	0.05	0.05
44.80	0.72	0.51	5.00	0.00	0.05	0.05
44.85	0.72	0.51	5.00	0.00	0.05	0.05
44.90	0.72	0.51	5.00	0.00	0.05	0.05
44.95	0.72	0.51	5.00	0.00	0.05	0.05
45.00	0.72	0.51	5.00	0.00	0.05	0.05
45.05	0.72	0.51	5.00	0.00	0.05	0.05
45.10	0.72	0.51	5.00	0.00	0.05	0.05
45.15	0.72	0.51	5.00	0.00	0.05	0.05
45.20	0.72	0.51	5.00	0.00	0.04	0.04
45.25	0.72	0.51	5.00	0.00	0.04	0.04
45.30	0.72	0.51	5.00	0.00	0.04	0.04
45.35	0.72	0.51	5.00	0.00	0.04	0.04
45.40	0.72	0.51	5.00	0.00	0.04	0.04
45.45	0.72	0.51	5.00	0.00	0.04	0.04
45.50	0.72	0.51	5.00	0.00	0.04	0.04
45.55	0.72	0.51	5.00	0.00	0.04	0.04
45.60	0.72	0.51	5.00	0.00	0.04	0.04
45.65	0.72	0.51	5.00	0.00	0.04	0.04
45.70	0.72	0.51	5.00	0.00	0.04	0.04
45.75	0.72	0.51	5.00	0.00	0.04	0.04
45.80	0.72	0.51	5.00	0.00	0.04	0.04
45.85	0.72	0.51	5.00	0.00	0.04	0.04
45.90	0.72	0.51	5.00	0.00	0.04	0.04
45.95	0.72	0.51	5.00	0.00	0.04	0.04
46.00	0.72	0.51	5.00	0.00	0.04	0.04
46.05	0.72	0.51	5.00	0.00	0.04	0.04
46.10	0.72	0.51	5.00	0.00	0.04	0.04
46.15	0.72	0.51	5.00	0.00	0.04	0.04
46.20	0.72	0.51	5.00	0.00	0.04	0.04
46.25	0.72	0.51	5.00	0.00	0.04	0.04
46.30	0.72	0.51	5.00	0.00	0.04	0.04
46.35	0.72	0.50	5.00	0.00	0.04	0.04
46.40	0.72	0.50	5.00	0.00	0.04	0.04
46.45	0.72	0.50	5.00	0.00	0.04	0.04
46.50	0.72	0.50	5.00	0.00	0.04	0.04
46.55	0.72	0.50	5.00	0.00	0.04	0.04
46.60	0.72	0.50	5.00	0.00	0.04	0.04
46.65	0.72	0.50	5.00	0.00	0.04	0.04

46.70	0.72	0.50	5.00	0.00	0.04	0.04
46.75	0.72	0.50	5.00	0.00	0.03	0.03
46.80	0.72	0.50	5.00	0.00	0.03	0.03
46.85	0.72	0.50	5.00	0.00	0.03	0.03
46.90	0.72	0.50	5.00	0.00	0.03	0.03
46.95	0.72	0.50	5.00	0.00	0.03	0.03
47.00	0.72	0.50	5.00	0.00	0.03	0.03
47.05	0.72	0.50	5.00	0.00	0.03	0.03
47.10	0.72	0.50	5.00	0.00	0.03	0.03
47.15	0.72	0.50	5.00	0.00	0.03	0.03
47.20	0.72	0.50	5.00	0.00	0.03	0.03
47.25	0.71	0.50	5.00	0.00	0.03	0.03
47.30	0.71	0.50	5.00	0.00	0.03	0.03
47.35	0.71	0.50	5.00	0.00	0.03	0.03
47.40	0.71	0.50	5.00	0.00	0.03	0.03
47.45	0.71	0.50	5.00	0.00	0.03	0.03
47.50	0.71	0.50	5.00	0.00	0.03	0.03
47.55	0.71	0.50	5.00	0.00	0.03	0.03
47.60	0.71	0.50	5.00	0.00	0.03	0.03
47.65	0.71	0.50	5.00	0.00	0.03	0.03
47.70	0.71	0.50	5.00	0.00	0.03	0.03
47.75	0.71	0.50	5.00	0.00	0.03	0.03
47.80	0.71	0.50	5.00	0.00	0.03	0.03
47.85	0.71	0.50	5.00	0.00	0.03	0.03
47.90	0.71	0.50	5.00	0.00	0.03	0.03
47.95	0.71	0.50	5.00	0.00	0.03	0.03
48.00	0.71	0.50	5.00	0.00	0.03	0.03
48.05	0.71	0.50	5.00	0.00	0.03	0.03
48.10	0.71	0.50	5.00	0.00	0.03	0.03
48.15	0.71	0.50	5.00	0.00	0.02	0.02
48.20	0.71	0.50	5.00	0.00	0.02	0.02
48.25	0.71	0.50	5.00	0.00	0.02	0.02
48.30	0.71	0.49	5.00	0.00	0.02	0.02
48.35	0.71	0.49	5.00	0.00	0.02	0.02
48.40	0.71	0.49	5.00	0.00	0.02	0.02
48.45	0.71	0.49	5.00	0.00	0.02	0.02
48.50	0.71	0.49	5.00	0.00	0.02	0.02
48.55	0.71	0.49	5.00	0.00	0.02	0.02
48.60	0.71	0.49	5.00	0.00	0.02	0.02
48.65	0.71	0.49	5.00	0.00	0.02	0.02
48.70	0.71	0.49	5.00	0.00	0.02	0.02
48.75	0.71	0.49	5.00	0.00	0.02	0.02
48.80	0.71	0.49	5.00	0.00	0.02	0.02
48.85	0.71	0.49	5.00	0.00	0.02	0.02
48.90	0.71	0.49	5.00	0.00	0.02	0.02
48.95	0.71	0.49	5.00	0.00	0.02	0.02
49.00	0.71	0.49	5.00	0.00	0.02	0.02
49.05	0.71	0.49	5.00	0.00	0.02	0.02
49.10	0.71	0.49	5.00	0.00	0.02	0.02
49.15	0.71	0.49	5.00	0.00	0.02	0.02
49.20	0.71	0.49	5.00	0.00	0.02	0.02
49.25	0.71	0.49	5.00	0.00	0.02	0.02
49.30	0.71	0.49	5.00	0.00	0.02	0.02
49.35	0.71	0.49	5.00	0.00	0.02	0.02
49.40	0.71	0.49	5.00	0.00	0.01	0.01
49.45	0.71	0.49	5.00	0.00	0.01	0.01
49.50	0.71	0.49	5.00	0.00	0.01	0.01
49.55	0.71	0.49	5.00	0.00	0.01	0.01
49.60	0.71	0.49	5.00	0.00	0.01	0.01
49.65	0.71	0.49	5.00	0.00	0.01	0.01
49.70	0.71	0.49	5.00	0.00	0.01	0.01
49.75	0.71	0.49	5.00	0.00	0.01	0.01
49.80	0.71	0.49	5.00	0.00	0.01	0.01

49.85	0.71	0.49	5.00	0.00	0.01	0.01
49.90	0.71	0.49	5.00	0.00	0.01	0.01
49.95	0.70	0.49	5.00	0.00	0.01	0.01
50.00	0.70	0.49	5.00	0.00	0.01	0.01
50.05	0.70	0.49	5.00	0.00	0.01	0.01
50.10	0.70	0.49	5.00	0.00	0.01	0.01
50.15	0.70	0.49	5.00	0.00	0.01	0.01
50.20	0.70	0.49	5.00	0.00	0.01	0.01
50.25	0.70	0.48	5.00	0.00	0.01	0.01
50.30	0.70	0.48	5.00	0.00	0.01	0.01
50.35	0.70	0.48	5.00	0.00	0.01	0.01
50.40	0.70	0.48	5.00	0.00	0.01	0.01
50.45	0.70	0.48	5.00	0.00	0.01	0.01
50.50	0.70	0.48	5.00	0.00	0.00	0.00
50.55	0.70	0.48	5.00	0.00	0.00	0.00
50.60	0.70	0.48	5.00	0.00	0.00	0.00
50.65	0.70	0.48	5.00	0.00	0.00	0.00
50.70	0.70	0.48	5.00	0.00	0.00	0.00
50.75	0.70	0.48	5.00	0.00	0.00	0.00
50.80	0.70	0.48	5.00	0.00	0.00	0.00
50.85	0.70	0.48	5.00	0.00	0.00	0.00
50.90	0.70	0.48	5.00	0.00	0.00	0.00
50.95	0.70	0.48	5.00	0.00	0.00	0.00
51.00	0.70	0.48	5.00	0.00	0.00	0.00

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft2)

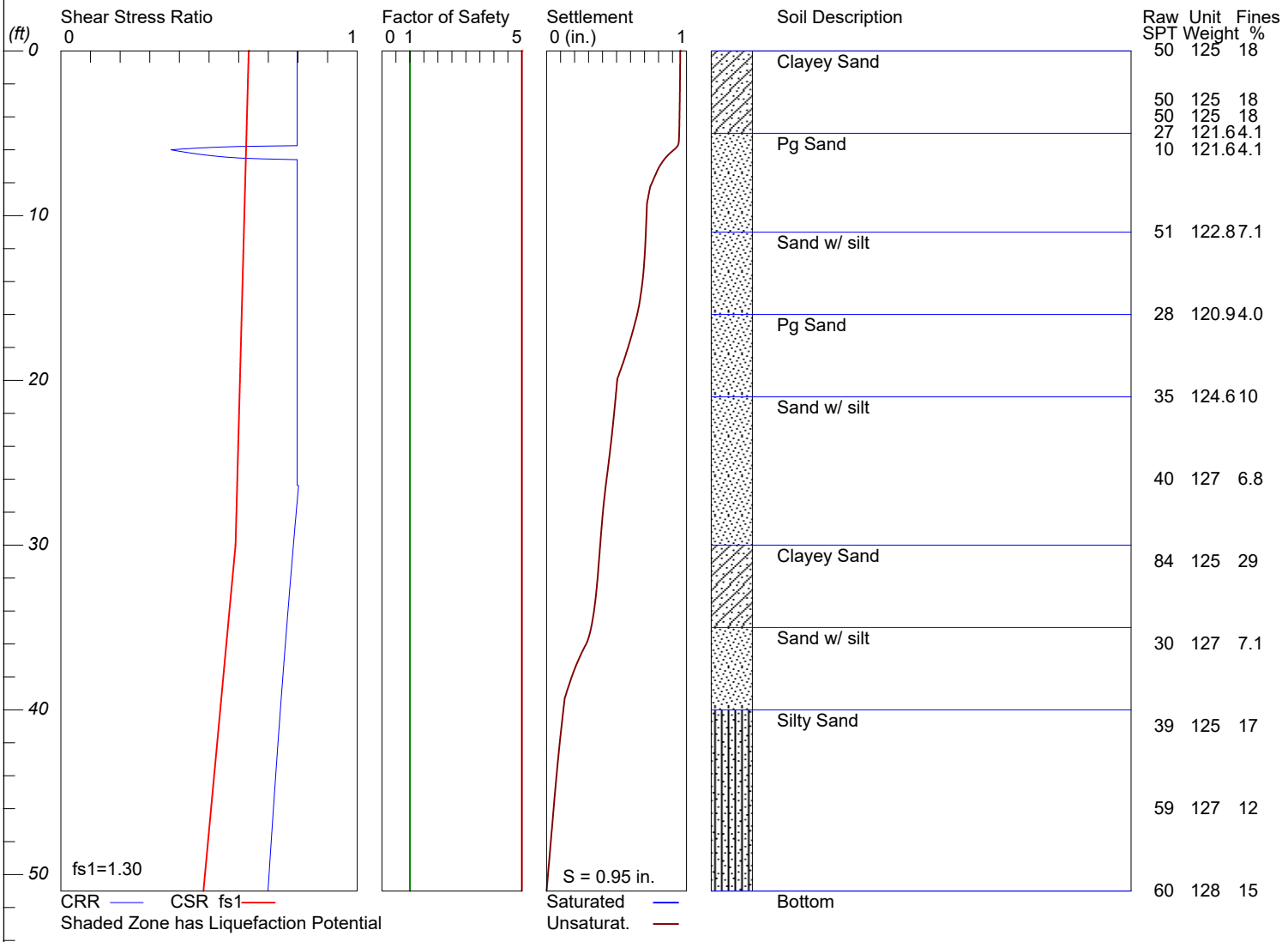
CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

LIQUEFACTION ANALYSIS

RB Inyokern Data Center

Hole No.=B-10 (4' Improvement) Water Depth=100 ft

Magnitude=6.25
Acceleration=0.75g



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LIQUEFACTION ANALYSIS SUMMARY

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Input File Name: O:\b. PROJECT FILES (ACTIVE)\20800-20899\20852 R&L Capital, RB Inyokern Data Center GEOTECH GEOHAZ\OFFICE REPORTS\Geohazard\Liquefy\20852 LiquefyPro B-10.liq

Title: RB Inyokern Data Center

Subtitle: 20852

Surface Elev.=

Hole No.=B-10 (4' Improvement)

Depth of Hole= 51.00 ft

Water Table during Earthquake= 100.00 ft

Water Table during In-Situ Testing= 100.00 ft

Max. Acceleration= 0.75 g

Earthquake Magnitude= 6.25

Input Data:

Surface Elev.=

Hole No.=B-10 (4' Improvement)

Depth of Hole=51.00 ft

Water Table during Earthquake= 100.00 ft

Water Table during In-Situ Testing= 100.00 ft

Max. Acceleration=0.75 g

Earthquake Magnitude=6.25

No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Tokimatsu, M-correction
3. Fines Correction for Liquefaction: Modify Stark/Olson
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.413
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1.2
9. User request factor of safety (apply to CSR) , User= 1.3
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*

* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
0.00	50.00	125.00	18.00
3.00	50.00	125.00	18.00
4.00	50.00	125.00	18.00
5.00	27.00	121.60	4.10
6.00	10.00	121.60	4.10
11.00	51.00	122.80	7.10
16.00	28.00	120.90	4.00
21.00	35.00	124.60	10.00
26.00	40.00	127.00	6.80
31.00	84.00	125.00	29.00
36.00	30.00	127.00	7.10
41.00	39.00	125.00	17.00
46.00	59.00	127.00	12.00
51.00	60.00	128.00	15.00

Output Results:

Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.95 in.
Total Settlement of Saturated and Unsaturated Sands=0.95 in.
Differential Settlement=0.477 to 0.630 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	0.80	0.63	5.00	0.00	0.95	0.95
0.05	0.80	0.63	5.00	0.00	0.95	0.95
0.10	0.80	0.63	5.00	0.00	0.95	0.95
0.15	0.80	0.63	5.00	0.00	0.95	0.95
0.20	0.80	0.63	5.00	0.00	0.95	0.95
0.25	0.80	0.63	5.00	0.00	0.95	0.95
0.30	0.80	0.63	5.00	0.00	0.95	0.95
0.35	0.80	0.63	5.00	0.00	0.95	0.95
0.40	0.80	0.63	5.00	0.00	0.95	0.95
0.45	0.80	0.63	5.00	0.00	0.95	0.95
0.50	0.80	0.63	5.00	0.00	0.95	0.95
0.55	0.80	0.63	5.00	0.00	0.95	0.95
0.60	0.80	0.63	5.00	0.00	0.95	0.95
0.65	0.80	0.63	5.00	0.00	0.95	0.95
0.70	0.80	0.63	5.00	0.00	0.95	0.95
0.75	0.80	0.63	5.00	0.00	0.95	0.95
0.80	0.80	0.63	5.00	0.00	0.95	0.95
0.85	0.80	0.63	5.00	0.00	0.95	0.95
0.90	0.80	0.63	5.00	0.00	0.95	0.95
0.95	0.80	0.63	5.00	0.00	0.95	0.95
1.00	0.80	0.63	5.00	0.00	0.95	0.95
1.05	0.80	0.63	5.00	0.00	0.95	0.95
1.10	0.80	0.63	5.00	0.00	0.95	0.95
1.15	0.80	0.63	5.00	0.00	0.95	0.95
1.20	0.80	0.63	5.00	0.00	0.95	0.95
1.25	0.80	0.63	5.00	0.00	0.95	0.95
1.30	0.80	0.63	5.00	0.00	0.95	0.95
1.35	0.80	0.63	5.00	0.00	0.95	0.95
1.40	0.80	0.63	5.00	0.00	0.95	0.95
1.45	0.80	0.63	5.00	0.00	0.95	0.95
1.50	0.80	0.63	5.00	0.00	0.95	0.95
1.55	0.80	0.63	5.00	0.00	0.95	0.95
1.60	0.80	0.63	5.00	0.00	0.95	0.95
1.65	0.80	0.63	5.00	0.00	0.95	0.95
1.70	0.80	0.63	5.00	0.00	0.95	0.95
1.75	0.80	0.63	5.00	0.00	0.95	0.95
1.80	0.80	0.63	5.00	0.00	0.95	0.95
1.85	0.80	0.63	5.00	0.00	0.95	0.95
1.90	0.80	0.63	5.00	0.00	0.95	0.95
1.95	0.80	0.63	5.00	0.00	0.95	0.95
2.00	0.80	0.63	5.00	0.00	0.95	0.95
2.05	0.80	0.63	5.00	0.00	0.95	0.95
2.10	0.80	0.63	5.00	0.00	0.95	0.95
2.15	0.80	0.63	5.00	0.00	0.95	0.95
2.20	0.80	0.63	5.00	0.00	0.95	0.95
2.25	0.80	0.63	5.00	0.00	0.95	0.95
2.30	0.80	0.63	5.00	0.00	0.95	0.95
2.35	0.80	0.63	5.00	0.00	0.95	0.95
2.40	0.80	0.63	5.00	0.00	0.95	0.95
2.45	0.80	0.63	5.00	0.00	0.95	0.95
2.50	0.80	0.63	5.00	0.00	0.95	0.95
2.55	0.80	0.63	5.00	0.00	0.95	0.95

2.60	0.80	0.63	5.00	0.00	0.95	0.95
2.65	0.80	0.63	5.00	0.00	0.95	0.95
2.70	0.80	0.63	5.00	0.00	0.95	0.95
2.75	0.80	0.63	5.00	0.00	0.95	0.95
2.80	0.80	0.63	5.00	0.00	0.95	0.95
2.85	0.80	0.63	5.00	0.00	0.95	0.95
2.90	0.80	0.63	5.00	0.00	0.95	0.95
2.95	0.80	0.63	5.00	0.00	0.95	0.95
3.00	0.80	0.63	5.00	0.00	0.95	0.95
3.05	0.80	0.63	5.00	0.00	0.95	0.95
3.10	0.80	0.63	5.00	0.00	0.95	0.95
3.15	0.80	0.63	5.00	0.00	0.95	0.95
3.20	0.80	0.63	5.00	0.00	0.95	0.95
3.25	0.80	0.63	5.00	0.00	0.95	0.95
3.30	0.80	0.63	5.00	0.00	0.95	0.95
3.35	0.80	0.63	5.00	0.00	0.95	0.95
3.40	0.80	0.63	5.00	0.00	0.95	0.95
3.45	0.80	0.63	5.00	0.00	0.95	0.95
3.50	0.80	0.63	5.00	0.00	0.95	0.95
3.55	0.80	0.63	5.00	0.00	0.95	0.95
3.60	0.80	0.63	5.00	0.00	0.95	0.95
3.65	0.80	0.63	5.00	0.00	0.95	0.95
3.70	0.80	0.63	5.00	0.00	0.95	0.95
3.75	0.80	0.63	5.00	0.00	0.95	0.95
3.80	0.80	0.63	5.00	0.00	0.95	0.95
3.85	0.80	0.63	5.00	0.00	0.95	0.95
3.90	0.80	0.63	5.00	0.00	0.95	0.95
3.95	0.80	0.63	5.00	0.00	0.95	0.95
4.00	0.80	0.63	5.00	0.00	0.95	0.95
4.05	0.80	0.63	5.00	0.00	0.95	0.95
4.10	0.80	0.63	5.00	0.00	0.95	0.95
4.15	0.80	0.63	5.00	0.00	0.95	0.95
4.20	0.80	0.63	5.00	0.00	0.95	0.95
4.25	0.80	0.63	5.00	0.00	0.95	0.95
4.30	0.80	0.63	5.00	0.00	0.95	0.95
4.35	0.80	0.63	5.00	0.00	0.95	0.95
4.40	0.80	0.63	5.00	0.00	0.95	0.95
4.45	0.80	0.63	5.00	0.00	0.95	0.95
4.50	0.80	0.63	5.00	0.00	0.95	0.95
4.55	0.80	0.63	5.00	0.00	0.95	0.95
4.60	0.80	0.63	5.00	0.00	0.95	0.95
4.65	0.80	0.63	5.00	0.00	0.95	0.95
4.70	0.80	0.63	5.00	0.00	0.95	0.95
4.75	0.80	0.63	5.00	0.00	0.95	0.95
4.80	0.80	0.63	5.00	0.00	0.95	0.95
4.85	0.80	0.63	5.00	0.00	0.95	0.95
4.90	0.80	0.63	5.00	0.00	0.95	0.95
4.95	0.80	0.63	5.00	0.00	0.95	0.95
5.00	0.80	0.63	5.00	0.00	0.95	0.95
5.05	0.80	0.63	5.00	0.00	0.95	0.95
5.10	0.80	0.63	5.00	0.00	0.95	0.95
5.15	0.80	0.63	5.00	0.00	0.95	0.95
5.20	0.80	0.63	5.00	0.00	0.95	0.95
5.25	0.80	0.63	5.00	0.00	0.95	0.95
5.30	0.80	0.63	5.00	0.00	0.95	0.95
5.35	0.80	0.63	5.00	0.00	0.95	0.95
5.40	0.80	0.63	5.00	0.00	0.95	0.95
5.45	0.80	0.63	5.00	0.00	0.95	0.95
5.50	0.80	0.63	5.00	0.00	0.94	0.94
5.55	0.80	0.63	5.00	0.00	0.94	0.94
5.60	0.80	0.63	5.00	0.00	0.94	0.94
5.65	0.80	0.63	5.00	0.00	0.94	0.94
5.70	0.80	0.63	5.00	0.00	0.94	0.94

5.75	0.80	0.63	5.00	0.00	0.94	0.94
5.80	0.60	0.63	5.00	0.00	0.93	0.93
5.85	0.51	0.63	5.00	0.00	0.93	0.93
5.90	0.46	0.63	5.00	0.00	0.92	0.92
5.95	0.41	0.62	5.00	0.00	0.92	0.92
6.00	0.37	0.62	5.00	0.00	0.91	0.91
6.05	0.39	0.62	5.00	0.00	0.90	0.90
6.10	0.40	0.62	5.00	0.00	0.90	0.90
6.15	0.42	0.62	5.00	0.00	0.89	0.89
6.20	0.44	0.62	5.00	0.00	0.88	0.88
6.25	0.46	0.62	5.00	0.00	0.88	0.88
6.30	0.48	0.62	5.00	0.00	0.87	0.87
6.35	0.50	0.62	5.00	0.00	0.86	0.86
6.40	0.53	0.62	5.00	0.00	0.86	0.86
6.45	0.56	0.62	5.00	0.00	0.85	0.85
6.50	0.60	0.62	5.00	0.00	0.85	0.85
6.55	0.68	0.62	5.00	0.00	0.84	0.84
6.60	0.80	0.62	5.00	0.00	0.84	0.84
6.65	0.80	0.62	5.00	0.00	0.83	0.83
6.70	0.80	0.62	5.00	0.00	0.83	0.83
6.75	0.80	0.62	5.00	0.00	0.83	0.83
6.80	0.80	0.62	5.00	0.00	0.82	0.82
6.85	0.80	0.62	5.00	0.00	0.82	0.82
6.90	0.80	0.62	5.00	0.00	0.81	0.81
6.95	0.80	0.62	5.00	0.00	0.81	0.81
7.00	0.80	0.62	5.00	0.00	0.81	0.81
7.05	0.80	0.62	5.00	0.00	0.80	0.80
7.10	0.80	0.62	5.00	0.00	0.80	0.80
7.15	0.80	0.62	5.00	0.00	0.80	0.80
7.20	0.80	0.62	5.00	0.00	0.79	0.79
7.25	0.80	0.62	5.00	0.00	0.79	0.79
7.30	0.80	0.62	5.00	0.00	0.79	0.79
7.35	0.80	0.62	5.00	0.00	0.79	0.79
7.40	0.80	0.62	5.00	0.00	0.78	0.78
7.45	0.80	0.62	5.00	0.00	0.78	0.78
7.50	0.80	0.62	5.00	0.00	0.78	0.78
7.55	0.80	0.62	5.00	0.00	0.78	0.78
7.60	0.80	0.62	5.00	0.00	0.77	0.77
7.65	0.80	0.62	5.00	0.00	0.77	0.77
7.70	0.80	0.62	5.00	0.00	0.77	0.77
7.75	0.80	0.62	5.00	0.00	0.77	0.77
7.80	0.80	0.62	5.00	0.00	0.76	0.76
7.85	0.80	0.62	5.00	0.00	0.76	0.76
7.90	0.80	0.62	5.00	0.00	0.76	0.76
7.95	0.80	0.62	5.00	0.00	0.76	0.76
8.00	0.80	0.62	5.00	0.00	0.75	0.75
8.05	0.80	0.62	5.00	0.00	0.75	0.75
8.10	0.80	0.62	5.00	0.00	0.75	0.75
8.15	0.80	0.62	5.00	0.00	0.75	0.75
8.20	0.80	0.62	5.00	0.00	0.74	0.74
8.25	0.80	0.62	5.00	0.00	0.74	0.74
8.30	0.80	0.62	5.00	0.00	0.74	0.74
8.35	0.80	0.62	5.00	0.00	0.74	0.74
8.40	0.80	0.62	5.00	0.00	0.74	0.74
8.45	0.80	0.62	5.00	0.00	0.74	0.74
8.50	0.80	0.62	5.00	0.00	0.73	0.73
8.55	0.80	0.62	5.00	0.00	0.73	0.73
8.60	0.80	0.62	5.00	0.00	0.73	0.73
8.65	0.80	0.62	5.00	0.00	0.73	0.73
8.70	0.80	0.62	5.00	0.00	0.73	0.73
8.75	0.80	0.62	5.00	0.00	0.73	0.73
8.80	0.80	0.62	5.00	0.00	0.73	0.73
8.85	0.80	0.62	5.00	0.00	0.73	0.73

8.90	0.80	0.62	5.00	0.00	0.73	0.73
8.95	0.80	0.62	5.00	0.00	0.72	0.72
9.00	0.80	0.62	5.00	0.00	0.72	0.72
9.05	0.80	0.62	5.00	0.00	0.72	0.72
9.10	0.80	0.62	5.00	0.00	0.72	0.72
9.15	0.80	0.62	5.00	0.00	0.72	0.72
9.20	0.80	0.62	5.00	0.00	0.72	0.72
9.25	0.80	0.62	5.00	0.00	0.72	0.72
9.30	0.80	0.62	5.00	0.00	0.72	0.72
9.35	0.80	0.62	5.00	0.00	0.72	0.72
9.40	0.80	0.62	5.00	0.00	0.72	0.72
9.45	0.80	0.62	5.00	0.00	0.72	0.72
9.50	0.80	0.62	5.00	0.00	0.72	0.72
9.55	0.80	0.62	5.00	0.00	0.72	0.72
9.60	0.80	0.62	5.00	0.00	0.72	0.72
9.65	0.80	0.62	5.00	0.00	0.72	0.72
9.70	0.80	0.62	5.00	0.00	0.72	0.72
9.75	0.80	0.62	5.00	0.00	0.72	0.72
9.80	0.80	0.62	5.00	0.00	0.71	0.71
9.85	0.80	0.62	5.00	0.00	0.71	0.71
9.90	0.80	0.62	5.00	0.00	0.71	0.71
9.95	0.80	0.62	5.00	0.00	0.71	0.71
10.00	0.80	0.62	5.00	0.00	0.71	0.71
10.05	0.80	0.62	5.00	0.00	0.71	0.71
10.10	0.80	0.62	5.00	0.00	0.71	0.71
10.15	0.80	0.62	5.00	0.00	0.71	0.71
10.20	0.80	0.62	5.00	0.00	0.71	0.71
10.25	0.80	0.62	5.00	0.00	0.71	0.71
10.30	0.80	0.62	5.00	0.00	0.71	0.71
10.35	0.80	0.62	5.00	0.00	0.71	0.71
10.40	0.80	0.62	5.00	0.00	0.71	0.71
10.45	0.80	0.62	5.00	0.00	0.71	0.71
10.50	0.80	0.62	5.00	0.00	0.71	0.71
10.55	0.80	0.62	5.00	0.00	0.71	0.71
10.60	0.80	0.62	5.00	0.00	0.71	0.71
10.65	0.80	0.62	5.00	0.00	0.71	0.71
10.70	0.80	0.62	5.00	0.00	0.71	0.71
10.75	0.80	0.62	5.00	0.00	0.71	0.71
10.80	0.80	0.62	5.00	0.00	0.71	0.71
10.85	0.80	0.62	5.00	0.00	0.71	0.71
10.90	0.80	0.62	5.00	0.00	0.71	0.71
10.95	0.80	0.62	5.00	0.00	0.71	0.71
11.00	0.80	0.62	5.00	0.00	0.71	0.71
11.05	0.80	0.62	5.00	0.00	0.71	0.71
11.10	0.80	0.62	5.00	0.00	0.71	0.71
11.15	0.80	0.62	5.00	0.00	0.71	0.71
11.20	0.80	0.62	5.00	0.00	0.71	0.71
11.25	0.80	0.62	5.00	0.00	0.71	0.71
11.30	0.80	0.62	5.00	0.00	0.71	0.71
11.35	0.80	0.62	5.00	0.00	0.71	0.71
11.40	0.80	0.62	5.00	0.00	0.71	0.71
11.45	0.80	0.62	5.00	0.00	0.71	0.71
11.50	0.80	0.62	5.00	0.00	0.71	0.71
11.55	0.80	0.62	5.00	0.00	0.71	0.71
11.60	0.80	0.62	5.00	0.00	0.71	0.71
11.65	0.80	0.62	5.00	0.00	0.71	0.71
11.70	0.80	0.62	5.00	0.00	0.71	0.71
11.75	0.80	0.62	5.00	0.00	0.71	0.71
11.80	0.80	0.62	5.00	0.00	0.71	0.71
11.85	0.80	0.62	5.00	0.00	0.70	0.70
11.90	0.80	0.62	5.00	0.00	0.70	0.70
11.95	0.80	0.62	5.00	0.00	0.70	0.70
12.00	0.80	0.62	5.00	0.00	0.70	0.70

12.05	0.80	0.62	5.00	0.00	0.70	0.70
12.10	0.80	0.62	5.00	0.00	0.70	0.70
12.15	0.80	0.62	5.00	0.00	0.70	0.70
12.20	0.80	0.62	5.00	0.00	0.70	0.70
12.25	0.80	0.62	5.00	0.00	0.70	0.70
12.30	0.80	0.62	5.00	0.00	0.70	0.70
12.35	0.80	0.62	5.00	0.00	0.70	0.70
12.40	0.80	0.62	5.00	0.00	0.70	0.70
12.45	0.80	0.62	5.00	0.00	0.70	0.70
12.50	0.80	0.62	5.00	0.00	0.70	0.70
12.55	0.80	0.62	5.00	0.00	0.70	0.70
12.60	0.80	0.62	5.00	0.00	0.70	0.70
12.65	0.80	0.62	5.00	0.00	0.70	0.70
12.70	0.80	0.61	5.00	0.00	0.70	0.70
12.75	0.80	0.61	5.00	0.00	0.70	0.70
12.80	0.80	0.61	5.00	0.00	0.70	0.70
12.85	0.80	0.61	5.00	0.00	0.70	0.70
12.90	0.80	0.61	5.00	0.00	0.70	0.70
12.95	0.80	0.61	5.00	0.00	0.70	0.70
13.00	0.80	0.61	5.00	0.00	0.70	0.70
13.05	0.80	0.61	5.00	0.00	0.70	0.70
13.10	0.80	0.61	5.00	0.00	0.70	0.70
13.15	0.80	0.61	5.00	0.00	0.69	0.69
13.20	0.80	0.61	5.00	0.00	0.69	0.69
13.25	0.80	0.61	5.00	0.00	0.69	0.69
13.30	0.80	0.61	5.00	0.00	0.69	0.69
13.35	0.80	0.61	5.00	0.00	0.69	0.69
13.40	0.80	0.61	5.00	0.00	0.69	0.69
13.45	0.80	0.61	5.00	0.00	0.69	0.69
13.50	0.80	0.61	5.00	0.00	0.69	0.69
13.55	0.80	0.61	5.00	0.00	0.69	0.69
13.60	0.80	0.61	5.00	0.00	0.69	0.69
13.65	0.80	0.61	5.00	0.00	0.69	0.69
13.70	0.80	0.61	5.00	0.00	0.69	0.69
13.75	0.80	0.61	5.00	0.00	0.69	0.69
13.80	0.80	0.61	5.00	0.00	0.69	0.69
13.85	0.80	0.61	5.00	0.00	0.69	0.69
13.90	0.80	0.61	5.00	0.00	0.69	0.69
13.95	0.80	0.61	5.00	0.00	0.69	0.69
14.00	0.80	0.61	5.00	0.00	0.69	0.69
14.05	0.80	0.61	5.00	0.00	0.68	0.68
14.10	0.80	0.61	5.00	0.00	0.68	0.68
14.15	0.80	0.61	5.00	0.00	0.68	0.68
14.20	0.80	0.61	5.00	0.00	0.68	0.68
14.25	0.80	0.61	5.00	0.00	0.68	0.68
14.30	0.80	0.61	5.00	0.00	0.68	0.68
14.35	0.80	0.61	5.00	0.00	0.68	0.68
14.40	0.80	0.61	5.00	0.00	0.68	0.68
14.45	0.80	0.61	5.00	0.00	0.68	0.68
14.50	0.80	0.61	5.00	0.00	0.68	0.68
14.55	0.80	0.61	5.00	0.00	0.68	0.68
14.60	0.80	0.61	5.00	0.00	0.68	0.68
14.65	0.80	0.61	5.00	0.00	0.68	0.68
14.70	0.80	0.61	5.00	0.00	0.67	0.67
14.75	0.80	0.61	5.00	0.00	0.67	0.67
14.80	0.80	0.61	5.00	0.00	0.67	0.67
14.85	0.80	0.61	5.00	0.00	0.67	0.67
14.90	0.80	0.61	5.00	0.00	0.67	0.67
14.95	0.80	0.61	5.00	0.00	0.67	0.67
15.00	0.80	0.61	5.00	0.00	0.67	0.67
15.05	0.80	0.61	5.00	0.00	0.67	0.67
15.10	0.80	0.61	5.00	0.00	0.67	0.67
15.15	0.80	0.61	5.00	0.00	0.67	0.67

15.20	0.80	0.61	5.00	0.00	0.67	0.67
15.25	0.80	0.61	5.00	0.00	0.66	0.66
15.30	0.80	0.61	5.00	0.00	0.66	0.66
15.35	0.80	0.61	5.00	0.00	0.66	0.66
15.40	0.80	0.61	5.00	0.00	0.66	0.66
15.45	0.80	0.61	5.00	0.00	0.66	0.66
15.50	0.80	0.61	5.00	0.00	0.66	0.66
15.55	0.80	0.61	5.00	0.00	0.66	0.66
15.60	0.80	0.61	5.00	0.00	0.66	0.66
15.65	0.80	0.61	5.00	0.00	0.66	0.66
15.70	0.80	0.61	5.00	0.00	0.65	0.65
15.75	0.80	0.61	5.00	0.00	0.65	0.65
15.80	0.80	0.61	5.00	0.00	0.65	0.65
15.85	0.80	0.61	5.00	0.00	0.65	0.65
15.90	0.80	0.61	5.00	0.00	0.65	0.65
15.95	0.80	0.61	5.00	0.00	0.65	0.65
16.00	0.80	0.61	5.00	0.00	0.65	0.65
16.05	0.80	0.61	5.00	0.00	0.65	0.65
16.10	0.80	0.61	5.00	0.00	0.64	0.64
16.15	0.80	0.61	5.00	0.00	0.64	0.64
16.20	0.80	0.61	5.00	0.00	0.64	0.64
16.25	0.80	0.61	5.00	0.00	0.64	0.64
16.30	0.80	0.61	5.00	0.00	0.64	0.64
16.35	0.80	0.61	5.00	0.00	0.64	0.64
16.40	0.80	0.61	5.00	0.00	0.64	0.64
16.45	0.80	0.61	5.00	0.00	0.63	0.63
16.50	0.80	0.61	5.00	0.00	0.63	0.63
16.55	0.80	0.61	5.00	0.00	0.63	0.63
16.60	0.80	0.61	5.00	0.00	0.63	0.63
16.65	0.80	0.61	5.00	0.00	0.63	0.63
16.70	0.80	0.61	5.00	0.00	0.63	0.63
16.75	0.80	0.61	5.00	0.00	0.62	0.62
16.80	0.80	0.61	5.00	0.00	0.62	0.62
16.85	0.80	0.61	5.00	0.00	0.62	0.62
16.90	0.80	0.61	5.00	0.00	0.62	0.62
16.95	0.80	0.61	5.00	0.00	0.62	0.62
17.00	0.80	0.61	5.00	0.00	0.62	0.62
17.05	0.80	0.61	5.00	0.00	0.61	0.61
17.10	0.80	0.61	5.00	0.00	0.61	0.61
17.15	0.80	0.61	5.00	0.00	0.61	0.61
17.20	0.80	0.61	5.00	0.00	0.61	0.61
17.25	0.80	0.61	5.00	0.00	0.61	0.61
17.30	0.80	0.61	5.00	0.00	0.61	0.61
17.35	0.80	0.61	5.00	0.00	0.60	0.60
17.40	0.80	0.61	5.00	0.00	0.60	0.60
17.45	0.80	0.61	5.00	0.00	0.60	0.60
17.50	0.80	0.61	5.00	0.00	0.60	0.60
17.55	0.80	0.61	5.00	0.00	0.60	0.60
17.60	0.80	0.61	5.00	0.00	0.60	0.60
17.65	0.80	0.61	5.00	0.00	0.59	0.59
17.70	0.80	0.61	5.00	0.00	0.59	0.59
17.75	0.80	0.61	5.00	0.00	0.59	0.59
17.80	0.80	0.61	5.00	0.00	0.59	0.59
17.85	0.80	0.61	5.00	0.00	0.59	0.59
17.90	0.80	0.61	5.00	0.00	0.59	0.59
17.95	0.80	0.61	5.00	0.00	0.58	0.58
18.00	0.80	0.61	5.00	0.00	0.58	0.58
18.05	0.80	0.61	5.00	0.00	0.58	0.58
18.10	0.80	0.61	5.00	0.00	0.58	0.58
18.15	0.80	0.61	5.00	0.00	0.58	0.58
18.20	0.80	0.61	5.00	0.00	0.57	0.57
18.25	0.80	0.61	5.00	0.00	0.57	0.57
18.30	0.80	0.61	5.00	0.00	0.57	0.57

18.35	0.80	0.61	5.00	0.00	0.57	0.57
18.40	0.80	0.61	5.00	0.00	0.57	0.57
18.45	0.80	0.61	5.00	0.00	0.57	0.57
18.50	0.80	0.61	5.00	0.00	0.56	0.56
18.55	0.80	0.61	5.00	0.00	0.56	0.56
18.60	0.80	0.61	5.00	0.00	0.56	0.56
18.65	0.80	0.61	5.00	0.00	0.56	0.56
18.70	0.80	0.61	5.00	0.00	0.56	0.56
18.75	0.80	0.61	5.00	0.00	0.55	0.55
18.80	0.80	0.61	5.00	0.00	0.55	0.55
18.85	0.80	0.61	5.00	0.00	0.55	0.55
18.90	0.80	0.61	5.00	0.00	0.55	0.55
18.95	0.80	0.61	5.00	0.00	0.55	0.55
19.00	0.80	0.61	5.00	0.00	0.54	0.54
19.05	0.80	0.61	5.00	0.00	0.54	0.54
19.10	0.80	0.61	5.00	0.00	0.54	0.54
19.15	0.80	0.61	5.00	0.00	0.54	0.54
19.20	0.80	0.61	5.00	0.00	0.54	0.54
19.25	0.80	0.61	5.00	0.00	0.53	0.53
19.30	0.80	0.61	5.00	0.00	0.53	0.53
19.35	0.80	0.61	5.00	0.00	0.53	0.53
19.40	0.80	0.61	5.00	0.00	0.53	0.53
19.45	0.80	0.61	5.00	0.00	0.52	0.52
19.50	0.80	0.60	5.00	0.00	0.52	0.52
19.55	0.80	0.60	5.00	0.00	0.52	0.52
19.60	0.80	0.60	5.00	0.00	0.52	0.52
19.65	0.80	0.60	5.00	0.00	0.52	0.52
19.70	0.80	0.60	5.00	0.00	0.51	0.51
19.75	0.80	0.60	5.00	0.00	0.51	0.51
19.80	0.80	0.60	5.00	0.00	0.51	0.51
19.85	0.80	0.60	5.00	0.00	0.51	0.51
19.90	0.80	0.60	5.00	0.00	0.51	0.51
19.95	0.80	0.60	5.00	0.00	0.50	0.50
20.00	0.80	0.60	5.00	0.00	0.50	0.50
20.05	0.80	0.60	5.00	0.00	0.50	0.50
20.10	0.80	0.60	5.00	0.00	0.50	0.50
20.15	0.80	0.60	5.00	0.00	0.50	0.50
20.20	0.80	0.60	5.00	0.00	0.50	0.50
20.25	0.80	0.60	5.00	0.00	0.50	0.50
20.30	0.80	0.60	5.00	0.00	0.50	0.50
20.35	0.80	0.60	5.00	0.00	0.50	0.50
20.40	0.80	0.60	5.00	0.00	0.50	0.50
20.45	0.80	0.60	5.00	0.00	0.50	0.50
20.50	0.80	0.60	5.00	0.00	0.50	0.50
20.55	0.80	0.60	5.00	0.00	0.50	0.50
20.60	0.80	0.60	5.00	0.00	0.50	0.50
20.65	0.80	0.60	5.00	0.00	0.50	0.50
20.70	0.80	0.60	5.00	0.00	0.50	0.50
20.75	0.80	0.60	5.00	0.00	0.50	0.50
20.80	0.80	0.60	5.00	0.00	0.50	0.50
20.85	0.80	0.60	5.00	0.00	0.50	0.50
20.90	0.80	0.60	5.00	0.00	0.49	0.49
20.95	0.80	0.60	5.00	0.00	0.49	0.49
21.00	0.80	0.60	5.00	0.00	0.49	0.49
21.05	0.80	0.60	5.00	0.00	0.49	0.49
21.10	0.80	0.60	5.00	0.00	0.49	0.49
21.15	0.80	0.60	5.00	0.00	0.49	0.49
21.20	0.80	0.60	5.00	0.00	0.49	0.49
21.25	0.80	0.60	5.00	0.00	0.49	0.49
21.30	0.80	0.60	5.00	0.00	0.49	0.49
21.35	0.80	0.60	5.00	0.00	0.49	0.49
21.40	0.80	0.60	5.00	0.00	0.49	0.49
21.45	0.80	0.60	5.00	0.00	0.49	0.49

21.50	0.80	0.60	5.00	0.00	0.49	0.49
21.55	0.80	0.60	5.00	0.00	0.49	0.49
21.60	0.80	0.60	5.00	0.00	0.49	0.49
21.65	0.80	0.60	5.00	0.00	0.49	0.49
21.70	0.80	0.60	5.00	0.00	0.49	0.49
21.75	0.80	0.60	5.00	0.00	0.49	0.49
21.80	0.80	0.60	5.00	0.00	0.48	0.48
21.85	0.80	0.60	5.00	0.00	0.48	0.48
21.90	0.80	0.60	5.00	0.00	0.48	0.48
21.95	0.80	0.60	5.00	0.00	0.48	0.48
22.00	0.80	0.60	5.00	0.00	0.48	0.48
22.05	0.80	0.60	5.00	0.00	0.48	0.48
22.10	0.80	0.60	5.00	0.00	0.48	0.48
22.15	0.80	0.60	5.00	0.00	0.48	0.48
22.20	0.80	0.60	5.00	0.00	0.48	0.48
22.25	0.80	0.60	5.00	0.00	0.48	0.48
22.30	0.80	0.60	5.00	0.00	0.48	0.48
22.35	0.80	0.60	5.00	0.00	0.48	0.48
22.40	0.80	0.60	5.00	0.00	0.48	0.48
22.45	0.80	0.60	5.00	0.00	0.48	0.48
22.50	0.80	0.60	5.00	0.00	0.48	0.48
22.55	0.80	0.60	5.00	0.00	0.48	0.48
22.60	0.80	0.60	5.00	0.00	0.48	0.48
22.65	0.80	0.60	5.00	0.00	0.47	0.47
22.70	0.80	0.60	5.00	0.00	0.47	0.47
22.75	0.80	0.60	5.00	0.00	0.47	0.47
22.80	0.80	0.60	5.00	0.00	0.47	0.47
22.85	0.80	0.60	5.00	0.00	0.47	0.47
22.90	0.80	0.60	5.00	0.00	0.47	0.47
22.95	0.80	0.60	5.00	0.00	0.47	0.47
23.00	0.80	0.60	5.00	0.00	0.47	0.47
23.05	0.80	0.60	5.00	0.00	0.47	0.47
23.10	0.80	0.60	5.00	0.00	0.47	0.47
23.15	0.80	0.60	5.00	0.00	0.47	0.47
23.20	0.80	0.60	5.00	0.00	0.47	0.47
23.25	0.80	0.60	5.00	0.00	0.47	0.47
23.30	0.80	0.60	5.00	0.00	0.47	0.47
23.35	0.80	0.60	5.00	0.00	0.47	0.47
23.40	0.80	0.60	5.00	0.00	0.47	0.47
23.45	0.80	0.60	5.00	0.00	0.46	0.46
23.50	0.80	0.60	5.00	0.00	0.46	0.46
23.55	0.80	0.60	5.00	0.00	0.46	0.46
23.60	0.80	0.60	5.00	0.00	0.46	0.46
23.65	0.80	0.60	5.00	0.00	0.46	0.46
23.70	0.80	0.60	5.00	0.00	0.46	0.46
23.75	0.80	0.60	5.00	0.00	0.46	0.46
23.80	0.80	0.60	5.00	0.00	0.46	0.46
23.85	0.80	0.60	5.00	0.00	0.46	0.46
23.90	0.80	0.60	5.00	0.00	0.46	0.46
23.95	0.80	0.60	5.00	0.00	0.46	0.46
24.00	0.80	0.60	5.00	0.00	0.46	0.46
24.05	0.80	0.60	5.00	0.00	0.46	0.46
24.10	0.80	0.60	5.00	0.00	0.46	0.46
24.15	0.80	0.60	5.00	0.00	0.46	0.46
24.20	0.80	0.60	5.00	0.00	0.45	0.45
24.25	0.80	0.60	5.00	0.00	0.45	0.45
24.30	0.80	0.60	5.00	0.00	0.45	0.45
24.35	0.80	0.60	5.00	0.00	0.45	0.45
24.40	0.80	0.60	5.00	0.00	0.45	0.45
24.45	0.80	0.60	5.00	0.00	0.45	0.45
24.50	0.80	0.60	5.00	0.00	0.45	0.45
24.55	0.80	0.60	5.00	0.00	0.45	0.45
24.60	0.80	0.60	5.00	0.00	0.45	0.45

24.65	0.80	0.60	5.00	0.00	0.45	0.45
24.70	0.80	0.60	5.00	0.00	0.45	0.45
24.75	0.80	0.60	5.00	0.00	0.45	0.45
24.80	0.80	0.60	5.00	0.00	0.45	0.45
24.85	0.80	0.60	5.00	0.00	0.45	0.45
24.90	0.80	0.60	5.00	0.00	0.44	0.44
24.95	0.80	0.60	5.00	0.00	0.44	0.44
25.00	0.80	0.60	5.00	0.00	0.44	0.44
25.05	0.80	0.60	5.00	0.00	0.44	0.44
25.10	0.80	0.60	5.00	0.00	0.44	0.44
25.15	0.80	0.60	5.00	0.00	0.44	0.44
25.20	0.80	0.60	5.00	0.00	0.44	0.44
25.25	0.80	0.60	5.00	0.00	0.44	0.44
25.30	0.80	0.60	5.00	0.00	0.44	0.44
25.35	0.80	0.60	5.00	0.00	0.44	0.44
25.40	0.80	0.60	5.00	0.00	0.44	0.44
25.45	0.80	0.60	5.00	0.00	0.44	0.44
25.50	0.80	0.60	5.00	0.00	0.44	0.44
25.55	0.80	0.60	5.00	0.00	0.44	0.44
25.60	0.80	0.60	5.00	0.00	0.43	0.43
25.65	0.80	0.60	5.00	0.00	0.43	0.43
25.70	0.80	0.60	5.00	0.00	0.43	0.43
25.75	0.80	0.60	5.00	0.00	0.43	0.43
25.80	0.80	0.60	5.00	0.00	0.43	0.43
25.85	0.80	0.60	5.00	0.00	0.43	0.43
25.90	0.80	0.60	5.00	0.00	0.43	0.43
25.95	0.80	0.60	5.00	0.00	0.43	0.43
26.00	0.80	0.60	5.00	0.00	0.43	0.43
26.05	0.80	0.60	5.00	0.00	0.43	0.43
26.10	0.80	0.60	5.00	0.00	0.43	0.43
26.15	0.80	0.60	5.00	0.00	0.43	0.43
26.20	0.80	0.60	5.00	0.00	0.43	0.43
26.25	0.80	0.59	5.00	0.00	0.42	0.42
26.30	0.80	0.59	5.00	0.00	0.42	0.42
26.35	0.80	0.59	5.00	0.00	0.42	0.42
26.40	0.80	0.59	5.00	0.00	0.42	0.42
26.45	0.80	0.59	5.00	0.00	0.42	0.42
26.50	0.80	0.59	5.00	0.00	0.42	0.42
26.55	0.80	0.59	5.00	0.00	0.42	0.42
26.60	0.80	0.59	5.00	0.00	0.42	0.42
26.65	0.80	0.59	5.00	0.00	0.42	0.42
26.70	0.80	0.59	5.00	0.00	0.42	0.42
26.75	0.80	0.59	5.00	0.00	0.42	0.42
26.80	0.80	0.59	5.00	0.00	0.42	0.42
26.85	0.80	0.59	5.00	0.00	0.42	0.42
26.90	0.80	0.59	5.00	0.00	0.42	0.42
26.95	0.80	0.59	5.00	0.00	0.42	0.42
27.00	0.80	0.59	5.00	0.00	0.41	0.41
27.05	0.80	0.59	5.00	0.00	0.41	0.41
27.10	0.80	0.59	5.00	0.00	0.41	0.41
27.15	0.80	0.59	5.00	0.00	0.41	0.41
27.20	0.80	0.59	5.00	0.00	0.41	0.41
27.25	0.80	0.59	5.00	0.00	0.41	0.41
27.30	0.80	0.59	5.00	0.00	0.41	0.41
27.35	0.80	0.59	5.00	0.00	0.41	0.41
27.40	0.80	0.59	5.00	0.00	0.41	0.41
27.45	0.80	0.59	5.00	0.00	0.41	0.41
27.50	0.80	0.59	5.00	0.00	0.41	0.41
27.55	0.80	0.59	5.00	0.00	0.41	0.41
27.60	0.80	0.59	5.00	0.00	0.41	0.41
27.65	0.80	0.59	5.00	0.00	0.41	0.41
27.70	0.80	0.59	5.00	0.00	0.41	0.41
27.75	0.80	0.59	5.00	0.00	0.41	0.41

27.80	0.80	0.59	5.00	0.00	0.40	0.40
27.85	0.79	0.59	5.00	0.00	0.40	0.40
27.90	0.79	0.59	5.00	0.00	0.40	0.40
27.95	0.79	0.59	5.00	0.00	0.40	0.40
28.00	0.79	0.59	5.00	0.00	0.40	0.40
28.05	0.79	0.59	5.00	0.00	0.40	0.40
28.10	0.79	0.59	5.00	0.00	0.40	0.40
28.15	0.79	0.59	5.00	0.00	0.40	0.40
28.20	0.79	0.59	5.00	0.00	0.40	0.40
28.25	0.79	0.59	5.00	0.00	0.40	0.40
28.30	0.79	0.59	5.00	0.00	0.40	0.40
28.35	0.79	0.59	5.00	0.00	0.40	0.40
28.40	0.79	0.59	5.00	0.00	0.40	0.40
28.45	0.79	0.59	5.00	0.00	0.40	0.40
28.50	0.79	0.59	5.00	0.00	0.40	0.40
28.55	0.79	0.59	5.00	0.00	0.40	0.40
28.60	0.79	0.59	5.00	0.00	0.40	0.40
28.65	0.79	0.59	5.00	0.00	0.40	0.40
28.70	0.79	0.59	5.00	0.00	0.40	0.40
28.75	0.79	0.59	5.00	0.00	0.39	0.39
28.80	0.79	0.59	5.00	0.00	0.39	0.39
28.85	0.79	0.59	5.00	0.00	0.39	0.39
28.90	0.79	0.59	5.00	0.00	0.39	0.39
28.95	0.79	0.59	5.00	0.00	0.39	0.39
29.00	0.79	0.59	5.00	0.00	0.39	0.39
29.05	0.79	0.59	5.00	0.00	0.39	0.39
29.10	0.79	0.59	5.00	0.00	0.39	0.39
29.15	0.79	0.59	5.00	0.00	0.39	0.39
29.20	0.79	0.59	5.00	0.00	0.39	0.39
29.25	0.79	0.59	5.00	0.00	0.39	0.39
29.30	0.79	0.59	5.00	0.00	0.39	0.39
29.35	0.79	0.59	5.00	0.00	0.39	0.39
29.40	0.79	0.59	5.00	0.00	0.39	0.39
29.45	0.79	0.59	5.00	0.00	0.39	0.39
29.50	0.79	0.59	5.00	0.00	0.39	0.39
29.55	0.79	0.59	5.00	0.00	0.39	0.39
29.60	0.79	0.59	5.00	0.00	0.39	0.39
29.65	0.79	0.59	5.00	0.00	0.39	0.39
29.70	0.79	0.59	5.00	0.00	0.39	0.39
29.75	0.79	0.59	5.00	0.00	0.39	0.39
29.80	0.79	0.59	5.00	0.00	0.38	0.38
29.85	0.79	0.59	5.00	0.00	0.38	0.38
29.90	0.79	0.59	5.00	0.00	0.38	0.38
29.95	0.78	0.59	5.00	0.00	0.38	0.38
30.00	0.78	0.59	5.00	0.00	0.38	0.38
30.05	0.78	0.59	5.00	0.00	0.38	0.38
30.10	0.78	0.59	5.00	0.00	0.38	0.38
30.15	0.78	0.59	5.00	0.00	0.38	0.38
30.20	0.78	0.59	5.00	0.00	0.38	0.38
30.25	0.78	0.59	5.00	0.00	0.38	0.38
30.30	0.78	0.59	5.00	0.00	0.38	0.38
30.35	0.78	0.59	5.00	0.00	0.38	0.38
30.40	0.78	0.59	5.00	0.00	0.38	0.38
30.45	0.78	0.59	5.00	0.00	0.38	0.38
30.50	0.78	0.59	5.00	0.00	0.38	0.38
30.55	0.78	0.59	5.00	0.00	0.38	0.38
30.60	0.78	0.59	5.00	0.00	0.38	0.38
30.65	0.78	0.59	5.00	0.00	0.38	0.38
30.70	0.78	0.59	5.00	0.00	0.38	0.38
30.75	0.78	0.59	5.00	0.00	0.38	0.38
30.80	0.78	0.59	5.00	0.00	0.38	0.38
30.85	0.78	0.58	5.00	0.00	0.38	0.38
30.90	0.78	0.58	5.00	0.00	0.37	0.37

30.95	0.78	0.58	5.00	0.00	0.37	0.37
31.00	0.78	0.58	5.00	0.00	0.37	0.37
31.05	0.78	0.58	5.00	0.00	0.37	0.37
31.10	0.78	0.58	5.00	0.00	0.37	0.37
31.15	0.78	0.58	5.00	0.00	0.37	0.37
31.20	0.78	0.58	5.00	0.00	0.37	0.37
31.25	0.78	0.58	5.00	0.00	0.37	0.37
31.30	0.78	0.58	5.00	0.00	0.37	0.37
31.35	0.78	0.58	5.00	0.00	0.37	0.37
31.40	0.78	0.58	5.00	0.00	0.37	0.37
31.45	0.78	0.58	5.00	0.00	0.37	0.37
31.50	0.78	0.58	5.00	0.00	0.37	0.37
31.55	0.78	0.58	5.00	0.00	0.37	0.37
31.60	0.78	0.58	5.00	0.00	0.37	0.37
31.65	0.78	0.58	5.00	0.00	0.37	0.37
31.70	0.78	0.58	5.00	0.00	0.37	0.37
31.75	0.78	0.58	5.00	0.00	0.37	0.37
31.80	0.78	0.58	5.00	0.00	0.37	0.37
31.85	0.78	0.58	5.00	0.00	0.37	0.37
31.90	0.78	0.58	5.00	0.00	0.37	0.37
31.95	0.78	0.58	5.00	0.00	0.36	0.36
32.00	0.78	0.58	5.00	0.00	0.36	0.36
32.05	0.78	0.58	5.00	0.00	0.36	0.36
32.10	0.77	0.58	5.00	0.00	0.36	0.36
32.15	0.77	0.58	5.00	0.00	0.36	0.36
32.20	0.77	0.58	5.00	0.00	0.36	0.36
32.25	0.77	0.58	5.00	0.00	0.36	0.36
32.30	0.77	0.58	5.00	0.00	0.36	0.36
32.35	0.77	0.58	5.00	0.00	0.36	0.36
32.40	0.77	0.58	5.00	0.00	0.36	0.36
32.45	0.77	0.58	5.00	0.00	0.36	0.36
32.50	0.77	0.58	5.00	0.00	0.36	0.36
32.55	0.77	0.58	5.00	0.00	0.36	0.36
32.60	0.77	0.58	5.00	0.00	0.36	0.36
32.65	0.77	0.58	5.00	0.00	0.36	0.36
32.70	0.77	0.58	5.00	0.00	0.36	0.36
32.75	0.77	0.58	5.00	0.00	0.36	0.36
32.80	0.77	0.57	5.00	0.00	0.36	0.36
32.85	0.77	0.57	5.00	0.00	0.36	0.36
32.90	0.77	0.57	5.00	0.00	0.35	0.35
32.95	0.77	0.57	5.00	0.00	0.35	0.35
33.00	0.77	0.57	5.00	0.00	0.35	0.35
33.05	0.77	0.57	5.00	0.00	0.35	0.35
33.10	0.77	0.57	5.00	0.00	0.35	0.35
33.15	0.77	0.57	5.00	0.00	0.35	0.35
33.20	0.77	0.57	5.00	0.00	0.35	0.35
33.25	0.77	0.57	5.00	0.00	0.35	0.35
33.30	0.77	0.57	5.00	0.00	0.35	0.35
33.35	0.77	0.57	5.00	0.00	0.35	0.35
33.40	0.77	0.57	5.00	0.00	0.35	0.35
33.45	0.77	0.57	5.00	0.00	0.35	0.35
33.50	0.77	0.57	5.00	0.00	0.35	0.35
33.55	0.77	0.57	5.00	0.00	0.35	0.35
33.60	0.77	0.57	5.00	0.00	0.35	0.35
33.65	0.77	0.57	5.00	0.00	0.34	0.34
33.70	0.77	0.57	5.00	0.00	0.34	0.34
33.75	0.77	0.57	5.00	0.00	0.34	0.34
33.80	0.77	0.57	5.00	0.00	0.34	0.34
33.85	0.77	0.57	5.00	0.00	0.34	0.34
33.90	0.77	0.57	5.00	0.00	0.34	0.34
33.95	0.77	0.57	5.00	0.00	0.34	0.34
34.00	0.77	0.57	5.00	0.00	0.34	0.34
34.05	0.77	0.57	5.00	0.00	0.34	0.34

34.10	0.77	0.57	5.00	0.00	0.34	0.34
34.15	0.77	0.57	5.00	0.00	0.34	0.34
34.20	0.77	0.57	5.00	0.00	0.34	0.34
34.25	0.77	0.57	5.00	0.00	0.33	0.33
34.30	0.76	0.57	5.00	0.00	0.33	0.33
34.35	0.76	0.57	5.00	0.00	0.33	0.33
34.40	0.76	0.57	5.00	0.00	0.33	0.33
34.45	0.76	0.57	5.00	0.00	0.33	0.33
34.50	0.76	0.57	5.00	0.00	0.33	0.33
34.55	0.76	0.57	5.00	0.00	0.33	0.33
34.60	0.76	0.57	5.00	0.00	0.33	0.33
34.65	0.76	0.57	5.00	0.00	0.33	0.33
34.70	0.76	0.57	5.00	0.00	0.33	0.33
34.75	0.76	0.56	5.00	0.00	0.32	0.32
34.80	0.76	0.56	5.00	0.00	0.32	0.32
34.85	0.76	0.56	5.00	0.00	0.32	0.32
34.90	0.76	0.56	5.00	0.00	0.32	0.32
34.95	0.76	0.56	5.00	0.00	0.32	0.32
35.00	0.76	0.56	5.00	0.00	0.32	0.32
35.05	0.76	0.56	5.00	0.00	0.32	0.32
35.10	0.76	0.56	5.00	0.00	0.32	0.32
35.15	0.76	0.56	5.00	0.00	0.31	0.31
35.20	0.76	0.56	5.00	0.00	0.31	0.31
35.25	0.76	0.56	5.00	0.00	0.31	0.31
35.30	0.76	0.56	5.00	0.00	0.31	0.31
35.35	0.76	0.56	5.00	0.00	0.31	0.31
35.40	0.76	0.56	5.00	0.00	0.31	0.31
35.45	0.76	0.56	5.00	0.00	0.31	0.31
35.50	0.76	0.56	5.00	0.00	0.30	0.30
35.55	0.76	0.56	5.00	0.00	0.30	0.30
35.60	0.76	0.56	5.00	0.00	0.30	0.30
35.65	0.76	0.56	5.00	0.00	0.30	0.30
35.70	0.76	0.56	5.00	0.00	0.30	0.30
35.75	0.76	0.56	5.00	0.00	0.30	0.30
35.80	0.76	0.56	5.00	0.00	0.29	0.29
35.85	0.76	0.56	5.00	0.00	0.29	0.29
35.90	0.76	0.56	5.00	0.00	0.29	0.29
35.95	0.76	0.56	5.00	0.00	0.29	0.29
36.00	0.76	0.56	5.00	0.00	0.28	0.28
36.05	0.76	0.56	5.00	0.00	0.28	0.28
36.10	0.76	0.56	5.00	0.00	0.28	0.28
36.15	0.76	0.56	5.00	0.00	0.27	0.27
36.20	0.76	0.56	5.00	0.00	0.27	0.27
36.25	0.76	0.56	5.00	0.00	0.27	0.27
36.30	0.76	0.56	5.00	0.00	0.26	0.26
36.35	0.76	0.56	5.00	0.00	0.26	0.26
36.40	0.76	0.56	5.00	0.00	0.26	0.26
36.45	0.76	0.56	5.00	0.00	0.26	0.26
36.50	0.76	0.56	5.00	0.00	0.25	0.25
36.55	0.76	0.56	5.00	0.00	0.25	0.25
36.60	0.75	0.56	5.00	0.00	0.25	0.25
36.65	0.75	0.56	5.00	0.00	0.24	0.24
36.70	0.75	0.55	5.00	0.00	0.24	0.24
36.75	0.75	0.55	5.00	0.00	0.24	0.24
36.80	0.75	0.55	5.00	0.00	0.24	0.24
36.85	0.75	0.55	5.00	0.00	0.23	0.23
36.90	0.75	0.55	5.00	0.00	0.23	0.23
36.95	0.75	0.55	5.00	0.00	0.23	0.23
37.00	0.75	0.55	5.00	0.00	0.23	0.23
37.05	0.75	0.55	5.00	0.00	0.22	0.22
37.10	0.75	0.55	5.00	0.00	0.22	0.22
37.15	0.75	0.55	5.00	0.00	0.22	0.22
37.20	0.75	0.55	5.00	0.00	0.22	0.22

37.25	0.75	0.55	5.00	0.00	0.21	0.21
37.30	0.75	0.55	5.00	0.00	0.21	0.21
37.35	0.75	0.55	5.00	0.00	0.21	0.21
37.40	0.75	0.55	5.00	0.00	0.21	0.21
37.45	0.75	0.55	5.00	0.00	0.20	0.20
37.50	0.75	0.55	5.00	0.00	0.20	0.20
37.55	0.75	0.55	5.00	0.00	0.20	0.20
37.60	0.75	0.55	5.00	0.00	0.20	0.20
37.65	0.75	0.55	5.00	0.00	0.19	0.19
37.70	0.75	0.55	5.00	0.00	0.19	0.19
37.75	0.75	0.55	5.00	0.00	0.19	0.19
37.80	0.75	0.55	5.00	0.00	0.19	0.19
37.85	0.75	0.55	5.00	0.00	0.19	0.19
37.90	0.75	0.55	5.00	0.00	0.18	0.18
37.95	0.75	0.55	5.00	0.00	0.18	0.18
38.00	0.75	0.55	5.00	0.00	0.18	0.18
38.05	0.75	0.55	5.00	0.00	0.18	0.18
38.10	0.75	0.55	5.00	0.00	0.18	0.18
38.15	0.75	0.55	5.00	0.00	0.17	0.17
38.20	0.75	0.55	5.00	0.00	0.17	0.17
38.25	0.75	0.55	5.00	0.00	0.17	0.17
38.30	0.75	0.55	5.00	0.00	0.17	0.17
38.35	0.75	0.55	5.00	0.00	0.17	0.17
38.40	0.75	0.55	5.00	0.00	0.16	0.16
38.45	0.75	0.55	5.00	0.00	0.16	0.16
38.50	0.75	0.55	5.00	0.00	0.16	0.16
38.55	0.75	0.55	5.00	0.00	0.16	0.16
38.60	0.75	0.54	5.00	0.00	0.16	0.16
38.65	0.75	0.54	5.00	0.00	0.15	0.15
38.70	0.75	0.54	5.00	0.00	0.15	0.15
38.75	0.75	0.54	5.00	0.00	0.15	0.15
38.80	0.75	0.54	5.00	0.00	0.15	0.15
38.85	0.75	0.54	5.00	0.00	0.15	0.15
38.90	0.75	0.54	5.00	0.00	0.14	0.14
38.95	0.74	0.54	5.00	0.00	0.14	0.14
39.00	0.74	0.54	5.00	0.00	0.14	0.14
39.05	0.74	0.54	5.00	0.00	0.14	0.14
39.10	0.74	0.54	5.00	0.00	0.14	0.14
39.15	0.74	0.54	5.00	0.00	0.14	0.14
39.20	0.74	0.54	5.00	0.00	0.13	0.13
39.25	0.74	0.54	5.00	0.00	0.13	0.13
39.30	0.74	0.54	5.00	0.00	0.13	0.13
39.35	0.74	0.54	5.00	0.00	0.13	0.13
39.40	0.74	0.54	5.00	0.00	0.13	0.13
39.45	0.74	0.54	5.00	0.00	0.13	0.13
39.50	0.74	0.54	5.00	0.00	0.13	0.13
39.55	0.74	0.54	5.00	0.00	0.13	0.13
39.60	0.74	0.54	5.00	0.00	0.13	0.13
39.65	0.74	0.54	5.00	0.00	0.12	0.12
39.70	0.74	0.54	5.00	0.00	0.12	0.12
39.75	0.74	0.54	5.00	0.00	0.12	0.12
39.80	0.74	0.54	5.00	0.00	0.12	0.12
39.85	0.74	0.54	5.00	0.00	0.12	0.12
39.90	0.74	0.54	5.00	0.00	0.12	0.12
39.95	0.74	0.54	5.00	0.00	0.12	0.12
40.00	0.74	0.54	5.00	0.00	0.12	0.12
40.05	0.74	0.54	5.00	0.00	0.12	0.12
40.10	0.74	0.54	5.00	0.00	0.12	0.12
40.15	0.74	0.54	5.00	0.00	0.12	0.12
40.20	0.74	0.54	5.00	0.00	0.12	0.12
40.25	0.74	0.54	5.00	0.00	0.12	0.12
40.30	0.74	0.54	5.00	0.00	0.12	0.12
40.35	0.74	0.54	5.00	0.00	0.12	0.12

40.40	0.74	0.54	5.00	0.00	0.11	0.11
40.45	0.74	0.54	5.00	0.00	0.11	0.11
40.50	0.74	0.54	5.00	0.00	0.11	0.11
40.55	0.74	0.53	5.00	0.00	0.11	0.11
40.60	0.74	0.53	5.00	0.00	0.11	0.11
40.65	0.74	0.53	5.00	0.00	0.11	0.11
40.70	0.74	0.53	5.00	0.00	0.11	0.11
40.75	0.74	0.53	5.00	0.00	0.11	0.11
40.80	0.74	0.53	5.00	0.00	0.11	0.11
40.85	0.74	0.53	5.00	0.00	0.11	0.11
40.90	0.74	0.53	5.00	0.00	0.11	0.11
40.95	0.74	0.53	5.00	0.00	0.11	0.11
41.00	0.74	0.53	5.00	0.00	0.11	0.11
41.05	0.74	0.53	5.00	0.00	0.11	0.11
41.10	0.74	0.53	5.00	0.00	0.11	0.11
41.15	0.74	0.53	5.00	0.00	0.10	0.10
41.20	0.74	0.53	5.00	0.00	0.10	0.10
41.25	0.74	0.53	5.00	0.00	0.10	0.10
41.30	0.74	0.53	5.00	0.00	0.10	0.10
41.35	0.74	0.53	5.00	0.00	0.10	0.10
41.40	0.74	0.53	5.00	0.00	0.10	0.10
41.45	0.73	0.53	5.00	0.00	0.10	0.10
41.50	0.73	0.53	5.00	0.00	0.10	0.10
41.55	0.73	0.53	5.00	0.00	0.10	0.10
41.60	0.73	0.53	5.00	0.00	0.10	0.10
41.65	0.73	0.53	5.00	0.00	0.10	0.10
41.70	0.73	0.53	5.00	0.00	0.10	0.10
41.75	0.73	0.53	5.00	0.00	0.10	0.10
41.80	0.73	0.53	5.00	0.00	0.10	0.10
41.85	0.73	0.53	5.00	0.00	0.10	0.10
41.90	0.73	0.53	5.00	0.00	0.10	0.10
41.95	0.73	0.53	5.00	0.00	0.09	0.09
42.00	0.73	0.53	5.00	0.00	0.09	0.09
42.05	0.73	0.53	5.00	0.00	0.09	0.09
42.10	0.73	0.53	5.00	0.00	0.09	0.09
42.15	0.73	0.53	5.00	0.00	0.09	0.09
42.20	0.73	0.53	5.00	0.00	0.09	0.09
42.25	0.73	0.53	5.00	0.00	0.09	0.09
42.30	0.73	0.53	5.00	0.00	0.09	0.09
42.35	0.73	0.53	5.00	0.00	0.09	0.09
42.40	0.73	0.53	5.00	0.00	0.09	0.09
42.45	0.73	0.53	5.00	0.00	0.09	0.09
42.50	0.73	0.52	5.00	0.00	0.09	0.09
42.55	0.73	0.52	5.00	0.00	0.09	0.09
42.60	0.73	0.52	5.00	0.00	0.09	0.09
42.65	0.73	0.52	5.00	0.00	0.09	0.09
42.70	0.73	0.52	5.00	0.00	0.09	0.09
42.75	0.73	0.52	5.00	0.00	0.09	0.09
42.80	0.73	0.52	5.00	0.00	0.08	0.08
42.85	0.73	0.52	5.00	0.00	0.08	0.08
42.90	0.73	0.52	5.00	0.00	0.08	0.08
42.95	0.73	0.52	5.00	0.00	0.08	0.08
43.00	0.73	0.52	5.00	0.00	0.08	0.08
43.05	0.73	0.52	5.00	0.00	0.08	0.08
43.10	0.73	0.52	5.00	0.00	0.08	0.08
43.15	0.73	0.52	5.00	0.00	0.08	0.08
43.20	0.73	0.52	5.00	0.00	0.08	0.08
43.25	0.73	0.52	5.00	0.00	0.08	0.08
43.30	0.73	0.52	5.00	0.00	0.08	0.08
43.35	0.73	0.52	5.00	0.00	0.08	0.08
43.40	0.73	0.52	5.00	0.00	0.08	0.08
43.45	0.73	0.52	5.00	0.00	0.08	0.08
43.50	0.73	0.52	5.00	0.00	0.08	0.08

43.55	0.73	0.52	5.00	0.00	0.08	0.08
43.60	0.73	0.52	5.00	0.00	0.08	0.08
43.65	0.73	0.52	5.00	0.00	0.07	0.07
43.70	0.73	0.52	5.00	0.00	0.07	0.07
43.75	0.73	0.52	5.00	0.00	0.07	0.07
43.80	0.73	0.52	5.00	0.00	0.07	0.07
43.85	0.73	0.52	5.00	0.00	0.07	0.07
43.90	0.73	0.52	5.00	0.00	0.07	0.07
43.95	0.73	0.52	5.00	0.00	0.07	0.07
44.00	0.72	0.52	5.00	0.00	0.07	0.07
44.05	0.72	0.52	5.00	0.00	0.07	0.07
44.10	0.72	0.52	5.00	0.00	0.07	0.07
44.15	0.72	0.52	5.00	0.00	0.07	0.07
44.20	0.72	0.52	5.00	0.00	0.07	0.07
44.25	0.72	0.52	5.00	0.00	0.07	0.07
44.30	0.72	0.52	5.00	0.00	0.07	0.07
44.35	0.72	0.52	5.00	0.00	0.07	0.07
44.40	0.72	0.52	5.00	0.00	0.07	0.07
44.45	0.72	0.51	5.00	0.00	0.07	0.07
44.50	0.72	0.51	5.00	0.00	0.07	0.07
44.55	0.72	0.51	5.00	0.00	0.07	0.07
44.60	0.72	0.51	5.00	0.00	0.06	0.06
44.65	0.72	0.51	5.00	0.00	0.06	0.06
44.70	0.72	0.51	5.00	0.00	0.06	0.06
44.75	0.72	0.51	5.00	0.00	0.06	0.06
44.80	0.72	0.51	5.00	0.00	0.06	0.06
44.85	0.72	0.51	5.00	0.00	0.06	0.06
44.90	0.72	0.51	5.00	0.00	0.06	0.06
44.95	0.72	0.51	5.00	0.00	0.06	0.06
45.00	0.72	0.51	5.00	0.00	0.06	0.06
45.05	0.72	0.51	5.00	0.00	0.06	0.06
45.10	0.72	0.51	5.00	0.00	0.06	0.06
45.15	0.72	0.51	5.00	0.00	0.06	0.06
45.20	0.72	0.51	5.00	0.00	0.06	0.06
45.25	0.72	0.51	5.00	0.00	0.06	0.06
45.30	0.72	0.51	5.00	0.00	0.06	0.06
45.35	0.72	0.51	5.00	0.00	0.06	0.06
45.40	0.72	0.51	5.00	0.00	0.06	0.06
45.45	0.72	0.51	5.00	0.00	0.06	0.06
45.50	0.72	0.51	5.00	0.00	0.06	0.06
45.55	0.72	0.51	5.00	0.00	0.05	0.05
45.60	0.72	0.51	5.00	0.00	0.05	0.05
45.65	0.72	0.51	5.00	0.00	0.05	0.05
45.70	0.72	0.51	5.00	0.00	0.05	0.05
45.75	0.72	0.51	5.00	0.00	0.05	0.05
45.80	0.72	0.51	5.00	0.00	0.05	0.05
45.85	0.72	0.51	5.00	0.00	0.05	0.05
45.90	0.72	0.51	5.00	0.00	0.05	0.05
45.95	0.72	0.51	5.00	0.00	0.05	0.05
46.00	0.72	0.51	5.00	0.00	0.05	0.05
46.05	0.72	0.51	5.00	0.00	0.05	0.05
46.10	0.72	0.51	5.00	0.00	0.05	0.05
46.15	0.72	0.51	5.00	0.00	0.05	0.05
46.20	0.72	0.51	5.00	0.00	0.05	0.05
46.25	0.72	0.51	5.00	0.00	0.05	0.05
46.30	0.72	0.51	5.00	0.00	0.05	0.05
46.35	0.72	0.50	5.00	0.00	0.05	0.05
46.40	0.72	0.50	5.00	0.00	0.05	0.05
46.45	0.72	0.50	5.00	0.00	0.05	0.05
46.50	0.72	0.50	5.00	0.00	0.05	0.05
46.55	0.72	0.50	5.00	0.00	0.04	0.04
46.60	0.71	0.50	5.00	0.00	0.04	0.04
46.65	0.71	0.50	5.00	0.00	0.04	0.04

46.70	0.71	0.50	5.00	0.00	0.04	0.04
46.75	0.71	0.50	5.00	0.00	0.04	0.04
46.80	0.71	0.50	5.00	0.00	0.04	0.04
46.85	0.71	0.50	5.00	0.00	0.04	0.04
46.90	0.71	0.50	5.00	0.00	0.04	0.04
46.95	0.71	0.50	5.00	0.00	0.04	0.04
47.00	0.71	0.50	5.00	0.00	0.04	0.04
47.05	0.71	0.50	5.00	0.00	0.04	0.04
47.10	0.71	0.50	5.00	0.00	0.04	0.04
47.15	0.71	0.50	5.00	0.00	0.04	0.04
47.20	0.71	0.50	5.00	0.00	0.04	0.04
47.25	0.71	0.50	5.00	0.00	0.04	0.04
47.30	0.71	0.50	5.00	0.00	0.04	0.04
47.35	0.71	0.50	5.00	0.00	0.04	0.04
47.40	0.71	0.50	5.00	0.00	0.04	0.04
47.45	0.71	0.50	5.00	0.00	0.04	0.04
47.50	0.71	0.50	5.00	0.00	0.04	0.04
47.55	0.71	0.50	5.00	0.00	0.03	0.03
47.60	0.71	0.50	5.00	0.00	0.03	0.03
47.65	0.71	0.50	5.00	0.00	0.03	0.03
47.70	0.71	0.50	5.00	0.00	0.03	0.03
47.75	0.71	0.50	5.00	0.00	0.03	0.03
47.80	0.71	0.50	5.00	0.00	0.03	0.03
47.85	0.71	0.50	5.00	0.00	0.03	0.03
47.90	0.71	0.50	5.00	0.00	0.03	0.03
47.95	0.71	0.50	5.00	0.00	0.03	0.03
48.00	0.71	0.50	5.00	0.00	0.03	0.03
48.05	0.71	0.50	5.00	0.00	0.03	0.03
48.10	0.71	0.50	5.00	0.00	0.03	0.03
48.15	0.71	0.50	5.00	0.00	0.03	0.03
48.20	0.71	0.50	5.00	0.00	0.03	0.03
48.25	0.71	0.50	5.00	0.00	0.03	0.03
48.30	0.71	0.49	5.00	0.00	0.03	0.03
48.35	0.71	0.49	5.00	0.00	0.03	0.03
48.40	0.71	0.49	5.00	0.00	0.03	0.03
48.45	0.71	0.49	5.00	0.00	0.03	0.03
48.50	0.71	0.49	5.00	0.00	0.03	0.03
48.55	0.71	0.49	5.00	0.00	0.02	0.02
48.60	0.71	0.49	5.00	0.00	0.02	0.02
48.65	0.71	0.49	5.00	0.00	0.02	0.02
48.70	0.71	0.49	5.00	0.00	0.02	0.02
48.75	0.71	0.49	5.00	0.00	0.02	0.02
48.80	0.71	0.49	5.00	0.00	0.02	0.02
48.85	0.71	0.49	5.00	0.00	0.02	0.02
48.90	0.71	0.49	5.00	0.00	0.02	0.02
48.95	0.71	0.49	5.00	0.00	0.02	0.02
49.00	0.71	0.49	5.00	0.00	0.02	0.02
49.05	0.71	0.49	5.00	0.00	0.02	0.02
49.10	0.71	0.49	5.00	0.00	0.02	0.02
49.15	0.71	0.49	5.00	0.00	0.02	0.02
49.20	0.71	0.49	5.00	0.00	0.02	0.02
49.25	0.71	0.49	5.00	0.00	0.02	0.02
49.30	0.70	0.49	5.00	0.00	0.02	0.02
49.35	0.70	0.49	5.00	0.00	0.02	0.02
49.40	0.70	0.49	5.00	0.00	0.02	0.02
49.45	0.70	0.49	5.00	0.00	0.02	0.02
49.50	0.70	0.49	5.00	0.00	0.02	0.02
49.55	0.70	0.49	5.00	0.00	0.01	0.01
49.60	0.70	0.49	5.00	0.00	0.01	0.01
49.65	0.70	0.49	5.00	0.00	0.01	0.01
49.70	0.70	0.49	5.00	0.00	0.01	0.01
49.75	0.70	0.49	5.00	0.00	0.01	0.01
49.80	0.70	0.49	5.00	0.00	0.01	0.01

49.85	0.70	0.49	5.00	0.00	0.01	0.01
49.90	0.70	0.49	5.00	0.00	0.01	0.01
49.95	0.70	0.49	5.00	0.00	0.01	0.01
50.00	0.70	0.49	5.00	0.00	0.01	0.01
50.05	0.70	0.49	5.00	0.00	0.01	0.01
50.10	0.70	0.49	5.00	0.00	0.01	0.01
50.15	0.70	0.49	5.00	0.00	0.01	0.01
50.20	0.70	0.49	5.00	0.00	0.01	0.01
50.25	0.70	0.48	5.00	0.00	0.01	0.01
50.30	0.70	0.48	5.00	0.00	0.01	0.01
50.35	0.70	0.48	5.00	0.00	0.01	0.01
50.40	0.70	0.48	5.00	0.00	0.01	0.01
50.45	0.70	0.48	5.00	0.00	0.01	0.01
50.50	0.70	0.48	5.00	0.00	0.01	0.01
50.55	0.70	0.48	5.00	0.00	0.00	0.00
50.60	0.70	0.48	5.00	0.00	0.00	0.00
50.65	0.70	0.48	5.00	0.00	0.00	0.00
50.70	0.70	0.48	5.00	0.00	0.00	0.00
50.75	0.70	0.48	5.00	0.00	0.00	0.00
50.80	0.70	0.48	5.00	0.00	0.00	0.00
50.85	0.70	0.48	5.00	0.00	0.00	0.00
50.90	0.70	0.48	5.00	0.00	0.00	0.00
50.95	0.70	0.48	5.00	0.00	0.00	0.00
51.00	0.70	0.48	5.00	0.00	0.00	0.00

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft2)

CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

R&L Capital

Geotechnical Engineering Services
RB Inyokern Data Center (CEI #1160-01)
35.650980, -117.809018 | Brown Rd & 178 Hwy, Kern County, CA

SOILS ENGINEERING, INC.

26-20852
July 14, 2026

TABLE 1

TEST LOCATION	USCS	% < # 200	CONSOLIDATION				DIRECT SHEAR		E.I.	MINIMUM RESISITIVITY	ATTERBERG LIMITS			R-VALUE @ 300 psi		MAXIMUM DENSITY	
			C_C	C_S	S.P. (psf)	HV %	C, (ksf)	F.A.			LL	PL	PI	R.V.	E.P. (psi)	MDD (pcf)	O.M.
B-2 @ 0-5'	SM	25							1								
B-4 @ 0-5'	SM	21							0								
B-7 @ 6'	SP-SM	5.8															
B-7 @ 11'	SP-SM	4.8															
B-7 @ 16'	SP-SM	9.4															
B-7 @ 21'	SP-SM	10.6															
B-7 @ 26'	SC	37															
B-7 @ 31'	SC	19															
B-7 @ 36'	SP-SM	9.9															
B-7 @ 41'	SM	16															
B-7 @ 46'	SM	25															
B-7 @ 51'	SP-SM	8.8															
B-8 @ 0-5'	SM	18							0								
B-8 @ 3'	SM						0.25	34.9									
B-8 @ 6'	SM		0.05	0		-2.8											
B-10 @ 6'	SP	4.1															
B-10 @ 11'	SP-SM	7.1															
B-10 @ 16'	SP	4.0															
B-10 @ 21'	SP-SM	10.0															
B-10 @ 26'	SP-SM	6.8															

CONSOLIDATION
Cc - Compression Index
Cs - Swell Index
S.P. (psf) - Swell Pressure
HV % - Heave Percentage / Collapse

E.I. - EXPANSION INDEX
ATTERBERG LIMITS
LL - Liquid Limit
PL - Plastic Limit
PI - Plasticity Index

DIRECT SHEAR
C (ksf) - Cohesion
F.A. - Friction Angle

RESISTANCE VALUE (R-VALUE)
RV - R-Value @ 300 psi
EP - Expansion Press @ 300 psi
MINIMUM RESISITIVITY - (ohm-cm)

MAXIMUM DENSITY
MDD (pcf) - Max Dry Density
O.M. - Optimum Moisture

R&L Capital

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			C_C	C_S	S.P. (psf)	HV %	C, (ksf)	F.A.			LL	PL	PI	R.V.	E.P. (psi)	MDD (pcf)	O.M.
B-10 @ 31'	SC	29															
B-10 @ 36'	SP-SM	7.1															
B-10 @ 41'	SM	17															
B-10 @ 46'	SM	12															
B-10 @ 51'	SM	15															
B-12 @ 0-5'	SM	27							0								
B-12 @ 3'	SM		0.08	0.01		-3.6											
B-13 @ 3'	SM						0.22	31.1									
B-13 @ 6'	SM		0.10	0.01		-2.8											
B-14 @ 0-5'	SM	29							0								
B-16 @ 0-5'	SM	27							3								
B-16 @ 3'	SM						0.22	36.4									
B-16 @ 6'	SM		0.06	0.01		-2.1											
R-1 @ 0-5'	SM	28												35	0		
R-2 @ 0-5'	SM	22												62	0		
R-3 @ 0-5'	SM	13												76	0.03		
R-4 @ 0-5'	SM	16												71	0		
R-5 @ 0-5'	SM	21												72	0		
R-6 @ 0-5'	SM	23												52	0		
R-7 @ 0-5'	SM	22												53	0		
R-8 @ 0-5'	SM	32												45	0		

CONSOLIDATION
Cc - Compression Index
Cs - Swell Index
S.P. (psf) - Swell Pressure
HV % - Heave Percentage / Collapse

E.I. - EXPANSION INDEX
ATTERBERG LIMITS
LL - Liquid Limit
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PI - Plasticity Index

DIRECT SHEAR
C (ksf) - Cohesion
F.A. - Friction Angle

RESISTANCE VALUE (R-VALUE)
RV - R-Value @ 300 psi
EP - Expansion Press @ 300 psi
MINIMUM RESISITIVITY - (ohm-cm)

MAXIMUM DENSITY
MDD (pcf) - Max Dry Density
O.M. - Optimum Moisture